



Morven North Offshore Wind Array Project

Habitats Regulations Appraisal

**Volume 2, Chapter 3: Report to Inform
Appropriate Assessment Part 3: SPA and Ramsar
Site Assessments**

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Table of contents

1	Introduction.....	1
1.1	The purpose of this Report to Inform Appropriate Assessment	1
1.2	Structure of the Report to Inform Appropriate Assessment.....	1
1.3	Structure of this document.....	1
2	Consultation	3
3	Summary of Habitats Regulations Appraisal screening conclusions	16
3.2	Screening outcomes for Morven North alone.....	16
3.3	Screening outcomes for Morven North in-combination with other plans and projects.....	16
4	Information to inform the Appropriate Assessment	62
4.1	Introduction	62
4.2	Maximum Design Scenarios	62
4.3	Designed-in measures	62
4.4	Baseline information.....	62
4.5	Conservation objectives and conservation advice	63
4.6	Approach to the in-combination assessment.....	64
4.6.1	Overview	64
4.6.2	Identification of projects considered in-combination.....	64
4.6.3	Threshold for in-combination assessment	66
5	Assessment of potential adverse effects on integrity	67
5.1	Introduction	67
5.2	Potential impacts and method of assessment.....	67
5.2.1	Introduction	67
5.2.2	Assessment methodology	68
	Seasonal definitions	68
	Apportioning and population modelling	69
	In-combination	70
5.2.3	Direct temporary habitat loss/disturbance	70
5.2.4	Changes in prey availability due to temporary habitat loss/disturbance.....	71
5.2.5	Displacement	71
5.2.6	Collision risk.....	73
5.2.7	Barrier effects	75
5.2.8	Attraction to light	75
5.3	Baseline	76
5.3.1	Project-specific baseline	76
5.3.2	Special Protection Areas	80
	Site descriptions	80
	Feature accounts	86
	Conservation objectives	86
5.3.3	Highly Pathogenic Avian Influenza (HPAI).....	137
5.4	Assessment of the adverse effects of Morven North alone.....	137
5.4.1	Direct temporary habitat loss/disturbance	137
	Construction phase.....	145

	Habitat loss/disturbance affecting guillemot, razorbill, puffin and breeding seabird assemblage qualifying features at the Morven North Boundary	145
	Habitat loss/disturbance affecting qualifying features of the Outer Firth of Forth and St Andrew’s Bay Complex SPA due to vessel movements.....	148
	Operation and maintenance phase.....	160
	Habitat loss/disturbance affecting guillemot, razorbill, puffin and breeding seabird assemblage qualifying features at the Morven North Boundary	160
	Habitat loss/disturbance affecting qualifying features of the Outer Firth of Forth and St Andrew’s Bay Complex SPA due to vessel movements.....	160
	Decommissioning phase.....	161
	All receptors.....	161
	Conclusion.....	161
5.4.2	Changes in prey availability due to temporary habitat loss/disturbance	163
	Construction phase.....	167
	Operations and maintenance phase.....	168
	Decommissioning phase.....	169
	Conclusion.....	169
5.4.3	Collision risk	172
	Operation and maintenance phase.....	175
	Gannet	183
	Herring gull.....	184
	Kittiwake	186
	Conclusion.....	186
5.4.4	Displacement	188
	Operation and maintenance phase.....	192
	Kittiwake	210
	Guillemot.....	210
	Razorbill	216
	Puffin.....	219
	Fulmar	219
	Gannet.....	220
	Conclusion.....	220
5.4.5	Combined collision and displacement	224
	Operation and maintenance phase.....	226
	Kittiwake	233
	Gannet.....	235
	Conclusion.....	235
5.4.6	Barrier effects	237
	Operation and maintenance phase.....	241
	Conclusion.....	241
5.4.7	Attraction to light	243
	All project phases	247
	Conclusion.....	247
5.5	Assessment of the adverse effects of Morven North in-combination with other plans and projects.....	248
5.5.2	Collision risk	259
	Operation and maintenance phase.....	264
	Kittiwake	264
	Gannet.....	342
	Conclusion.....	352
5.5.3	Displacement	353
	Operation and maintenance phase.....	359

	Kittiwake	359
	Guillemot.....	444
	Razorbill	476
	Puffin.....	528
	Gannet.....	562
	Conclusion.....	606
5.5.4	Combined collision and displacement	607
	Operation and maintenance phase.....	607
	Kittiwake	614
	Gannet.....	662
	Conclusion.....	717
6	Summary	719
7	References	824
Appendix A	828

List of tables

Table 2.1: Summary of key consultation relevant to Part 3 of the Report to Inform Appropriate Assessment	4
Table 3.1: Summary of all Special Protection Areas for which the potential for Likely Significant Effect could not be discounted, and for which an Appropriate Assessment is required	18
Table 4.1: Scenarios to be considered in the Morven North whole project assessment, Morven Programme assessment and in-combination assessment	64
Table 5.1: Potential impacts to offshore ornithological features of the European sites identified for Appropriate Assessment.....	67
Table 5.2: Seasonal definitions as the basis for assessment, from NatureScot (2020) and Furness (2015) and after additional advice from NatureScot taking into account the date each baseline survey was flown	69
Table 5.3: Displacement and mortality rates included for consideration in assessment.....	72
Table 5.4: Species biometrics and input parameters used in collision risk modelling	74
Table 5.5: Seasonal collision risk estimates for gannet, herring gull, and kittiwake associated with Morven North, using a stochastic model	75
Table 5.6: Summary of the abundance and distribution of seabird species recorded during site-specific baseline Digital Aerial Surveys and regional digital aerial surveys covering part of the Scottish North Sea.....	77
Table 5.7: Site descriptions for all Special Protection Areas for which Likely Significant Effects ² have been identified in relation to impacts associated with Morven North	81
Table 5.8: Populations for qualifying features at Special Protection Areas for which Likely Significant Effects has been identified in relation to impacts associated with Morven North	87
Table 5.9: Conservation objectives for all Special Protection Areas and associated qualifying features for which Likely Significant Effects has been identified in relation to impacts associated with Morven North.....	93
Table 5.10: European sites and associated qualifying features for which Likely Significant Effects ² in relation to direct temporary habitat loss/disturbance impacts associated with Morven North could not be ruled out	138

Table 5.11: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to direct temporary habitat loss/disturbance during all project phases	140
Table 5.12: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to direct temporary habitat loss/disturbance during all project phases	145
Table 5.13: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to direct temporary habitat loss/disturbance impacts associated with Morven North alone	162
Table 5.14: European sites and associated qualifying features for which Likely Significant Effects ² in relation to changes in prey availability due to temporary habitat loss/disturbance impacts associated with Morven North could not be ruled out.....	163
Table 5.15: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to change in prey availability due to temporary habitat loss/disturbance during all project phases.....	166
Table 5.16: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to direct temporary habitat loss/disturbance during all project phases	166
Table 5.17: EIA significance of effects of construction impacts on fish, shellfish and bivalve ecology	168
Table 5.18: EIA significance of effects of construction impacts on fish, shellfish and bivalve ecology	169
Table 5.19: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to changes in prey availability due to temporary habitat loss/disturbance impacts associated with Morven North alone	170
Table 5.20: European sites and associated qualifying features for which Likely Significant Effects ² in relation to collision risk impacts associated with Morven North could not be ruled out.....	172
Table 5.21: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to collision risk during the operation and maintenance phase	174
Table 5.22: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to collision risk during the operation and maintenance phase	174
Table 5.23: Calculation of effect from Morven North alone in relation to collision risk based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion, adult:immature ratio and sabbatical proportion	176
Table 5.24: Calculation of effect from Morven North alone in relation to collision risk based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion ,adult:immature ratio and sabbatical proportion	179
Table 5.25: Calculation of breeding season impacts for gannet at the Forth Islands SPA incorporating foraging range data from Wakefield <i>et al.</i> (2013).....	184
Table 5.26: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to collision risk impacts associated with Morven North alone	187
Table 5.27: European sites and associated qualifying features for which Likely Significant Effects ² in relation to displacement associated with Morven North could not be ruled out	189
Table 5.28: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to displacement during the operation and maintenance phase	192
Table 5.29: Calculation of effect from Morven North alone in relation to displacement based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, NB = non-	

breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion ,adult:immature ratio and sabbatical proportion	194
Table 5.30: Calculation of effect from Morven North alone in relation to displacement based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion, adult:immature ratio and sabbatical proportion	204
Table 5.31: Summary of population viability analysis results for displacement impacts on the guillemot feature of the Fowlsheugh, Buchan Ness to Collieston Coast, Forth Islands, St Abb’s Head to Fast Castle and Troup, Pennan and Lion’s Heads Special Protection Areas after 35 years	214
Table 5.32: Summary of population viability analysis results for displacement impacts on the razorbill feature of the Forth Islands Special Protection Area after 35 years	218
Table 5.33: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to displacement impacts associated with Morven North alone	221
Table 5.34: European sites and associated qualifying features for which Likely Significant Effects ² in relation to combined collision and displacement impacts associated with Morven North could not be ruled out	224
Table 5.35: Calculation of effect from Morven North alone in relation to collision and displacement combined based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, Pre = pre-breeding season)	227
Table 5.36: Calculation of effect from Morven North alone in relation to collision and displacement combined based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, Pre = pre-breeding season)	231
Table 5.37: Summary of population viability analysis results for combined collision and displacement impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years.....	234
Table 5.38: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to combined collision and displacement impacts associated with Morven North alone	236
Table 5.39: European sites and associated qualifying features for which Likely Significant Effects ² in relation to barrier effects associated with Morven North could not be ruled out.....	238
Table 5.40: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to barrier effects during the operation and maintenance phase	240
Table 5.41: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to barrier effects associated with Morven North alone.....	241
Table 5.42: European sites and associated qualifying features for which Likely Significant Effects ² in relation to attraction to light associated with Morven North could not be ruled out	245
Table 5.43: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to attraction to light during all project phases.....	246
Table 5.44: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to attraction to light during all project phases	246
Table 5.45: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to attraction to light associated with Morven North alone.....	248
Table 5.46: List of other plans and projects with potential for in-combination effects on offshore ornithological features	251
Table 5.47: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to collision risk in the operations and maintenance phase of Morven North in-combination with other plans and projects	261

Table 5.48: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	267
Table 5.49: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from collision risk impacts (Applicant’s approach)	270
Table 5.50: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years	273
Table 5.51: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	276
Table 5.52: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from collision risk impacts (Applicant’s approach).....	279
Table 5.53: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years	282
Table 5.54: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	285
Table 5.55: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands SPA resulting from collision risk impacts (Applicant’s approach)	288
Table 5.56: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Farne Islands SPA after 35 years.....	291
Table 5.57: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	294
Table 5.58: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (Applicant’s approach).....	297
Table 5.59: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years...	300
Table 5.60: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	303
Table 5.61: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from collision risk impacts (Applicant’s approach)	307
Table 5.62: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years	311
Table 5.63: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	314
Table 5.64: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from collision risk impacts (Applicant’s approach)	318
Table 5.65: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years	322
Table 5.66: Predicted in-combination annual mortality rate of kittiwake at the St Abb’s Head to Fast Castle Special Protection Area resulting from collision risk impacts (NatureScot’s approach)	325
Table 5.67: Predicted in-combination annual mortality rate of kittiwake at the St Abb’s Head to Fast Castle Special Protection Area resulting from collision risk impacts (Applicant’s approach)	328
Table 5.68: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the St Abb’s Head to Fast Castle Special Protection Area after 35 years.....	331

Table 5.69: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area resulting from collision risk impacts (NatureScot's approach)	334
Table 5.70: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area resulting from collision risk impacts (Applicant's approach) .	338
Table 5.71: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Troup, Pennan and Lion's Heads Special Protection Area after 35 years	341
Table 5.72: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from collision risk impacts (NatureScot's approach).....	344
Table 5.73: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from collision risk impacts (Applicant's approach).....	348
Table 5.74: Summary of population viability analysis results for in-combination collision impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years	351
Table 5.75: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to displacement in the operations and maintenance phase of Morven North in-combination with other plans and projects	355
Table 5.76: Predicted annual mortality of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme.....	359
Table 5.77: Mean-peak population estimates for kittiwake at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)	362
Table 5.78: Mean-peak population estimates for kittiwake at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)	366
Table 5.79: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years	369
Table 5.80: Predicted annual mortality of kittiwake at the East Caithness Cliffs Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3) ...	370
Table 5.81: Mean-peak population estimates for kittiwake at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	373
Table 5.82: Mean-peak population estimates for kittiwake at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	377
Table 5.83: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years.....	380
Table 5.84: Predicted annual mortality of kittiwake at the Farne Islands SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3)	381
Table 5.85: Mean-peak population estimates for kittiwake at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)	383
Table 5.86: Mean-peak population estimates for kittiwake at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	387
Table 5.87: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Farne Islands Special Protection Area after 35 years	390

Table 5.88: Predicted annual mortality of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	391
Table 5.89: Mean-peak population estimates for kittiwake at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	394
Table 5.90: Mean-peak population estimates for kittiwake at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	398
Table 5.91: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years.....	401
Table 5.92: Predicted annual mortality of kittiwake at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	402
Table 5.93: Mean-peak population estimates for kittiwake at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	404
Table 5.94: Mean-peak population estimates for kittiwake at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	408
Table 5.95: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Fowlsheugh SPA after 35 years.....	411
Table 5.96: Predicted annual mortality of kittiwake at the Forth Islands SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	412
Table 5.97: Mean-peak population estimates for kittiwake at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	414
Table 5.98: Mean-peak population estimates for kittiwake at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	418
Table 5.99: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years.....	421
Table 5.100: Predicted annual mortality of kittiwake at the St Abb's Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	422
Table 5.101: Mean-peak population estimates for kittiwake at the St Abb's Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	425
Table 5.102: Mean-peak population estimates for kittiwake at the St Abb's Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).....	429
Table 5.103: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the St Abb's Head to Fast Castle Special Protection Area after 35 years.....	432
Table 5.104: Predicted annual mortality of kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	433
Table 5.105: Mean-peak population estimates for kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach).....	436

Table 5.106: Mean-peak population estimates for kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	440
Table 5.107: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years	443
Table 5.108: Predicted annual mortality of guillemot at the Buchan Ness to Collieston Coast SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3)	444
Table 5.109: Mean-peak population estimates for guillemot at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement	447
Table 5.110: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years	449
Table 5.111: Predicted annual mortality of guillemot at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	450
Table 5.112: Mean-peak population estimates for guillemot at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)..	453
Table 5.113: Mean-peak population estimates for guillemot at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach).....	455
Table 5.114: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Fowlsheugh Special Protection Area after 35 years	457
Table 5.115: Predicted annual mortality of guillemot at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	458
Table 5.116: Mean-peak population estimates for guillemot at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement.....	461
Table 5.117: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Forth Islands Special Protection Area after 35 years	463
Table 5.118: Predicted annual mortality of guillemot at the St Abb’s Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	464
Table 5.119: Mean-peak population estimates for guillemot at the St Abb’s Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement	467
Table 5.120: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the St Abb’s Head to Fast Castle Special Protection Area after 35 years	469
Table 5.121: Predicted annual mortality of guillemot at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	470
Table 5.122: Mean-peak population estimates for guillemot at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement	473
Table 5.123: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years	475
Table 5.124: Predicted annual mortality of razorbill at the East Caithness Cliffs Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3) ...	476

Table 5.125: Mean-peak population estimates for razorbill at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement	479
Table 5.126: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the East Caithness Cliffs Special Protection Area after 35 years	483
Table 5.127: Predicted annual mortality of razorbill at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	484
Table 5.128: Mean-peak population estimates for razorbill at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement	487
Table 5.129: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Flamborough and Filey Coast Special Protection Area after 35 years	492
Table 5.130: Predicted annual mortality of razorbill at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	493
Table 5.131: Mean-peak population estimates for razorbill at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement.....	496
Table 5.132: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Forth Islands Special Protection Area after 35 years.....	501
Table 5.133: Predicted annual mortality of razorbill at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	502
Table 5.134: Mean-peak population estimates for razorbill at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement.....	505
Table 5.135: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Fowlsheugh Special Protection Area after 35 years	510
Table 5.136: Predicted annual mortality of razorbill at the St Abb’s Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	511
Table 5.137: Mean-peak population estimates for razorbill at the St Abb’s Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement	514
Table 5.138: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the St Abb’s Head to Fast Castle Special Protection Area after 35 years	519
Table 5.139: Mean-peak population estimates for razorbill at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement	522
Table 5.140: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years.....	527
Table 5.141: Predicted annual mortality of puffin at the Coquet Island Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	528
Table 5.142: Mean-peak population estimates for puffin at the Coquet Island Special Protection Area for projects considered in-combination in relation to displacement.....	531
Table 5.143: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Coquet Island Special Protection Area after 35 years	535
Table 5.144: Predicted annual mortality of puffin at the Farne Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	536

Table 5.145: Mean-peak population estimates for puffin at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement.....	538
Table 5.146: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Farne Islands Special Protection Area after 35 years.....	542
Table 5.147: Predicted annual mortality of puffin at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	543
Table 5.148: Mean-peak population estimates for puffin at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement.....	545
Table 5.149: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Forth Islands Special Protection Area after 35 years	548
Table 5.150: Predicted annual mortality of puffin at the Foula Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	549
Table 5.151: Mean-peak population estimates for puffin at the Foula Special Protection Area for projects considered in-combination in relation to displacement	551
Table 5.152: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Foula Special Protection Area after 35 years	554
Table 5.153: Predicted annual mortality of puffin at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	555
Table 5.154: Mean-peak population estimates for puffin at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement	557
Table 5.155: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years	561
Table 5.156: Predicted annual mortality of gannet at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	562
Table 5.157: Mean-peak population estimates for gannet at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	565
Table 5.158: Mean-peak population estimates for gannet at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach).....	569
Table 5.159: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years.....	573
Table 5.160: Predicted annual mortality of gannet at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3).....	574
Table 5.161: Mean-peak population estimates for gannet at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	576
Table 5.162: Mean-peak population estimates for gannet at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	580
Table 5.163: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Flamborough and Filey Coast Special Protection Area after 35 years	583
Table 5.164: Predicted annual mortality of gannet at the Noss Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	584

Table 5.165: Mean-peak population estimates for gannet at the Noss Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	586
Table 5.166: Mean-peak population estimates for gannet at the Noss Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	590
Table 5.167: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Noss Special Protection Area after 35 years	594
Table 5.168: Predicted annual mortality of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)	595
Table 5.169: Mean-peak population estimates for gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	597
Table 5.170: Mean-peak population estimates for gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	601
Table 5.171: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years	605
Table 5.172: Maximum Design Scenario considered for the assessment of potential impacts to gannet at the St Kilda Special Protection Area due to combined collision and displacement in the operations and maintenance phase of Morven North in-combination with other plans and projects	610
Table 5.173: Predicted annual mortality of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme	614
Table 5.174: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	615
Table 5.175: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years	617
Table 5.176: Predicted annual mortality of kittiwake at the East Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	618
Table 5.177: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.	619
Table 5.178: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years	621
Table 5.179: Predicted annual mortality of kittiwake at the Farne Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	622
Table 5.180: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects..	623

Table 5.181: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Farne Islands Special Protection Area after 35 years	625
Table 5.182: Predicted annual mortality of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	626
Table 5.183: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	627
Table 5.184: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years	629
Table 5.185: Predicted annual mortality of kittiwake at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	630
Table 5.186: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	631
Table 5.187: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years	633
Table 5.188: Predicted annual mortality of kittiwake at the Fowlsheugh Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	634
Table 5.189: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	635
Table 5.190: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years	637
Table 5.191: Predicted annual mortality of kittiwake at the North Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	638
Table 5.192: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.	639
Table 5.193: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	641
Table 5.194: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from collision risk impacts (Applicant’s approach).....	644
Table 5.195: Mean-peak population estimates for kittiwake at the North Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	647
Table 5.196: Mean-peak population estimates for kittiwake at the North Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	650

Table 5.197: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the North Caithness Cliffs Special Protection Area after 35 years	653
Table 5.198: Predicted annual mortality of kittiwake at the St Abb’s Head to Fast Castle Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	654
Table 5.199: Predicted in-combination annual mortality rate of kittiwake at the St Abb’s Head to Fast Castle Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	655
Table 5.200: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the St Abb’s Head to Fast Castle Special Protection Area after 35 years	657
Table 5.201: Predicted annual mortality of kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	658
Table 5.202: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	659
Table 5.203: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years	661
Table 5.204: Predicted annual mortality of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	662
Table 5.205: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.	663
Table 5.206: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (NatureScot’s approach).....	665
Table 5.207: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (Applicant’s approach).....	668
Table 5.208: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Flamborough and Filey Coast Special Protection Area after 35 years	671
Table 5.209: Predicted annual mortality of gannet at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3).....	672
Table 5.210: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	673
Table 5.211: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years	675
Table 5.212: Predicted annual mortality of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3).....	676

Table 5.213: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	677
Table 5.214: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from collision risk impacts (NatureScot’s approach)	679
Table 5.215: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from collision risk impacts (Applicant’s approach)	682
Table 5.216: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years	685
Table 5.217: Predicted annual mortality of gannet at the Noss Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	686
Table 5.218: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.	687
Table 5.219: Predicted in-combination annual mortality rate of gannet at the Noss Special Protection Area resulting from collision risk impacts (NatureScot’s approach)	689
Table 5.220: : Predicted in-combination annual mortality rate of gannet at the Noss Special Protection Area resulting from collision risk impacts (Applicant’s approach)	693
Table 5.221: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Noss Special Protection Area after 35 years	696
Table 5.222: Predicted annual mortality of gannet at the St Kilda Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)	697
Table 5.223: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects	698
Table 5.224: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from collision risk impacts (NatureScot’s approach)	700
Table 5.225: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from collision risk impacts (Applicant’s approach)	704
Table 5.226: Mean-peak population estimates for gannet at the St Kilda Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)	708
Table 5.227: Mean-peak population estimates for gannet at the St Kilda Special Protection Area for projects considered in-combination in relation to displacement (Applicant’s approach)	712
Table 5.228: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the St Kilda Special Protection Area after 35 years	716
Table 6.1: Summary of conclusions for the assessment of adverse effects on Special Protection Area and Ramsar site integrity for Morven North alone and in-combination	720

List of figures

Figure 3.1: Location of Special Protection Areas for which Likely Significant Effects were identified in relation to impacts associated with Morven North	17
Figure 5.1: Annual averages of vessel movement throughout Outer Firth of Forth and St Andrews Bay Complex Special Protection Area	150
Figure 5.2: Distribution of red-throated diver in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	151
Figure 5.3: Distribution of Slavonian grebe in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	152
Figure 5.4: Distribution of common eider in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	153
Figure 5.5: Distribution of long-tailed duck in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	154
Figure 5.6: Distribution of common scoter in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	155
Figure 5.7: Distribution of velvet scoter in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	156
Figure 5.8: Distribution of common goldeneye in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season	157
Figure 5.9: Distribution of red-breasted merganser in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season.....	158
Figure 5.10: Distribution of guillemot in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season.....	159
Figure 5.11: Location of other plans and projects considered for the in-combination effects assessment on Special Protection Areas with offshore ornithological features	250

1 Introduction

1.1 The purpose of this Report to Inform Appropriate Assessment

- 1.1.1.1 This Report to Inform Appropriate Assessment (RIAA) has been prepared by TetraTech RPS Energy Limited and NIRAS, on behalf of Morven Offshore Wind Limited (MvOWL) (hereafter referred to as the 'Applicant'). The purpose of this RIAA is to support the Habitats Regulations Appraisal (HRA) required under the Habitats Regulations¹ for the Morven North Offshore Wind Farm (hereafter referred to as 'Morven North').
- 1.1.1.2 The RIAA builds upon Volume 1, Chapter 1: Morven Option Lease Agreement Site: HRA Stage 1 Screening Report (hereafter referred to as 'Morven Site HRA Screening Report') and the Likely Significant Effects (LSE²) re-screening exercise (see Volume 2, Chapter 1: RIAA Part 1: Introduction (hereafter 'RIAA Part 1')) to assesses whether Morven North could have an adverse effect, either alone, or in-combination with other plans or projects, on the integrity of relevant European sites. This report will provide the Competent Authority with the information required to undertake an HRA Stage 2 Appropriate Assessment.
- 1.1.1.3 The scope of this Morven North RIAA covers all relevant European sites and designated features where the potential for LSE² could not be ruled out due to the potential impacts arising from Morven North. This includes both 'offshore' European sites and features (seaward of Mean High Water Springs (MHWS)), and potential impacts of offshore infrastructure on 'onshore' European sites (landward of Mean Low Water Springs (MLWS)).

1.2 Structure of the Report to Inform Appropriate Assessment

- 1.2.1.1 This RIAA has been reported in three 'Parts', which are structured as follows:
- Volume 2, Chapter 1: Report to Inform Appropriate Assessment Part 1: Introduction;
 - Volume 2, Chapter 2: Report to Inform Appropriate Assessment Part 2: Special Area of Conservation (SAC) Assessments;
 - Volume 2, Chapter 3: Report to Inform Appropriate Assessment Part 3: Special Protection Area (SPA) and Ramsar Site Assessments (this document).

1.3 Structure of this document

- 1.3.1.1 As stated in paragraph 1.2.1.1, this document constitutes Part 3 of the RIAA and presents the assessment of whether Morven North could have an adverse effect on the integrity of relevant European sites.
- 1.3.1.2 This document is structured as follows:
- Section 1: Introduction, which details the purpose and structure of the RIAA;
 - Section 2: Consultation, which provides a summary of relevant consultation undertaken to date, the responses provided and how these have been addressed within this Part of the RIAA;
 - Section 3: Summary of HRA Stage 1 LSE² Screening Conclusions for SPAs and Ramsar sites;
 - Section 4: Information to inform the Appropriate Assessment, which includes the Maximum Design Scenario (MDS), information on designed-in measures, an outline of

¹ The collective term for The Conservation (Natural Habitats, & C.) Regulations 1994, The Conservation of Habitats and Species Regulations 2017, and the Conservation of Offshore Marine Habitats and Species 2017.

the approach taken to baseline data, conservation objectives, and the in-combination assessment;

- Section 5: Assessment of adverse effects on integrity on European sites designated for ornithological features, both alone and in-combination with other plans and projects;
- Section 6: Summary of this Part of the RIAA.

1.3.1.3 The following documents are also relevant to this Part of the RIAA:

- Volume 2, Annex 3.1: RIAA: Apportioning;
- Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

2 Consultation

- 2.1.1.1 Consultation has been undertaken with statutory stakeholders with regards to the ornithological features of SPAs and Ramsar sites. A summary of all relevant consultation undertaken to date is presented in Table 2.1. The consultation summaries provided in Table 2.1 focus on those elements specific to the HRA process for ornithological interests. Consultation specific to underlying methodologies (e.g. site specific surveys or analytical approaches) is provided in Volume 2, Chapter 11: Offshore Ornithology, of the Environmental Impact Assessment (EIA) Report.

Table 2.1: Summary of key consultation relevant to Part 3 of the Report to Inform Appropriate Assessment

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
03 July 2023	NatureScot	NatureScot – email correspondence	<p>The consultation aimed to clarify NatureScot’s guidance on Offshore Ornithology Impact Pathways for Offshore Wind Developments, specifically regarding alternative approaches to biological defined minimum population scale (BDMPS) for assessing cumulative impacts on guillemots and razorbills during the non-breeding season. The Applicant asked NatureScot to provide details on what “other agreed approaches” meant in the Guidance Note, beyond BDMPS, for cumulative assessment of guillemots and razorbills in the non-breeding season.</p> <ul style="list-style-type: none"> • NatureScot’s Position on Guillemots: advised against using BDMPS for guillemot cumulative assessment in the non-breeding season. Instead, recommended applying the breeding season approach of mean-max foraging range plus one standard deviation, based on Buckingham et al. (2022) tracking data. • NatureScot’s Position on Razorbills: For razorbills, NatureScot confirmed that the BDMPS region remains appropriate for screening cumulative impacts during the non-breeding season. 	No	The Applicant has agreed a bespoke approach for guillemot based on additional pre-application consultation undertaken in October 2025. For razorbill the approach proposed by NatureScot has been followed.

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			NatureScot clarified that for guillemots, the alternative agreed approach is the breeding season foraging range method (mean-max + 1 SD), while for razorbills, the existing BDMPS region should continue to be used for cumulative impact screening in the non-breeding season.		
24 August 2023	NatureScot	Advice on the Scoping Report for the Morven Option Lease Agreement Site (hereafter 'the Morven Site Scoping Report')	NatureScot expect apportioning during the breeding season to be undertaken following the NatureScot theoretical approach (NatureScot, 2018), with the exception of kittiwake, guillemot, razorbill and shag, where the apportioning tool developed by Marine Scotland should be used (Butler <i>et al.</i> , 2020).	No	Apportioning for all species has used the approach described in NatureScot (2018) as the Butler <i>et al.</i> , (2020) is currently unavailable, this was agreed with NatureScot during further consultation in March 2024. Please see in Volume 2, Annex 3.1: RIAA: Apportioning for a detailed description of the methodology applied.
			<p>NatureScot advise that an explanation of how birds recorded to species groups will be attributed to species level and how accounting for availability bias will be carried out should be provided prior to submission of the EIA Report.</p> <p>Regarding availability bias, NatureScot expect that species-specific correction factors are applied to the number of each auk species recorded on the sea's surface. They accept factors from Thaxter <i>et al.</i> (2010) for guillemot and razorbill, from Spencer (2012) for puffin, and using Barlow <i>et al.</i> (1988).</p>	No	Birds only identified at a species group level have been attributed to species level using the standard ratio approach as detailed in Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report of the EIA Report and incorporated into the calculation of abundance estimates presented throughout the application. Please see Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report of the EIA Report for further information. Availability bias has also been incorporated into the calculation of

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			<p>Regarding Population Viability Analysis (PVA), NatureScot note a clarification of the wording in their Guidance Note 11, Section 2.1: 'We advise that the impacts of collision and distributional responses, such as displacement, will need to be considered in the context of relevant SPA breeding colonies particularly where the assessed effects result in a decrease to the adult annual survival rate of 0.02 percentage point change or higher.'</p>	No	<p>abundance metrics for relevant species using correction factors from the references provided by NatureScot.</p> <p>The assessments presented in this RIAA Part 3 follow this approach.</p>
24 August 2023	Natural England	Advice on Morven Site HRA Screening Report within the Morven Option Lease Agreement Site Scoping Opinion (hereafter 'Morven Site Scoping Opinion')	Natural England advises that guillemot from the Farne Islands SPA and the Flamborough and Filey Coast SPA should be screened in for potential impacts during the non-breeding season. Whilst Natural England advises that to assess the potential impacts on the Farne Islands SPA and Flamborough and Filey Coast SPA guillemot in the non-breeding season, the traditional approach of apportioning birds to the relevant SPA using the BDMPS populations as prescribed by Furness (2015) should be used.	No	Calculation of impacts following Natural England's advice is provided in Volume 3, Annex 5.2: Offshore Ornithology Impact Estimates using Natural England Approaches, of the EIA Report [and includes consideration of the Farne Islands SPA and Flamborough and Filey Coast SPA.
25 August 2023	RSPB Scotland	RSPB Scotland: Response to	RSPB Scotland welcomes the use of foraging ranges from Woodward <i>et al.</i> , (2019) to derive connectivity with SPA colonies, and also recommend that site specific data is	No	The Stage 1 screening process applied in the Morven Site HRA Screening Report and the subsequent update to this process provided in RIAA Part 1 aligns

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
		Morven Site Scoping Report	<p>examined and site specific values are used where they exceed generic values.</p> <p>The exceptions to this are guillemot and razorbill. In the case of these species, for all designated sites south of the Pentland Firth, the RSPB advise using the mean max (MM) plus one standard deviation (SD) discounting Fair Isle values.</p>		with the approach suggested by the RSPB
			RSPB Scotland raises issues with the bio-season definitions from Furness (2015) with regards to gannet and kittiwake. The issue raised is that the 'migration-free' seasonal definition excludes the early and later months of the season that would be included in a full breeding season.	No	Following the advice of MD-LOT and NatureScot, the breeding season for all species has been defined based on the seasonal definitions provided in NatureScot (2018) which have more correspondence with the full breeding season as defined by Furness (2015) and therefore follow the advice of RSPB Scotland. Please also see additional pre-application consultation with NatureScot in this table below which specifically deals with the seasonal extents defined for guillemot and razorbill.
27 March 2024	NatureScot	Response to request for further advice on receipt of the Morven Site Scoping Opinion	NatureScot agree that until the Butler tool is updated as part of the Cumulative Effects Framework, to enable Seabirds Count data to be utilised, the tool cannot be used. Instead, NatureScot suggest a theoretical apportioning approach should be applied, and that apportioning allocated to sites with sufficient tagging data may be re-apportioned depending on the results of tracking analysis.	No	The apportioning approach applied for Morven North is detailed in Volume 2, Annex 3.1: RIAA: Apportioning and follows the approach recommended in NatureScot (2018) and incorporates further advice provided by NatureScot on 28 January 2025 and 28 May 2025.

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			NatureScot refer to their interim guidance note on apportioning (NatureScot, 2018).		
28 January 2025	NatureScot	Ornithology Advice Pre-application Consultation	<p>NatureScot support the approach to apportioning using their <i>Interim Guidance on apportioning impacts from marine renewable developments to breeding seabird populations in SPAs</i> note NatureScot (2018) and Seabirds Count data.</p> <p>NatureScot would welcome discussion about North East and East Ornithology Group work about how to consider puffin in the non-breeding season, once the results are available.</p> <p>NatureScot note that puffin were recorded in Morven DAS in the non-breeding season, and that it will therefore be important to consider puffin in the non-breeding season for Morven. They expect project alone and cumulative assessments to be undertaken for non-breeding seasons.</p>	No	<p>The methodology applied and results of the apportioning approach applied for Morven North are provided in Volume 2, Annex 3.1: RIAA: Apportioning. The approach applied follows NatureScot guidance.</p> <p>Impacts on puffin are considered in all seasons, where relevant, in Section 5.3.3 and 5.5. Work exploring impacts on puffin in the non-breeding season is ongoing through the North East and East Ornithology Group but will not be completed in time for inclusion in the assessments presented in this RIAA Part 3.</p>
			NatureScot have reservations regarding the approach to estimate the proportion of immature birds present of a number of species during site specific surveys in the breeding season. However, they accept its use dependent on sufficiently good identification rates for the specific immature age classes and that the results are not less precautionary than the standard approach	No	The methodology applied and results of the apportioning approach applied for Morven North are provided in Volume 2, Annex 3.1: RIAA: Apportioning including in relation to the estimation of the proportion of immature birds. Two approaches are presented including NatureScot's advocated approach (i.e. using the immature proportions from Furness (2015)) which is applied as part

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			(i.e. equal or higher adult proportions), and would welcome confirmation of this.		of NatureScot's approach in this RIAA Part 3.
			<p>NatureScot advise that immature birds should be removed when undertaking breeding season apportioning of impacts to SPAs.</p> <p>NatureScot recommend the following adult proportion rates, derived using a stable age proportion and taken from Furness (2015), should be used: kittiwake - 0.53; guillemot/razorbill - 0.57; puffin - 0.55; gannet - 0.55; fulmar - 0.62; great black-backed gull - 0.44; great skua - 0.41.</p> <p>When apportioning breeding season impacts from Morven North to SPAs, NatureScot advise sabbatical birds should also be removed using the following rates: large gulls - 0.35; kittiwake - 0.1; auks - 0.07; gannet - 0.1; shag - 0.35. During the non-breeding season sabbatical birds do not need to be removed, as all birds are non-breeders.</p> <p>In summary, NatureScot advise that breeding season mortalities should first be multiplied by the adult proportion and then by (1 - sabbatical rate) to provide the number of mortalities to breeding adults.</p>	No	The methodology applied and results of the apportioning approach applied for Morven North are provided in Volume 2, Annex 3.1: RIAA: Apportioning. The approach applied includes the estimation of the proportion of immature birds based on NatureScot guidance.
			<p>NatureScot provide an Annex describing their current advice for PVA.</p> <p>For project alone impacts, the Annex describes how PVA is required for all sites and species where the project alone impacts</p>	No	The methodology applied and results of population modelling conducted for Morven North are provided in Volume 2, Annex 3.2: RIAA: Population Viability

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			<p>equal or exceed a 0.02 percentage point change in combined breeding and non-breeding season adult survival rate.</p> <p>For in-combination impacts, the Annex describes how PVA is generally required where in-combination impacts equal or exceed a 0.02 percentage point change in combined breeding and non-breeding season adult survival rate. The exception to this is where the project contribution to the in-combination impact is less than 0.2 birds per annum.</p>		Analysis and follows NatureScot guidance.
05 March 2025	NatureScot, MD-LOT	Consultation meeting with NatureScot titled 'HRA Derogation Consultation - Identification of Predator Control Measures'	<p>This meeting aimed to discuss the identification of Valued Ornithological Receptors (VORs) for Morven North/South. The consultation sought feedback from NatureScot and MD-LOT on baseline ornithology reports, seasonal definitions, cumulative impact assessment scenarios, and compensation measures.</p> <p>NatureScot noted peaks in guillemot and razorbill abundance may relate to post-breeding dispersal. They advised reviewing fledging dates and considering adjustments to seasonal definitions, such as adding a post-breeding dispersal period.</p>	No	The Applicant has followed NatureScot's advice in relation to seasonal definitions for guillemot throughout the assessments presented in this report.
28 May 2025	NatureScot	Consultation meeting with NatureScot titled	It was noted that predicted impacts for guillemot were driven by increased populations in July and August. The Applicant	No	The Applicant has followed NatureScot's advice in relation to seasonal definitions

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
		'Morven North and South HRA consultation'	<p>had defined a post-breeding season for guillemot following previous NatureScot advice and had applied the same apportioning in the post-breeding season as advised for the non-breeding season.</p> <p>NatureScot confirmed that July should be incorporated into the post-breeding season for guillemot due to the high populations recorded during site specific surveys. NatureScot agreed with the application of the apportioning approach in the non-breeding season to the post-breeding season.</p>		for guillemot throughout the assessments presented in this RIAA.
23 June 2025	NatureScot	Email correspondence	<p>The Applicant provided NatureScot with preliminary outputs from the SeabORD analysis used to quantify displacement impacts. The Applicant requested NatureScot's advice in relation to the use of these outputs in the assessments required for Morven North and Morven South.</p> <p>NatureScot responded stating that SeabORD outputs should be presented to provide additional context to the displacement assessment, but the matrix approach should be used as the main assessment method for all species and seasons.</p>	No	The Applicant has used the outputs from the displacement matrix approach for all species and seasons throughout the assessments presented and has provided outputs from the SeabORD modelling approach in Volume 3, Annex 11.5: Offshore Ornithology Displacement Modelling Report (SeabORD), of the EIA Report.
11 July 2025	NatureScot	Email correspondence	The Applicant requested advice in relation to the impact pathways that should be considered for fulmar.	Yes	Potential impacts from displacement have been considered for fulmar as a qualifying feature for all SPAs for which LSE was originally identified in the Morven Site HRA Screening Report. In addition, fulmar, as a qualifying feature

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			NatureScot advised that displacement and attraction to light should be considered for fulmar.		at relevant SPAs has also been considered in relation to attraction to light.
21 July 2025	MD-LOT	Email correspondence	<p>MD-LOT confirmed that the approach to the whole project, Morven Programme and cumulative assessment, as set out within MvOWL's targeted consultation letter dated 13 March 2025, was likely to be acceptable, subject to NatureScot's agreement.</p> <p>MD-LOT confirmed the cut-off dates for the consideration of new or updated information for plans projects and activities within cumulative assessments should be six months prior to application submission for quantitative assessment and three months for qualitative cumulative assessment.</p>	No	<p>Cut-off dates for the qualitative and quantitative assessments were implemented as agreed with MD-LOT</p> <p>The whole project, Morven Programme and cumulative assessment approach is set out in Sections 4.6 and 5.5.</p>
30 July 2025	NatureScot	Letter	The Applicant provided NatureScot with a summary of the re-screening exercise undertaken to account for the separation of the whole Morven project into Morven North and Morven South as detailed in RIAA Part 1.	Yes	The RIAA Part 3 incorporates all SPAs and associated qualifying features for which LSE was identified in the RIAA Part 1.
18 August 2025	NatureScot and MD-LOT	Consultation meeting with NatureScot titled 'Morven CEA discussion'	<p>NatureScot and MD-LOT agreed to refinements to the whole project, Morven Programme and cumulative effects assessment approach set out within MvOWL's targeted consultation letter dated 13 March 2025.</p> <p>To allow each of the Morven North and Morven South consent applications to be considered independently, NatureScot</p>	No	The whole project, Morven Programme and in-combination assessment approach is set out in Sections 4.6 and 5.5.

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			<p>advised that cumulative assessment should consider the potential effects of Morven North together with other projects, plans and activities (including other components of the Morven Programme alongside other tiered projects), rather than the consideration of Morven Programme impacts together with other projects, plans and activities.</p> <p>It was also agreed that the Morven Programme assessment would only be required for offshore ornithology and shipping and navigation receptors.</p>		
19 August 2025	NatureScot	Letter	<p>NatureScot queried the use of a distance measured from the centre of the project to the centre of the SPA as incorporated into the apportioning exercise undertaken for the project. NatureScot requested that apportioning values be calculated for all SPAs by increasing the foraging distance used for each species so that all SPAs are included when using a centre to centre measurement.</p>	No	Please see entry for consultation undertaken on 23 October 2025.
26 September 2025	NatureScot, MD-LOT	Email correspondence	<p>The Applicant consulted NatureScot and MD LOT to request advice on whether Berwick Bank Offshore Wind Farm should be excluded from the in combination assessment for species and designated sites where compensatory measures are required.</p>	No	Consideration is given to those projects for which compensation measures have been applied throughout section 5.5
01 October 2025	NatureScot, MD-LOT	Email correspondence	<p>The Applicant issued a letter to NatureScot and MD LOT outlining significant discrepancies identified within the NEEOG</p>	No	Please see entry for consultation undertaken on 23 October 2025.

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
			cumulative ornithology database. This database, developed to provide a consistent set of cumulative collision and displacement totals for offshore wind assessments, was found to contain outdated, incorrect, or inconsistent population and impact values for several offshore wind projects. The Applicant requested NatureScot's advice on the implications of these issues and sought confirmation that their proposed approach, to use updated, project specific assessment data rather than the uncorrected NEEOG database values, was acceptable for the cumulative assessments for Morven North and Morven South.		
02 October 2025	NatureScot	Email correspondence	<p>The Applicant requested NatureScot's advice in relation to the conversion factor to apply to convert population counts of razorbill from individuals into breeding pairs/individuals. Burnell <i>et al.</i> (2023) applied an updated correction factor based on information from the Isle of May and the Applicant asked NatureScot to confirm whether this correction factor should now be applied.</p> <p>NatureScot confirmed that the correction factor from Burnell <i>et al.</i> (2023) should be used to correct population counts of razorbill.</p>	No	Population counts of razorbill have been calculated applying the correction factor from Burnell <i>et al.</i> (2023).
23 October 2025	NatureScot	Meeting	The Applicant presented the information sent to NatureScot on 16 th October 2025 to inform a discussion on the approach to apportioning for guillemot in all seasons	Yes	The Applicant agreed to undertake additional apportioning incorporating an increased foraging range to provide apportioning values for specific SPAs for

Date	Consultee	Type of consultation	Summary of consultation	Change required to screening outcomes?	Where addressed in this document
					<p>which LSE were identified in the screening exercise. For Morven North this was relevant to herring gull at the Buchan Ness to Collieston Coast SPA only. It was agreed that changes to the approach to distance measurement as part of the apportioning approach applied for Morven North were not required for any other species. Apportioning values calculated for guillemot have been used to inform NatureScot's approach as presented in the RIAA Part 3. In addition, it was agreed to use tracking data from Buckingham <i>et al.</i> (2023) to identify those SPAs with connectivity with Morven North in the post- and non-breeding seasons.</p>
05 February 2026	NatureScot	Email correspondence	NatureScot response in relation to Applicant's email correspondence of 1 October 2025. NatureScot confirmed they were happy for the Applicant to proceed as proposed, utilising the Applicant's cumulative databases instead of the NEEOG interim CEF database	No	The Applicant has used site-specific data throughout the in-combination assessments presented in section 5.5.

3 Summary of Habitats Regulations Appraisal screening conclusions

3.1.1.1 This section summarises all pathways for potential LSE² on ornithological features identified for SPAs and Ramsar sites (arising alone or in-combination with other plans and projects). Please note that pathways for potential LSE² were not identified for any features of Ramsar sites.

3.2 Screening outcomes for Morven North alone

3.2.1.1 A total of 24 SPAs designated for ornithological features were advanced to the RIAA. These are as follows:

- Buchan Ness to Collieston Coast SPA;
- Calf of Eday SPA;
- Copinsay SPA;
- Coquet Island SPA;
- East Caithness Cliffs SPA;
- Fair Isle SPA;
- Farne Islands SPA;
- Fetlar SPA;
- Flamborough and Filey Coast SPA;
- Forth Islands SPA;
- Foula SPA;
- Fowlsheugh SPA;
- Hermaness, Saxa Vord and Valla Field SPA;
- Hoy SPA;
- Marwick Head SPA;
- North Caithness Cliffs SPA;
- Northumberland Marine SPA;
- Noss SPA;
- Outer Firth of Forth and St Andrews Bay Complex SPA;
- Rousay SPA;
- St Abb`s Head to Fast Castle SPA;
- St Kilda SPA;
- Troup, Pennan and Lion`s Heads SPA;
- West Westray SPA.

3.2.1.2 A summary of the 24 SPAs and associated qualifying features for which LSE² could not be ruled out and therefore were carried forward to the RIAA is presented in Table 3.1. The location of these SPAs is provided in Figure 3.1.

3.3 Screening outcomes for Morven North in-combination with other plans and projects

3.3.1.1 All offshore ornithology sites which could not be excluded from the alone assessment are also included within the in-combination assessment following LSE² screening. Further information on in-combination assessment methodology is presented within Section 1.1.

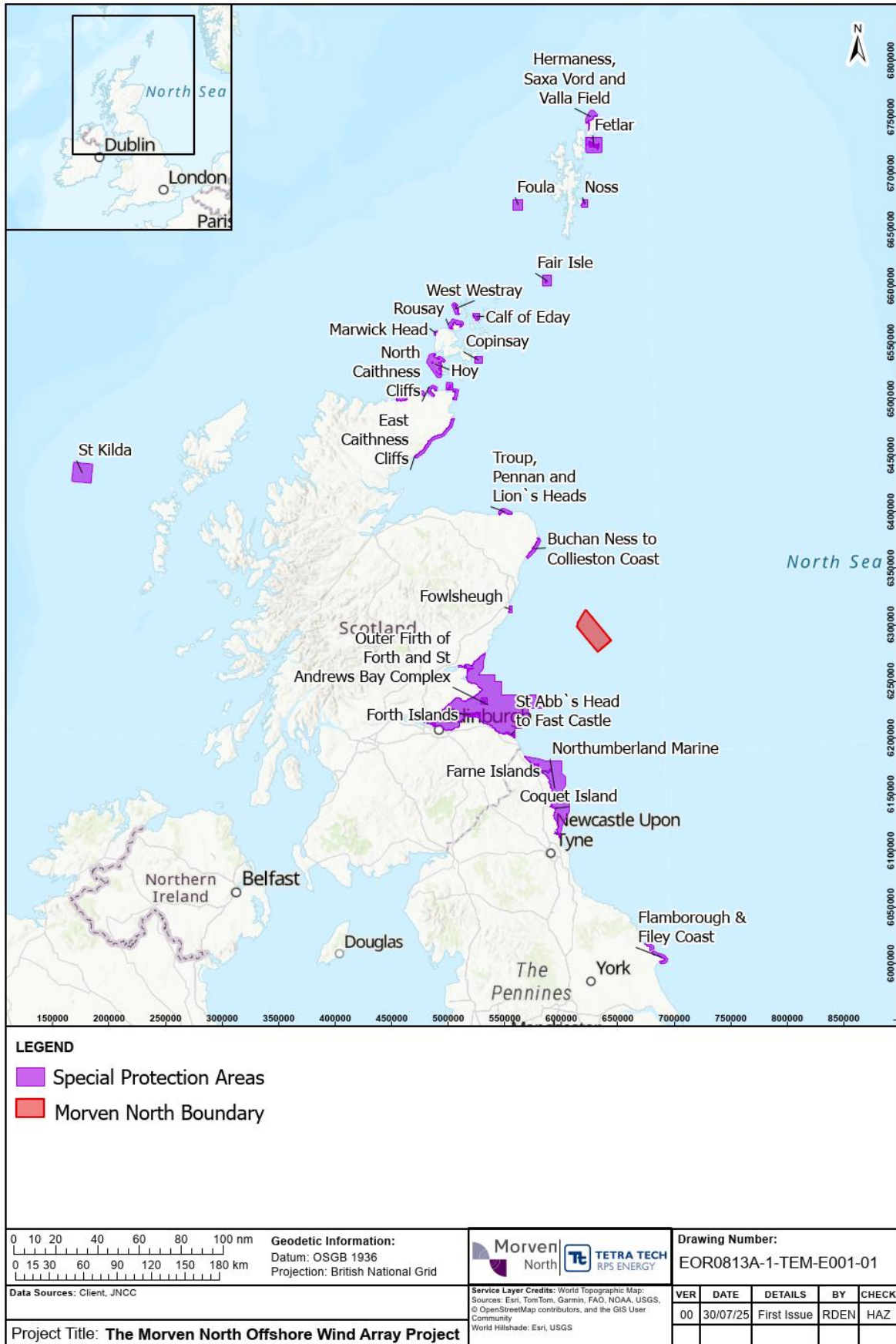


Figure 3.1: Location of Special Protection Areas for which Likely Significant Effects were identified in relation to impacts associated with Morven North

Table 3.1: Summary of all Special Protection Areas for which the potential for Likely Significant Effect could not be discounted, and for which an Appropriate Assessment is required

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
UK9002271	Fowlsheugh SPA	59	Herring gull (<i>Larus argentatus</i>)	Operation and maintenance	Collision
			Kittiwake (<i>Rissa tridactyla</i>)	Construction	Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
			Guillemot (<i>Uria aalge</i>)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill (<i>Alca torda</i>)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9020316	Outer Firth of Forth and St Andrews Bay Complex SPA	66	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
			Herring gull (non-breeding)	Operation and maintenance	Collision

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Guillemot	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Puffin (<i>Fratercula arctica</i>)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Gannet (<i>Morus bassanus</i>)	Operation and maintenance	Collision; Displacement; Barrier effects.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Red-throated diver (<i>Gavia stellata</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Slavonian grebe (<i>Podiceps auritus</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Direct temporary habitat loss/disturbance
			Eider (<i>Somateria mollissima</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Shag (<i>Gulosus aristotelis</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Long-tailed duck (<i>Clangula hyemalis</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Common scoter (<i>Melanitta nigra</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Velvet scoter (<i>Melanitta fusca</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Goldeneye (<i>Bucephala clangula</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Red-breasted merganser (<i>Mergus serrator</i>)	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
			Non-breeding waterfowl assemblage	Construction	Direct temporary habitat loss/disturbance
				Operation and maintenance	Direct temporary habitat loss/disturbance
				Decommissioning	Direct temporary habitat loss/disturbance
UK9002281		68	Herring gull	Operation and maintenance	Collision

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
	Buchan Ness to Collieston Coast SPA		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
			Guillemot	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Breeding seabird assemblage		Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9004171	Forth Islands SPA	101	Gannet	Operation and maintenance	Collision; Displacement; Barrier effects.
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Collision;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Guillemot (non-breeding seasons only)		Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Breeding seabird assemblage	Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9020325	Northumberland Marine SPA	102	Fulmar (<i>Fulmarus glacialis</i>)	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9004173	St Abb's Head to Fast Castle SPA	104	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Guillemot (non-breeding seasons only)		Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Breeding seabird assemblage	Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9002471	Troup, Pennan and Lion's Heads SPA	107	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Guillemot (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Razorbill	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
UK9006021	Farne Islands SPA	111	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Breeding seabird assemblage	Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9006031	Coquet Island SPA	143	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9001182	East Caithness Cliffs SPA	199	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Razorbill (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9001181	North Caithness Cliffs SPA	218	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Attraction to light
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9002291	Copinsay SPA	237	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	
UK9002292	Hoy SPA	243	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Breeding seabird assemblage		Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
UK9006101	Flamborough and Filey Coast SPA	260	Gannet (non-breeding seasons only)	Operation and maintenance	Collision; Displacement; Barrier effects.
			Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
Operation and maintenance	Collision;				

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Construction	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
			Razorbill (non-breeding seasons only)		Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9002431	Calf of Eday SPA	273	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Operation and maintenance	Collision; Displacement; Barrier effects;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
UK9002432	Rousay SPA	274	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance
			Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.	

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
UK9002121	Marwick Head SPA	277	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
UK9002101	West Westray SPA	285	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
UK9002441	Fair Isle SPA	289	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Attraction to light
			Gannet (non-breeding seasons only)	Operation and maintenance	Collision; Displacement; Barrier effects.
			Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance
				Operation and maintenance	Collision; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance
			Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Changes in prey availability due to temporary habitat loss/disturbance.
UK9002081	Noss SPA	357	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Gannet	Operation and maintenance	Collision; Displacement; Barrier effects.
			Breeding seabird assemblage	Construction	Attraction to light
				Operation and maintenance	Collision; Displacement; Barrier effects; Attraction to light.
Decommissioning	Attraction to light				
UK9002061	Foula SPA	359	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance.
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance;

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
					Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9002071	Fetlar SPA	405	Fulmar	Construction	Attraction to light.
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Breeding seabird assemblage	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
UK9002051	Hermaness, Saxa Vord and Valla Field SPA	425	Fulmar	Construction	Attraction to light
				Operation and maintenance	Displacement; Attraction to light.
				Decommissioning	Attraction to light
			Gannet	Operation and maintenance	Collision; Displacement; Barrier effects.
			Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Operation and maintenance	Direct temporary habitat loss/disturbance; Displacement; Barrier effects; Changes in prey availability due to temporary habitat loss/disturbance.
				Decommissioning	Direct temporary habitat loss/disturbance; Changes in prey availability due to temporary habitat loss/disturbance
			Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
				Operation and maintenance	Direct temporary habitat loss/disturbance; Collision; Displacement; Barrier effects; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.

Site ID	Site name	Distance to Morven North (km)	Relevant qualifying features	Project phase	Potential impact
				Decommissioning	Direct temporary habitat loss/disturbance; Attraction to light; Changes in prey availability due to temporary habitat loss/disturbance.
UK9004172	St Kilda SPA	448	Gannet (non-breeding seasons only)	Operation and maintenance	Collision; Displacement; Barrier effects;
			Breeding seabird assemblage	Operation and maintenance	Collision; Displacement; Barrier effects.

4 Information to inform the Appropriate Assessment

4.1 Introduction

- 4.1.1.1 As described in RIAA Part 1, a European site is progressed to the Appropriate Assessment stage (Stage 2 of the HRA process) where it is not possible to rule out potential LSEs² on one or more of its qualifying interest features in view of the site's conservation objectives. European sites, features and potential impacts requiring an Appropriate Assessment for Morven North are therefore those for which the potential for LSE² could not be ruled out during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1 and following consultation).
- 4.1.1.2 Information to help inform the Appropriate Assessment for SPAs (and Ramsar sites) is provided in the following sections of this Part of the RIAA. The information provided includes a description of the SPAs (and Ramsar sites) under consideration, their qualifying interest features, and an assessment of potential effects on site integrity in light of the conservation objectives of each site. A cross-referencing approach has been adopted to aid readability and reduce repetition where relevant, but that this has been carefully carried out to ensure that all information required for a robust HRA of each site is presented.

4.2 Maximum Design Scenarios

- 4.2.1.1 The assessments for all SPAs (and Ramsar sites) considered in this Part of the RIAA have been based on a realistic MDS, which was derived from the Project Design Envelope (PDE). An overview of the MDS considered for the assessment of potential impacts on ornithological features considered in this Part of the RIAA for each impact assessed is provided in each respective section (see Section 5). This MDS is consistent with that used for the assessment in Volume 2, Chapter 11: Offshore Ornithology, of the EIA Report.

4.3 Designed-in measures

- 4.3.1.1 As part of the Morven North design process, a number of designed-in measures have been included in Morven North and are committed to be delivered by the Applicant as part of Morven North. These designed-in measures are integrated into the project description for Morven North and are not considered as mitigation measures intended to specifically avoid or reduce effects on European sites.
- 4.3.1.2 Measures intended specifically to avoid or reduce effects on European sites were not considered during the HRA Stage 1 Screening but are included within the HRA Stage 2 Appropriate Assessment for determination of adverse effects on integrity. Where relevant, this Part of the RIAA indicates whether adverse effects on European sites are likely and if so, whether those effects can be avoided through the introduction of mitigation measures that avoid or reduce the effect. These measures are referred to as further mitigation measures and may be taken from Volume 2, Chapter 11: Offshore Ornithology, of the EIA Report or, where necessary, may have been developed specifically to comply with HRA requirements. Where the latter is the case, this has been made clear throughout. All measures are detailed in the EIA Commitments Register (Volume 3 Annex 6.4: EIA Commitments Register, of the EIA Report).

4.4 Baseline information

- 4.4.1.1 Baseline information on the SPAs identified for further assessment within the HRA Stage 2 Appropriate Assessment has been collated through a comprehensive review of existing desktop studies and datasets. Key desktop data sources are presented in Section 5.2 for ornithological features. Where applicable, any additional data sources used in the HRA Stage 2 Appropriate Assessment are also included in this section. Further baseline

information is presented within Volume 2, Chapter 11: Offshore Ornithology, of the EIA Report and accompanying technical reports.

- 4.4.1.2 For offshore ornithology SPA and Ramsar sites, the main source of baseline information comes from the 24 month site specific aerial survey data and baseline characterisation for ornithology. In addition to the baseline surveys, information was presented from multiple reports which investigated the ornithological assemblage of the regional study area as defined in Volume 3, Chapter 11.1: Offshore Ornithology Baseline Characterisation Report.
- 4.4.1.3 The detailed methods, results and analysis of the aerial surveys and additional data required to inform the assessment presented in the RIAA are presented within documentation associated with the EIA Report and RIAA:
- Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report of the EIA Report;
 - Volume 3, Annex 11.2: Offshore Ornithology Collision Risk Modelling Report of the EIA Report;
 - Volume 3, Annex 11.3: Offshore Ornithology Collision Risk Modelling Report: Migratory of the EIA Report;
 - Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach) of the EIA Report;
 - Volume 3, Annex 11.5: Offshore Ornithology Displacement Modelling Report (SeabORD) of the EIA Report;
 - Volume 2, Annex 3.1: RIAA: Apportioning
 - Volume 2, Annex 3.2: RIAA: Population Viability Analysis

4.5 Conservation objectives and conservation advice

- 4.5.1.1 UK Statutory Nature Conservation Bodies (SNCBs) have produced conservation advice for European sites under their statutory remit. This conservation advice provides supplementary information on sites and features, and although the content provided is similar, the format of the advice provided varies between the different SNCBs.
- 4.5.1.2 Conservation objectives set the framework for establishing appropriate conservation measures for each feature of the site and provide a benchmark against which plans or projects can be assessed. The conservation objectives set out the essential elements needed to ensure that a qualifying habitat or species is maintained or restored at a site. If all the conservation objectives are met, then the integrity of the site will be maintained, and deterioration or significant disturbance of the qualifying features avoided.
- 4.5.1.3 In this RIAA Part 3, the Applicant has referenced the most up-to-date conservation objectives and conservation advice available. It is recognised that in the conservation advice documents, if any feature of the SPA is in unfavourable condition, the integrity of the site is deemed to be compromised and the overarching objective is therefore to restore site integrity.
- 4.5.1.4 Due to the location and scale of Morven North, European sites with the potential to be impacted fall variously under the remit of NatureScot, Natural England and the Joint Nature Conservation Committee (JNCC).
- 4.5.1.5 For Scottish SPAs, NatureScot has published conservation and management advice documents for each site. These documents provide detailed conservation objectives which are used as part of the assessments in this RIAA Part 3.
- 4.5.1.6 SPAs that stretch into offshore waters beyond the territorial sea limit fall under the remit of JNCC. For these SPAs, JNCC has published conservation and management advice. This information has been used as part of the assessments in this RIAA Part 3.

4.5.1.7 For some SPAs, Natural England has published a ‘European Site Conservation Objectives: Supplementary advice on conserving and restoring features’ document. The document presents attributes which are ecological characteristics of the designated species and habitats within a site. Each attribute has a target which is either quantitative or qualitative depending on the available evidence. Targets are also listed for the desired state to be achieved for the attribute.

4.6 Approach to the in-combination assessment

4.6.1 Overview

4.6.1.1 The approach taken for the assessment of in-combination impacts has been partly informed by the Cumulative Effects Assessment (CEA) (see Volume 1, Chapter 6: EIA Methodology, of the EIA Report for further detail) carried out for relevant topics in the EIA Report (Volume 2, Chapter 9: Fish and Shellfish Ecology and Volume 2, Chapter 11: Offshore Ornithology, of the EIA Report). The methodology for the in-combination assessment is compliant with HRA guidance and is summarised in the following paragraphs.

4.6.1.2 The following assessment scenarios have been considered to identify the potential impacts of Morven North in combination with other plans and projects on the same receptor, as follows (and summarised in Table 4.1):

- Whole Project assessment: to identify the potential impacts associated with Morven North together with each grid connection option in turn, Scenario 1: Morven Hawthorn Pit Grid Connection Project (MHPGC Project) and Scenario 2: Morven Branxton Area Grid Connection Project (MBAGC Project), each of which would comprise a “Whole Project”;
- Morven Programme assessment: to identify potential impacts associated with all four components of the Morven Programme (Morven North, Morven South, MHPGC and MBAGC) (Scenario 3);
- In-combination assessment: to identify the potential impacts associated with Morven North together with other relevant projects, plans and activities including other components of the Morven Programme, using a tiered approach (Scenario 4).

Table 4.1: Scenarios to be considered in the Morven North whole project assessment, Morven Programme assessment and in-combination assessment

Whole Project assessment		Morven Programme assessment	In-combination assessment
Scenario 1	Scenario 2	Scenario 3	Scenario 4
Morven North + MHPGC Project	Morven North + MBAGC Project	Morven North + Morven South + MHPGC Project + MBAGC Project	Morven North + Tier 1, Tier 2 and Tier 3 Plans/Projects screened in

4.6.2 Identification of projects considered in-combination

4.6.2.1 The screening undertaken for the CEA in the EIA Report has been used to inform the list of projects and plans relevant to the in-combination assessment. Each project or plan has been considered on a case-by-case basis for screening in or out of this in-combination assessment based upon data confidence, effect-receptor pathways and the spatial/temporal scales involved. See Volume 3, Annex 6.2: Cumulative Effects Screening, of the EIA Report for further details on the CEA screening process.

- 4.6.2.2 In undertaking the in-combination assessment for Morven North, it should be noted that other projects and plans under consideration will have differing potential for proceeding to an operational stage and hence a differing potential to ultimately contribute to an in-combination impact alongside Morven North. Therefore, a tiered approach has been adopted whereby the in-combination assessment will be provided in tiers of projects. This provides a framework for placing relative weight upon the potential for each project/plan to be included to ultimately be realised, based upon the project/plan's current stage of maturity and certainty in the projects' parameters. This includes the allocation of the other three components of the Morven Programme into Tiers for assessment in the in-combination assessment.
- 4.6.2.3 The tiered approach utilised within the Morven North in-combination assessment employs the following tiers:
- Tier 1 assessment – Existing developments either built (operational) or under construction²; approved developments awaiting implementation; and permitted/submitted application(s), but not yet determined.
 - Tier 2 assessment – All plans/projects assessed under Tier 1, and plans/projects where a scoping report has been submitted and is in the public domain.
 - Tier 3 assessment – All plans/projects assessed under Tier 1 and 2, plus plans/projects that are reasonably foreseeable (e.g. projects identified in development plans, projects in other plans and programmes, offshore renewable energy projects that have a Crown Estate Scotland Lease Option Agreement).
- 4.6.2.4 The specific projects scoped into the in-combination assessment for offshore ornithological features are presented in Section 5.5. Projects are considered quantitatively within the assessments presented in Section 5.5, where quantitative information for a project was available at least six months before the application submission date for Morven North. Whilst an additional screening exercise was undertaken three months before the submission date of Morven North to ensure all projects that could contribute to an in-combination effect with Morven North were captured within Volume 3, Annex 6.2: Cumulative Effects Screening it is not possible to incorporate any further projects into the assessments presented in Volume 3, Annex 6.2: Cumulative Effects Screening in a quantitative manner. This, however, only affects one project, the Ayre offshore wind farm, for which quantitative information in a format required for inclusion in the in-combination assessments presented in Section 5.5 was not available prior to the six month cut-off mentioned above for quantitative consideration.
- 4.6.2.5 As part of the in-combination assessment all projects for which collision risk estimates or population estimates are available are considered. This approach is consistent with the approach taken for previous offshore wind farm projects in UK waters. In some cases, SPAs for which the potential for LSE² could not be ruled out in relation to potential impacts associated with Morven North may not have been given detailed consideration in the assessments produced previously for other projects considered in-combination. This often means that apportioning values in the breeding season for some SPAs are not provided in project-specific documentation for older projects. Where this occurs, available breeding season apportioning values from the nearest project for which a value is available have been

² Note that existing developments are included in Tier 1 CEA long list but are generally screened out of the CEA assessments, aside from the following exceptions:

- a) Existing developments which were not present at the time of baseline characterisation, where a potential cumulative impact-receptor pathway has been identified.
- b) Existing developments are screened into Tier 1 assessments for specific topics where there is a large conceptual, temporal and spatial overlap between project impacts. In these instances, the potential for ongoing effects through cumulative impact-receptor pathways throughout project lifetime, across the development phases, means that they are considered within quantitative assessment for these topic CEAs (e.g., offshore ornithology assessments consider the cumulative effects of operational offshore wind farms).

applied. Where this approach has been followed, it has been identified above relevant tables in Section 5.5.

- 4.6.2.6 In the non-breeding seasons, although apportioning values may not have been calculated for SPAs in project-specific documentation for projects considered in-combination, apportioning values for these seasons are readily calculated from Furness (2015) and, generally the same as those used for Morven North. Where apportioning values are required outside of the breeding season for guillemot and herring gull, for which a different approach to calculating non-breeding season apportioning values is applied these values are taken from project-specific documentation.
- 4.6.2.7 Collision risk estimates for projects considered in-combination have been updated using the avoidance rate recommended by NatureScot (NatureScot, 2025b) for the relevant species to provide a precautionary approach that ensures sites are not omitted from the assessment prematurely. Assumptions in relation to in-combination displacement impacts are provided for each relevant SPA in Section 5.5.

4.6.3 Threshold for in-combination assessment

- 4.6.3.1 NatureScot have advised (pre-application consultation January 2025) that in-combination assessments are only required when the impact associated with Morven North alone represents a mortality of more than 0.2 birds/annum. This threshold has been applied throughout to all quantitative assessments presented in this RIAA Part 3 and it is therefore considered that where the impact associated with Morven North is less than 0.2 birds/annum, that Morven North will not materially contribute to any existing in-combination impact.

5 Assessment of potential adverse effects on integrity

5.1 Introduction

- 5.1.1.1 This section provides background information and explanation for the approach taken to assess the potential impacts of Morven North on SPAs and Ramsar sites designated for offshore ornithological features.
- 5.1.1.2 As stated in Section 3.2, the potential for LSE² could not be ruled out for offshore ornithological features of 24 SPAs, which are listed in Table 3.1 and Figure 3.1.
- 5.1.1.3 The potential for LSE² on the SPAs presented in Table 3.1 could not be ruled out for all project phases of Morven North, which are outlined below in Table 5.1. A range of designed-in measures have been committed to as part of Morven North, and these are presented, where relevant, in Section 5.3.3 per impact, as well as in the EIA Commitments Register (Volume 3 Annex 6.4: EIA Commitments Register, of the EIA Report).

Table 5.1: Potential impacts to offshore ornithological features of the European sites identified for Appropriate Assessment

Project phase	Potential impact
Construction	Direct temporary habitat loss/disturbance Changes in prey availability due to temporary habitat loss/disturbance Attraction to light
Operation and maintenance	Direct temporary habitat loss/disturbance Changes in prey availability due to temporary habitat loss/disturbance Displacement Collision Barrier effects Attraction to light Changes in prey availability due to temporary habitat loss/disturbance
Decommissioning	Direct temporary habitat loss/disturbance Changes in prey availability due to temporary habitat loss/disturbance Attraction to light

5.2 Potential impacts and method of assessment

5.2.1 Introduction

- 5.2.1.1 As described in Sections 2 and 4, the assessments within this RIAA have been carried out with regards to NatureScot's Guidance Notes (NatureScot, 2023a-i) along with advice received through the consultation process (Table 2.1). However, the Habitats Regulations requires HRA to be based on the best available scientific information and, in some instances, the Applicant considers the advice and guidance provided to be overly precautionary based on a review of the available scientific literature. Therefore, for some assessments, this RIAA

presents a separate NatureScot approach and Applicant's approach. The NatureScot approach follows NatureScot's guidance and advice received from NatureScot through the consultation process. The Applicant's approach follows the Applicant's interpretation of the best available scientific information (as detailed in the assessment methodology below) whilst still being sufficiently precautionary to account for the uncertainty in the scientific information available.

5.2.2 Assessment methodology

Seasonal definitions

- 5.2.2.1 Seasonal definitions used as the basis for assessment are provided in Table 5.2. Seasons have been defined based on NatureScot advice (breeding season) (NatureScot, 2020) with non-breeding seasons split, where necessary, based on the seasonal extents defined in Furness (2015) with priority given to the breeding season where overlaps exist. Where the seasonal extents presented in NatureScot (2020) begin or end within a month, the middle of the month was used as the cut off for inclusion in either the breeding or relevant non-breeding season. Months were assigned to a season based on the day that the site-specific survey from which abundance estimates were calculated was flown. Timings of each survey can be found in Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report of the EIA Report.
- 5.2.2.2 In the case of guillemot and razorbill, further advice has been sought from NatureScot regarding seasonality, and the inclusion of alternative seasons for use in displacement analyses for these species (see Volume 1, Chapter 5: Consultation of the EIA Report). This advice, and full descriptions and justifications of changes to the seasonal extents used for these two species can be found in Appendix B of Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report. It was agreed that peak abundances of both guillemot and razorbill in the Morven North Boundary occurring late in the breeding season likely represents post-breeding dispersal of birds from breeding colonies. This aligns with the phenology provided in Furness (2015), which describes modal dispersal from breeding colonies as taking place in July and colonies being deserted by August. It also aligns with fledging data from the Isle of May from 2021 to 2023, where chicks fledge between late June and early August (see Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report of the EIA Report). As a result the data used for displacement analysis for guillemot utilises different seasonal extents in the two years of baseline data. This is identified in Table 5.2. For all other species the seasonal extents used are the same in both survey years.
- 5.2.2.3 In the case of guillemot, NatureScot advised during a consultation meeting undertaken on 28 May 2025 that July and August should be included in a post-breeding season, where the abundance estimates were higher than those recorded in surrounding months. In the case of Morven North, a post-breeding season comprising July and August 2022 and July 2023 has been defined. Full justification for the inclusion of these months in the post-breeding season is provided in Appendix B of Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report.
- 5.2.2.4 In the case of razorbill, NatureScot has advised that the post-breeding season should be extended to include the months in which peak abundance was recorded during the digital aerial surveys; in this case, this means including July and August in the post-breeding season rather than the breeding season.

Table 5.2: Seasonal definitions as the basis for assessment, from NatureScot (2020) and Furness (2015) and after additional advice from NatureScot taking into account the date each baseline survey was flown

Species	Pre-breeding season/spring migration	Breeding season	Post breeding season/autumn migration	Non-breeding/winter season
Kittiwake	January to April	May to August	September to December	n/a
Gannet	December to March	April to September	October to November	n/a
Guillemot	n/a	April to June 2022 and 2023	July and August 2022 and July 2023	August 2021 to March 2022 and September 2022 to March 2023
Razorbill	January to March	April to June	July to October	November to December
Puffin	n/a	April to August	n/a	September to March
Fulmar	December to March	April to September	October	November

Apportioning and population modelling

- 5.2.2.5 For HRA purposes, it is then necessary to ‘apportion’ the impact to SPA populations. For Morven North, the apportioning values applied are presented in Volume 2, Annex 3.1: RIAA: Apportioning. During the breeding season, a theoretical approach (developed by NatureScot (NatureScot, 2018)) has been applied to determine the proportion of birds from SPAs which use Morven North in the breeding season. In relevant tables in section 5.3.3, apportioning values presented for the breeding season represent a combination of the colony proportion (as calculated in Volume 2, Annex 3.1: RIAA: Apportioning, the adult:immature ratio and the sabbatical proportion).
- 5.2.2.6 In the non-breeding period, the standard approach to apportioning that utilises the population data presented in Furness (2015), is applied for all species with the exception of guillemot and herring gull.
- 5.2.2.7 For herring gull the applied approach is similar to the Furness (2015) approach described above, but instead of using the BDMPS areas defined in Furness (2015), the area of the BDMPS is defined as the mean-maximum foraging range of the species plus one SD (Woodward *et al.*, 2019). The breeding adult population within this area plus the associated immature population (calculated using the stable age proportions from Furness (2015)) are then totalled to provide the BDMPS population. The population of the relevant SPA is then divided by the BDMPS population to provide the apportioning value.
- 5.2.2.8 For guillemot, a different approach has been agreed between the Applicant and NatureScot during pre-application consultation undertaken in October 2025. Due to the increased populations recorded at Morven North in surveys undertaken in July and August it is considered that guillemots from a wider range of colonies than would usually be identified following the approach normally recommended by NatureScot (the application of the mean-maximum foraging range plus one SD) may be contributing to the population present at Morven North. The approach for guillemot therefore utilises tracking data collected by Buckingham *et al.* (2023) to identify the colonies that may contribute birds to the population present at Morven North. These data suggest that guillemot from colonies between the Troup,

Pennan and Lion's Heads SPA and the St Abb's Head to Fast Castle SPA may occur at Morven North during the post-breeding and non-breeding seasons. The total population of guillemot at colonies in this area has been calculated to provide the total breeding population. This population has been multiplied by the immature ratio presented in Furness (2015) to calculate the number of immatures associated with this population. These two populations have then been combined to provide the total population from which birds at Morven North may originate. The population of each SPA has then been divided by the total population to calculate apportioning values which are then applied to post-breeding and non-breeding season impacts.

- 5.2.2.9 Following apportioning, the predicted impact upon each qualifying feature is considered in relation to the potential for adverse effect. Where the impact represents more than a 0.02 percentage point increase in the baseline mortality of the SPA population, additional assessment steps, including population modelling, may be required. Population modelling has followed NatureScot guidance (NatureScot, 2023h) and uses the Natural England Population Viability Analysis tool (Searle *et al.*, 2019) with the methodology and results for all applicable SPAs and associated qualifying features presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis. The proposed lifetime for Morven North is 35 years and this is therefore used as the basis for the assessments presented in this RIAA Part 3. The results presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis provide PVA outputs for all years assuming impacts will operate for 50 years following NatureScot guidance.
- 5.2.2.10 Where the increase in baseline mortality is below the threshold of 0.02 percentage points, then it can be concluded that there is no possibility for the additional mortality caused by the impact in question to have any discernible impact on the relevant SPA population. Seabird survival and productivity is influenced by environmental stochasticity, leading to natural variation in survival and productivity rates. This natural variation far exceeds a 0.02 percentage point increase in mortality (Horswill and Robinson, 2015) and therefore it can be concluded that the additional mortality would not have an impact on the population size that is detectable within the operational lifespan of Morven North and therefore additional assessment steps, including population modelling, are not required.

In-combination

- 5.2.2.11 As discussed in Section 4.6.3, NatureScot have advised (pre-application consultation January 2025; Table 2.1) that in-combination assessments are only required when the impact associated with Morven North alone represents more than 0.2 birds/annum. This threshold has been applied throughout to all quantitative assessments presented in this RIAA Part 3 and it is therefore considered that where the impact associated with Morven North is less than 0.2 birds/annum, that Morven North will not materially contribute to any existing in-combination impact.

5.2.3 Direct temporary habitat loss/disturbance

- 5.2.3.1 There is potential for temporary, direct benthic habitat loss as a result of activities during the construction, operations and maintenance, and decommissioning phases of Morven North (e.g. seabed preparation, Unexploded Ordnance (UXO) detonation, drilling, inter-array and interconnector cables installation and removal, vessel movements). These activities have the potential to affect the foraging efficiency of diving birds.
- 5.2.3.2 In addition to this direct habitat loss, temporary disturbance as the result of activities during the construction, operations and maintenance, and decommissioning phases of an offshore wind farm has the potential to displace seabirds from an area of sea in which the activity is occurring.
- 5.2.3.3 In relation to offshore wind farm development, disturbance is defined as an interruption to a bird's normal pattern of activity caused by anthropogenic activity (JNCC *et al.*, 2022). This may lead to a reduction in the number of seabirds occurring within or immediately adjacent

to the disturbance event. Disturbance can be considered as a temporary indirect habitat loss, as it results in birds unable to utilise the habitat in the area from which they have been disturbed for a given period of time. Upon cessation of the disturbance event birds may then return to the area from which they were disturbed. The Morven North design includes a Navigation Safety Plan and Vessel Management Plan (NSPVMP) (Volume 4, Annex 5: Outline Navigation Safety Plan and Vessel Management Plan (NSPVMP) of the EIA Report), which will reduce disturbance of seabird species by avoiding bird populations and/or migratory routes.

5.2.3.4 The loss of habitat means that displaced birds may move to areas already occupied by other birds and thus may face higher intra- or inter-specific competition due to a higher density of individuals competing for the same resources. Alternatively, displaced birds may be forced to move into areas of lower quality (e.g. areas of lower prey availability) or travel longer distances to reach habitat of a suitable quality. This could therefore affect their demographic fitness (i.e. survival rates and breeding productivity), as well as potentially impacting on other birds in areas that displaced birds move to (for example, by increasing competition for resources).

5.2.3.5 The impact of disturbance and displacement has been assessed qualitatively. Project activities that may result in disturbance are expected to be intermittent and spatially limited at any given time, and therefore a qualitative assessment is considered to be proportional to the magnitude of the anticipated impacts.

5.2.4 Changes in prey availability due to temporary habitat loss/disturbance.

5.2.4.1 There is potential for changes to availability, via temporary direct benthic habitat loss and disturbance to sediments as a result of activities during all phases (e.g. seabed preparation, UXO detonation, drilling, inter-array and interconnector cable installation and repair/reburial and removal of infrastructure). This has potential to indirectly affect birds by directly affecting prey species, such as fish, shellfish and bivalves.

5.2.4.2 Seabirds may be indirectly disturbed and displaced during the construction, operations and maintenance, and decommissioning phases as a result of direct impacts on habitat and increased SSCs (for example, due to turbine installation), which may result in the loss of a food resource to birds within the Morven North Boundary. The increase in SSCs may also reduce the ability of birds to capture prey in the water column.

5.2.4.3 As a result, displaced seabirds may move to areas already occupied by other birds but, in doing so, may face higher intra/inter-specific competition due to a higher density of individuals competing for the same resource. Alternatively, displaced birds may be forced to move into areas of lower quality (e.g. areas of lower prey availability). Such disturbance and resulting displacement could ultimately affect their demographic fitness (i.e. survival rates and breeding productivity) as well as potentially impacting on other birds in areas that displaced birds move to.

5.2.4.4 The potential impacts on fish, shellfish and bivalve prey are provided in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report and include temporary subtidal habitat loss/disturbance and increased SSCs and associated sediment deposition.

5.2.5 Displacement

5.2.5.1 This impact relates to the physical displacement that could occur if birds avoid the area occupied by Morven North during the operation and maintenance phase.

5.2.5.2 It should be noted that for breeding seabirds, it can be difficult to distinguish between displacement and barrier effects for breeding seabirds (JNCC *et al.*, 2022). JNCC *et al.*, (2022) defines barrier effects as “a physical factor that limits the migration, or free movement of individuals or populations, thus requiring them to divert from their intended path in order to

reach their original destination". For any individual seabird, whether Morven North creates a displacement effect, a barrier effect, both, or neither would depend on where that individual would have foraged in the absence of Morven North, where it chooses to forage instead, and the route it takes to get there.

- 5.2.5.3 The current guidance from NatureScot (2023f) therefore recommends treating both displacement and barrier effects together as "distributional responses" and, for breeding seabirds, recommends assessing these distributional responses together. Therefore, for breeding seabirds, the approach to the displacement assessment covers both displacement and barrier effects, whilst the assessment of "barrier to movement" (Section 5.2.7) only considers the barrier effect to migratory birds.
- 5.2.5.4 Displacement has been screened in for a number of sites and species during operation and maintenance phase, as a result of a direct response to operational wind turbines. A distributional response may impact bird populations by affecting site usage which may be for foraging, resting or moulting purposes. As a result of displacement, an individual bird may experience a decrease in fitness, due to the effect of re-locating to alternative foraging grounds and or changes to energy budgets due to the increased energy expenditure when avoiding a wind farm. These impacts, in turn, may have indirect effects on birds in areas that may be some distance from the wind farm, including reduced energy acquisition as a result of increased competition at other foraging sites which can result in further reductions in fitness affecting reproductive success.
- 5.2.5.5 The displacement assessment for relevant qualifying features is primarily based on the use of the displacement matrix approach (JNCC *et al.*, 2022), which was agreed during consultation with NatureScot (Table 2.1). Seabirds may not be displaced solely from the Morven North Boundary, but also a Zone of Influence (ZoI) around the array. This ZoI is defined as Morven North plus a 2km buffer in all directions, in line with the recommended approach (NatureScot 2023f; JNCC *et al.*, 2022). Therefore, all species, seasonal mean peak abundances used for displacement analysis are based on the abundance within Morven North plus 2km buffer.
- 5.2.5.6 The consequences of a distributional response can include displacement and potentially mortality, with percentage values applied for these. These are presented in Table 5.3 in terms of the values defined in NatureScot guidance (2023f) (NatureScot's approach) alongside values that represent the Applicant's approach. Assessments are conducted using both sets of values are provided to enable a comparison to be made. A full discussion on the rates used and full approach of the displacement assessment is provided in Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report.

Table 5.3: Displacement and mortality rates included for consideration in assessment

Species	Displacement Rate (%)		Mortality rate (%)		
	NatureScot's approach	Applicant's approach	NatureScot's approach		Applicant's approach
			Breeding season	Non-breeding season	All seasons
Kittiwake	30	30	1 and 3	1 and 3	1
Guillemot	60	50	3 and 5	1 and 3	1
Razorbill	60	50	3 and 5	1 and 3	1
Puffin	60	50	3 and 5	1 and 3	1
Gannet	70	70	1 and 3	1 and 3	1

Species	Displacement Rate (%)		Mortality rate (%)		
	NatureScot's approach	Applicant's approach	NatureScot's approach		Applicant's approach
			Breeding season	Non-breeding season	All seasons
Fulmar	20	10	1 and 3	1 and 3	1

5.2.6 Collision risk

- 5.2.6.1 This impact relates to the potential for mortality arising from birds colliding with turbine structures, which will be present at Morven North once operational. Therefore, the ZoI defined for collision risk is the Morven North Boundary only.
- 5.2.6.2 Operational wind turbines and associated infrastructure present a collision risk for seabirds flying within Morven North. This includes birds commuting between breeding and foraging sites, migrating birds, and those foraging for food within Morven North. Direct collision with infrastructure may result in injury or death, however, it is assumed that all collisions with operational wind turbines result in mortality.
- 5.2.6.3 Collision risk modelling was undertaken using the Stochastic Collision Risk Model (sCRM) (Caneco and Humphries, 2022) which is based on the stochLAB R package as recommended by JNCC *et al.* (2024b) and NatureScot (2025b). The input parameters used to parameterise models for each species are presented in Volume 3, Annex 11.2: Offshore Ornithology Collision Risk Modelling Report, of the EIA Report.
- 5.2.6.4 Flight height and density information, along with the wind turbine specifications, number of wind turbines, and other seabird parameters (e.g. size, flight type and nocturnal activity), are used to estimate the number of collisions. Initially, the model assumes that birds within the wind farm do not avoid individual wind turbines, swept areas, or blades, nor do they avoid the whole wind farm (macro-avoidance). Avoidance rates are then applied to adjust collision estimates.
- 5.2.6.5 Flight height distribution data for each species has been derived from Johnston *et al.* (2014) which provides generic flight height distributions for all of the species for which collision risk modelling was required at Morven North.
- 5.2.6.6 Collision risk modelling has incorporated draft guidance on recommended avoidance rates, bird size, flight speed, flight type, and nocturnal activity scores from NatureScot (NatureScot, 2025). Throughout the document, outputs using NatureScot's recommended input parameter values have been presented alongside outputs calculated using different input parameter values for certain parameters (e.g. flight speed and avoidance rate) which the Applicant considers represent the best available evidence. By presenting outputs calculated using different input parameters, the uncertainty associated with different parameters can be explored. The input parameter values used in collision risk modelling for each species are presented in Table 5.4.
- 5.2.6.7 Collision risk estimates for the species considered within this RIAA Part 3, calculated using stochastic modelling approaches, are presented in Table 5.5. 70% macro-avoidance rates have been applied to estimates for gannet in the post-breeding and pre-breeding seasons in the NatureScot approach, and in all seasons in the Applicant approach. Complete results of both stochastic and deterministic modelling approaches following NatureScot advice, are presented in Volume 3, Annex 11.2: Offshore Ornithology Collision Risk Modelling Report, of the EIA Report.

Table 5.4: Species biometrics and input parameters used in collision risk modelling

Parameter	Approach	Source	Kittiwake	Herring gull	Gannet
Bird length (m)	NatureScot and Applicant	JNCC <i>et al.</i> (2024)	0.39 (± 0.005)	0.60 (± 0.0225)	0.94 (± 0.0325)
Wingspan (m)	NatureScot and Applicant	JNCC <i>et al.</i> (2024)	1.08 (± 0.0625)	1.44 (± 0.03)	1.72 (± 0.0375)
Flight speed (m/s)	NatureScot	Alerstam <i>et al.</i> (2007)/JNCC <i>et al.</i> (2024)	13.1 (± 0.40)	12.8 (± 1.80)	-
	NatureScot	Pennycuick (1997) /JNCC <i>et al.</i> (2024)	-	-	14.9 (± 0)
	Applicant	Skov <i>et al.</i> (2018)	8.71 (± 3.16)	9.8 (± 3.63)	13.33 (± 4.24)
Nocturnal activity factor	NatureScot and Applicant	Cook <i>et al.</i> (2023)	0.40 (± 0.12)	-	0.14 (± 0.10)
	NatureScot and Applicant	Garthe and Hüppop (2004)	-	0.375 (± 0.0637) / 0.25 to 0.5	-
Flight type	NatureScot and Applicant	JNCC <i>et al.</i> (2024)	Flapping	Flapping	Gliding
Proportion of flights upwind (%)	NatureScot and Applicant	JNCC <i>et al.</i> (2024)	50	50	50
Avoidance rate	NatureScot and Applicant (gannet) NatureScot (kittiwake)	Ozsanlav-Harris <i>et al.</i> (2023) (all gull rate)	0.9929 (± 0.0003)	-	0.9929 (± 0.0003)
	NatureScot	Ozsanlav-Harris <i>et al.</i> (2023) (large gull rate)	-	0.9940 (± 0.0004)	-
	Applicant	Ozsanlav-Harris <i>et al.</i> (2023) (species-specific rate)	0.9979 (± 0.0013)	0.9952 (± 0.0003)	-

Table 5.5: Seasonal collision risk estimates for gannet, herring gull, and kittiwake associated with Morven North, using a stochastic model

Species	Approach	Seasonal collision risk estimates (no. of birds)				Total impact (no. of birds)
		Breeding	Post-breeding	Non-breeding	Pre-breeding	
Gannet	NatureScot	9.7	0.7		0.2	10.6
	Applicant	2.7	0.7		0.2	3.6
Herring gull	NatureScot	0.6		0.3		0.9
	Applicant	0.4		0.2		0.6
Kittiwake	NatureScot	19.8	2.3		2.8	25.0
	Applicant	4.5	0.5		0.6	5.6

5.2.7 Barrier effects

- 5.2.7.1 JNCC *et al.* (2022) defines barrier effects as “a physical factor that limits the migration, or free movement of individuals or populations, thus requiring them to divert from their intended path in order to reach their original destination. This effect is expected to increase the energy expenditure of birds if they have to fly around the area in question in order to reach their goal”.
- 5.2.7.2 Once Morven North is operational, the presence of wind turbines could create a barrier to the movements of flying birds. This could lead to permanent changes in the flight routes of birds, which in turn would lead to an increase in energy demands, and could result in reduced breeding success and/or reduced survival rates. The ZoI for barrier to movement is defined as the Morven North Boundary only, as there is no impact on birds which would not fly through the Morven North Boundary.
- 5.2.7.3 Barriers to movement could affect birds that would pass through Morven North on their annual migrations, and also birds that would pass through Morven North during their daily movements between their roosting/breeding area and foraging sites. The latter of these scenarios may impose an additional energetic cost to movements at a key period in the annual cycle when seabirds are making daily commutes between foraging grounds at sea and breeding sites. Additional energetic costs could have long term implications for individuals, impacting bird fitness (breeding productivity and survival) and for populations. Barrier effects are considered to be less impactful when affecting migratory flights as avoidance of a single wind farm may be trivial relative to the total length and cost of the journey (Masden *et al.*, 2010; 2012).
- 5.2.7.4 For breeding seabirds, NatureScot (2023f) consider barrier effects alongside displacement as “distributional responses”. This is because it can be difficult to distinguish barrier effects from the effects of displacement for breeding seabirds foraging in the region. NatureScot (2023f) advise that distributional responses are assessed using the matrix approach, and therefore for breeding seabirds, no separate assessment of barrier to movement is carried out, with the assessments presented for disturbance and displacement considered to address any potential impacts arising from barrier effects. The assessments for barrier effects for relevant qualifying features therefore only consider potential impacts of barriers to movement during migratory seasons.

5.2.8 Attraction to light

- 5.2.8.1 There is the potential for artificial light associated with offshore wind farms to impact birds during the construction, operations and maintenance, and decommissioning phases.

- 5.2.8.2 Seabirds may be affected by offshore lighting via phototaxis (attraction to light which could potentially operate over ranges of tens of kilometres) and/or disorientation (the alteration of flight paths of birds within tens of metres of artificial light). Lit offshore structures may provide seabirds with opportunities for extended feeding periods, shelter, and resting places. They may also act as navigational aids for migrating birds. Artificial lighting may attract prey close to the sea surface, increasing foraging opportunities and prey availability – many fisheries specifically use artificial light to attract prey.
- 5.2.8.3 During the construction and decommissioning phases, construction and support vessels often use large-scale, continuous, broad-spectrum lighting for operational and safety reasons. These lights may potentially attract seabirds and/or modify the behaviour of seabirds in their proximity (Deakin *et al.*, 2022).
- 5.2.8.4 In the operations and maintenance phases light sources include wind turbines, associated infrastructure, and vessel lighting. It is a requirement for navigational and aviation safety that offshore wind farms include safety lighting. These lights may attract seabirds and/or modify the behaviour of seabirds in their proximity (Deakin *et al.*, 2022). The impacts of artificial lighting in the operations and maintenance phase are expected to be the same as or less than the impacts at the construction phase, as the construction phase is expected to involve greater light levels (Deakin *et al.*, 2022).
- 5.2.8.5 Consideration of impacts associated with the attraction of relevant qualifying features to the light associated with Morven North has been undertaken qualitatively. A thorough review of the potential for each relevant qualifying feature to light has been undertaken and contextualised against the nature of lighting to be deployed at Morven North.

5.3 Baseline

5.3.1 Project-specific baseline

- 5.3.1.1 Table 5.6 presents the results of the site-specific digital aerial surveys undertaken Morven North between June 2021 and September 2023. A full description of the results of the site-specific baseline digital aerial surveys is provided in Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report. Table 5.6 also presents the results of the digital aerial surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023).

Table 5.6: Summary of the abundance and distribution of seabird species recorded during site-specific baseline Digital Aerial Surveys and regional digital aerial surveys covering part of the Scottish North Sea

Species	Site-specific abundance and distribution	Regional abundance and distribution
Kittiwake	<p>Kittiwakes were present in all baseline aerial surveys undertaken across the Morven North Offshore Ornithology Study Area.</p> <p>The species was most abundant towards the end of the breeding season (June and July) in both years with peak populations of 2,068 birds in June 2022 and 5,384 birds in July 2023. Outside of the breeding season the abundance of the species was generally lower than that recorded in the breeding season with peak populations of 306 birds in October 2021 and 221 birds in December 2022.</p>	<p>Kittiwakes were recorded in all the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023) with the highest numbers during the breeding season.</p> <p>The distribution of kittiwake in the breeding season was often centred on the western side of the survey area, especially during surveys undertaken in 2022, often overlapping with the Morven North Offshore Ornithology Study Area. In the non-breeding seasons there was no obvious trend in the distribution of kittiwake across the survey area.</p>
Herring gull	<p>Herring gulls were recorded within the Morven North Offshore Ornithology Study Area, with the highest populations estimated during the species breeding season and smaller numbers in the non-breeding season. The peak population was recorded in July 2021 (368 birds), with the highest densities of herring gulls being found in the northern part of the Morven North Offshore Ornithology Study Area in July 2021 and June 2023. There were no obvious trends in distribution in other months.</p>	<p>Herring gulls were recorded in 12 of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023). Less than 20 birds were recorded in all surveys except June and July 2022 (43 birds in both surveys), November 2022 (24 birds) and June 2023 (119 birds).</p> <p>Birds occurred in the Morven North Offshore Ornithology Study Area, though there was no trend in the distribution of this species.</p>
Guillemot	<p>Guillemots were recorded in all of the baseline aerial surveys undertaken across the Morven North Offshore Ornithology Study Area. The species was most abundant in the breeding and post-breeding season (May to August) in all three years with the peak population recorded in July 2023 (36,744 birds). It is considered that these populations represent post-breeding dispersal movements from breeding colonies. Outside of this period the abundance of the species was considerably lower.</p> <p>During the breeding season, densities were generally higher in the northern sector of the Morven North Offshore Ornithology Study Area, especially between May and July. There is no</p>	<p>Guillemots were recorded in all of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023) with the highest numbers during the breeding season, although numbers were lower in the second year of surveys. A peak count of 28,036 birds was recorded in the July 2022 survey.</p> <p>In the breeding season guillemot were abundant throughout the survey area including the Morven North Offshore Ornithology Study Area. There was a westerly bias in the distribution in May 2022 with this occurring more regularly in the second breeding season. In the August 2022 and 2023</p>

Species	Site-specific abundance and distribution	Regional abundance and distribution
	obvious trend in the distribution of guillemot in the non-breeding season.	surveys there was a northerly bias in the distribution of guillemot with birds tending to exhibit a more offshore distribution in the non-breeding season.
Razorbill	Razorbills were recorded in all but one of the baseline aerial surveys undertaken across the Morven North Offshore Ornithology Study Area. The species was most abundant towards the end of the breeding season and the start of the post-breeding season (July and August) in all three years with the peak population of 13,289 recorded in July 2021. Outside of this period the abundance of the species was considerably lower.	Razorbills were recorded in all of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023) with the highest numbers during the breeding season, although numbers were lower in the second year of surveys. A peak count of 3,095 birds was recorded in the July 2022 survey. The species was widespread throughout the survey area during the July 2022 survey whereas there was a westerly bias in the distribution of razorbill during the July 2023 survey. In the remaining surveys undertaken in the breeding season there was no obvious trend in the distribution of the species, with far fewer birds present, when compared to the July surveys, with birds not always recorded in the Morven North Offshore Ornithology Study area. There was also no obvious trend in the distribution of the species in the non-breeding season with birds also not recorded in the Morven North Offshore Ornithology Study Area in all months.
Puffin (Puffins were recorded in 26 of the baseline aerial surveys undertaken across the Morven North Offshore Ornithology Study Area. In 2021 and 2022, the species was most abundant during the breeding season and the start of the non-breeding season (mid-August and September), with peak counts in each year occurring in September 2021 (2,696 birds) and August 2022 (1,006 birds). In 2023, the highest populations occurred in February (544 birds), May (601 birds) and June (469 birds). Outside of these periods, population estimates were considerably lower with the species not recorded in January 2022 or August 2023.	Puffins were recorded in all of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023) with the highest numbers during the breeding season, although numbers were lower in the second year of surveys. A peak count of 1,023 birds was recorded in the July 2022 survey. In the July 2022 survey, there was a southerly bias in the distribution of the species whereas in the August 2022 survey there was a northerly bias in the distribution of the species. In other breeding season months there was no obvious trend in the distribution of the species. Very few puffin were recorded in the November 2022 and January 2023 surveys with no

Species	Site-specific abundance and distribution	Regional abundance and distribution
	<p>There is no obvious trend in the distribution of puffin on a seasonal or annual basis.</p>	<p>obvious trend in the distribution of puffin in all surveys conducted in the non-breeding season.</p>
Fulmar	<p>Fulmars were recorded in 27 of the baseline aerial surveys undertaken across the Morven North Offshore Ornithology Study Area. The species was most abundant from the middle of the breeding season (April to September) through the post-breeding (October) and non-breeding season (November) to the start of the pre-breeding season (December to March).</p> <p>There was no obvious trend in the distribution of fulmar on a seasonal or annual basis.</p>	<p>Fulmars were recorded in all of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023). Over 100 birds were recorded in all surveys except the April 2023 survey, with a peak of 1,306 birds in September 2022.</p> <p>There was no obvious trend in the distribution of fulmars in the majority of surveys. In the September and November 2022 and August 2023 surveys there was a northerly bias in the distribution of fulmars.</p>
Gannet (<p>Gannets were recorded in all but two of the baseline aerial surveys conducted across the Morven North Offshore Ornithology Study Area, with a general increase in May to a peak in June or July. The peak population estimates in the breeding season (March to September) occurred in July 2021 (1,651 birds), with the peak population in the post-breeding season and pre-breeding season occurring in October 2021 (742 birds) and February 2022 (32 birds) respectively. The peak population in 2022 occurred in June (1,318 birds) and the peak population in 2023 occurred in July (617 birds).</p> <p>There are no obvious trends in the distribution of gannet on a seasonal or annual basis.</p>	<p>Gannets were recorded in all of the surveys undertaken as part of the regional surveys covering part of the Scottish North Sea (HiDef Aerial Surveying Limited, 2023) with the highest numbers in the breeding season, although fewer birds in second year of surveys. A peak count of 884 birds was recorded in May 2022. There was no obvious trend in the distribution of gannet in any survey.</p>

5.3.2 Special Protection Areas

5.3.2.1 The following sections provide information relevant to the SPAs and associated qualifying features for which the potential for LSE² could not be ruled out in RIAA Part 1, including site descriptions, feature accounts, conservation objectives and condition assessments.

Site descriptions

5.3.2.2 Site descriptions for all SPAs for which the potential for LSE² could not be ruled out are provided in Table 5.7.

Table 5.7: Site descriptions for all Special Protection Areas for which Likely Significant Effects² have been identified in relation to impacts associated with Morven North

Special Protection Area	Site description
Fowlsheugh SPA	<p>Fowlsheugh SPA, located 4km south of Stonehaven on the east coast of Aberdeenshire in northeast Scotland, is a 10.15ha stretch of sheer cliffs, between 30m and 60m high, cut mostly from basalt and conglomerate rocks of Old Red Sandstone age.</p> <p>The boundary of the SPA overlaps with the boundaries of Fowlsheugh SSSI. The seaward extension extends 2km into the marine environment and includes the seabed, water column and surface.</p>
Outer Firth of Forth and St Andrews Bay Complex SPA	<p>The Outer Firth of Forth and St Andrews Bay Complex Special Protection Area (SPA) is a large estuarine/marine site on southeast coast of Scotland consisting of the two closely adjacent Firths of Forth and Tay. In the mid Firth of Forth a belt of mud-rich sediments lies between areas of sandy gravels and shell material on either side along the shore. As the estuary widens towards the outer firth, there are extensive areas of sandy and gravelly muds and fine sediments. In contrast St Andrews Bay contains clean sands and gravel with only small areas of muddy sediments. Water depth is variable but large areas, in both the Firth of Forth and St Andrews Bay, are shallow and less than 10m deep.</p> <p>The area supports a wide variety of both pelagic and demersal fish, including sandeels, and crustaceans, molluscs and marine worms, all of which, especially sandeels, comprise the prey of the waterfowl species</p>
Buchan Ness to Collieston Coast SPA	<p>Buchan Ness to Collieston Coast SPA is a stretch of southeast facing cliff in Aberdeenshire, Scotland. The 15km stretch of cliffs, formed of granite, quartzite and other rocks, runs south of Peterhead, broken only by the sandy beach of Cruden Bay. The varied coastal vegetation on the ledges and the cliff tops includes maritime heath, grassland and brackish flushes.</p> <p>The boundary of the SPA follows the boundaries of Bullers of Buchan Coast SSSI and Collieston to Whinnyfold Coast SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Forth Islands SPA	<p>Forth Islands SPA consists of a series of islands supporting the main seabird colonies in the Firth of Forth. The islands of Inchmickery, Isle of May, Fidra, The Lamb, Craigleith and Bass Rock were classified on 25 April 1990. The extension to the site, classified on the 16 February 2004 consists of the island of Long Craig, which, at the time of classification, supported the largest colony of roseate tern in Scotland. It is the most northerly of only six regular British colonies. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p> <p>The boundary of the SPA overlaps with the boundaries of the following Sites of Special Scientific Interest: Long Craig, Inchmickery, Forth Islands, Bass Rock and the Isle of May. A small overlap also occurs with the Firth of Forth SPA.</p>
Northumberland Marine SPA	<p>The Northumberland Marine SPA is located on the Northumberland coast between Blyth and Berwick-Upon-Tweed. The site supports a wide range of marine habitats. The coastal parts of the site consist of sandy bays separated by rocky</p>

Special Protection Area	Site description
	<p>headlands backed by dunes or soft and hard cliffs. There are extensive areas of inter-tidal rocky reef, long sandy beaches at Beadnell, Embleton and Druridge Bay and extensive sand and mud flats at Budle Bay and Fenham Flats at Lindisfarne.</p> <p>The Northumberland coast and surrounding sea supports important breeding colonies of seabirds and auks, protected at four existing SPAs: Farne Islands SPA, Coquet Island SPA, Lindisfarne SPA and Northumbria Coast SPA. The surrounding waters are protected by Northumberland Marine SPA, these areas are used by the seabirds and auks for foraging and maintenance activities, such as bathing and preening.</p>
St Abb's Head to Fast Castle SPA	<p>St Abb's Head to Fast Castle SPA comprises an area of sea cliffs and coastal strip stretching over 10km along the Berwickshire Coast north of St Abbs.</p> <p>The boundary of the SPA overlaps with that of St Abb's Head to Fast Castle SSSI, and the seaward extension extends approximately 1km into the marine environment to include the seabed, water column and surface.</p>
Troup, Pennan and Lion's Heads SPA	<p>The Troup, Pennan and Lion's Heads Special Protection Area is a 9km stretch of sea cliffs along the Aberdeenshire coast. The cliffs support large colonies of breeding seabirds.</p> <p>The boundary of the Special Protection Area overlaps with the boundary of Gamrie and Pennan coast SSSI and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Farne Islands SPA	<p>The Farne Islands are a group of rocky Islands stretching from between 2.4 to 7.6km offshore. The islands are rocky plateaus formed from Whin Sill rock, the total area of all the islands is 101ha consisting of 15to20 islands depending on tide, they are split into the Inner Farnes and the Outer Farnes. The botanical interest is limited but the islands are famous as a breeding ground for grey seal and as a seabird nesting colony.</p>
Coquet Island SPA	<p>Coquet Island is a small uninhabited island which lies less than a mile off the coast of Northumberland, near Amble, in the northeast of England. The island is managed by the RSPB and consists of a flat grassy plateau, surrounded by low sandstone cliffs and intertidal boulders and rock. The total area of the island at mean low water is 22ha.</p>
East Caithness Cliffs SPA	<p>East Caithness Cliffs SPA is of special nature conservation and scientific importance within Britain and the European Community for supporting very large populations of breeding seabirds. It includes most of the sea-cliff areas between Wick and Helmsdale on the northeast coast of the Scottish mainland.</p> <p>The boundary of the SPA overlaps either partly or wholly with the following Sites of Special Scientific Interest (SSSI): Castle of Old Wick to Craig Hammel SSSI, Craig Hammel to Sgaps Geo SSSI, Dunbeath to Sgaps Geo SSSI, Berriedale Cliffs SSSI, Ousdale Burn SSSI and Helmsdale Coast SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
North Caithness Cliffs SPA	<p>North Caithness Cliffs SPA is of special nature conservation and scientific importance within Britain and the European Community for supporting very large populations of breeding seabirds.</p>

Special Protection Area	Site description
	The site overlaps either partly or wholly with Duncansby Head Site of Special Scientific Interest (SSSI), Stroma SSSI, Dunnet Head SSSI, Holborn Head SSSI, and Red Point Coast SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.
Copinsay SPA	The Copinsay Special Protection Area comprises a group of islands 4km off the east coast of Orkney Mainland. The islands have a cliffed rocky coastline and maritime vegetation that support large colonies of breeding seabirds. The boundary of the SPA encompasses Copinsay SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.
Hoy SPA	Hoy is a mountainous island at the south-western end of the Orkney archipelago. Hoy SPA covers the northern and western two-thirds of the island of Hoy, which is formed of Old Red Sandstone and contains Orkney's highest hills, and adjacent coastal waters. The SPA supports an extremely diverse mixture of mire, heath and alpine vegetation and Britain's most northerly native woodland. These upland areas and the high sea cliffs at the coast support an important assemblage of moorland breeding birds and breeding seabirds. The boundary of Hoy SPA overlaps with that of Hoy SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.
Flamborough and Filey Coast SPA	The Flamborough and Filey Coast SPA straddles the border of East Yorkshire and North Yorkshire at the western coast of the North Sea. It has two sections - Flamborough to the south, and Filey to the north - both encompassing clifftop, sea cliff and intertidal rock habitats and offshore to 2km. It extends inland in the sections running from Cunstone Nab in the north to Carr Naze at the corner of Filey Brigg, then from the south of Filey Bay at Reighton to its southern most point at Sewerby steps. The expanse of Filey Bay divides these two inland sections, but is not included in the designation.
Calf of Eday SPA	Calf of Eday Special Protection Area (SPA) is a small maritime island to the north of Eday in Orkney. Calf of Eday has a rocky shoreline with cliffs to the north and the west. The island is covered by maritime heath and grassland. The boundary of the Special Protection Area encompasses the boundary of the Calf of Eday SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.
Rousay SPA	Rousay is an island off the north-east coast of Mainland, Orkney. The SPA consists of sea cliffs and areas of maritime heath and grassland in the northwest and northeast of the island. The boundary of the Special Protection Area overlaps with the boundary of Rousay SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.
Marwick Head SPA	The Marwick Head Special Protection Area is a 2km stretch of sea cliffs, and adjacent coastal waters, along the west coast of Orkney Mainland. The cliffs support large colonies of breeding seabirds. The boundary of the Special Protection Area overlaps the boundary of Marwick Head SSSI, and the seaward extension extends approximately 1km into the marine environment to include the seabed, water column and surface.

Special Protection Area	Site description
West Westray SPA	<p>West Westray SPA is an 8km stretch of sea cliffs, together with adjacent grassland and heathland, along the west coast of the island of Westray in Orkney. The cliffs support large colonies of breeding auks and kittiwakes while the grassland and heathland areas support breeding colonies of skuas and terns.</p> <p>The boundary of the SPA overlaps with that of the West Westray SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Fair Isle SPA	<p>Fair Isle is an Old Red Sandstone island, the most southerly of the Shetland group, lying halfway between Mainland and Orkney. It has a rocky, cliff coastline with adjacent coastal waters, heather moorland, acidic grassland, maritime grassland and crofting in-bye.</p> <p>The boundary of Fair Isle SPA is coincident with Fair Isle SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface</p>
Noss SPA	<p>Noss SPA is an offshore island lying 5km east of Lerwick, Shetland. It supports breeding seabirds on cliffs and also on inland heathlands and grasslands. The boundary of the SPA overlaps that of the Noss SSSI and National Nature Reserve and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Foula SPA	<p>Foula is the most westerly of the Shetland Islands which are situated to the north of the Scottish mainland and Orkney. It lies 20km west of Shetland Mainland. Foula SPA consists of a rocky coastline, large areas of mire, and adjacent coastal waters which support internationally important breeding populations of seabirds.</p> <p>The boundary of the Special Protection Area overlaps with the boundary of Foula SSSI and Foula Coast SSSI, and the seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Fetlar SPA	<p>Fetlar is an island in the Shetland group, lying to the east and south respectively of the larger islands of Yell and Unst. The species-rich heath, bog and mire communities on the island support an important and characteristic breeding bird community, with the cliffs, rocky shores, and adjacent coastal waters important for breeding seabirds.</p> <p>Fetlar SPA overlaps North Fetlar SSSI, Lamb Hoga SSSI and Trona Mires SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>
Hermaness, Saxa Vord and Valla Field SPA	<p>Hermaness, Saxa Vord and Valla Field Special Protection Area lies in the northwest corner of the island of Unst, Shetland, at the northernmost tip of Britain. It consists of 100m-200m high sea cliffs and adjoining areas of grassland, heath and blanket bog.</p> <p>The boundary of the SPA is coincident with that of the Hermaness SSSI, Saxa Vord SSSI, and Valla Field SSSI. The seaward extension extends approximately 2km into the marine environment to include the seabed, water column and surface.</p>

Special Protection Area	Site description
	Part of the site (Hermaness SSSI and Saxa Vord SSSI) was previously classified as Hermaness and Saxa Vord SPA on 29 March 1994 for fulmar, Northern gannet, great skua (<i>Catharacta skua</i>), guillemot and Atlantic puffin.
St Kilda SPA	<p>St Kilda is a group of remote Scottish islands lying in the North Atlantic about 70km west of North Uist in the Outer Hebrides. The islands are steep, with precipitous cliffs reaching 430m on Hirta and 380m on Soay and Boreray. The vegetation is strongly influenced by sea spray and the presence of seabirds and livestock. Inland on Hirta, species-poor acidic grassland and sub-maritime heaths occupy extensive areas. The islands provide a strategic nesting locality for seabirds that feed in the rich waters to the west of Scotland. The total population of seabirds exceeds 600,000 individuals, making this one of the largest concentrations in the North Atlantic and the largest in the UK.</p> <p>The boundary of the SPA overlaps with the boundary of St. Kilda SSSI, and the seaward extension extends approximately 4km into the marine environment to include the seabed, water column and surface.</p>

Feature accounts

- 5.3.2.3 Feature accounts for all qualifying features for which the potential for LSE² could not be ruled out are provided in Table 5.8. Table 5.8 also includes the current condition assessment for each qualifying features. The assessments presented in Section 5.4, specifically those that quantify associated impacts, require population data for each feature against which impacts can be compared. Impacts are calculated using baseline survey data collected between June 2021 and September 2023. The most contemporaneous dataset against which impacts can be compared is therefore the population data presented in Burnell *et al.* (2023) with these populations presented in Table 5.8.

Conservation objectives

- 5.3.2.4 Conservation objectives for all qualifying features for which the potential for LSE² could not be ruled out are provided in Table 5.9. Conservation objectives for assemblage features are not defined in the conservation and management advice documents associated with SPA as conservation objectives are defined for each qualifying feature or named qualifier that forms part of the assemblage.

Table 5.8: Populations for qualifying features at Special Protection Areas for which Likely Significant Effects has been identified in relation to impacts associated with Morven North

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
Fowlsheugh SPA	Herring gull	6,380	2,070	Unfavourable, no change
	Kittiwake	73,300	28,078	Unfavourable, declining
	Guillemot	75,643	93,570	Favourable maintained
	Razorbill	7,772	20,990	Favourable, maintained
	Seabird breeding assemblage,	n/a	n/a	Favourable, maintained
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	Breeding: 12,020 individuals Wintering: 3,191 individuals	No colonies within SPA	Favourable, maintained
	Herring gull	Wintering: 12,313 individuals	No colonies within SPA	Favourable, maintained
	Guillemot	Wintering: 21,968 individuals	No colonies within SPA	Favourable, maintained
	Razorbill	Wintering: 5,481 individuals	No colonies within SPA	Favourable, maintained
	Puffin	Breeding: 61,086 individuals	No colonies within SPA	Favourable, maintained
	Gannet	Breeding: 10,945 individuals	No colonies within SPA	Favourable, maintained
	Red-throated diver	Wintering: 851 individuals	Unavailable	Favourable, maintained
	Slavonian grebe	Wintering: 30 individuals	Unavailable	Favourable, maintained
	Eider	Wintering: 21,546 individuals	Unavailable	Favourable, maintained
	Shag	Wintering: 2,426 individuals	Unavailable	Favourable, maintained

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
	Long-tailed duck	Wintering: 1,948 individuals	Unavailable	Favourable, maintained
	Common scoter	Wintering: 4,677 individuals	Unavailable	Favourable, maintained
	Velvet scoter	Wintering: 775 individuals	Unavailable	Favourable, maintained
	Goldeneye	Wintering: 589 individuals	Unavailable	Favourable, maintained
	Red-breasted merganser	Wintering: 431 individuals	Unavailable	Favourable, maintained
	Seabird assemblage, breeding	n/a	n/a	Not assessed
	Seabird assemblage, non-breeding	n/a	n/a	Favourable, maintained
Buchan Ness to Collieston Coast SPA	Herring gull	8,584	4,154	Unfavourable declining
	Kittiwake	60,904	22,590	Unfavourable, no change
	Guillemot	11,578	39,440	Favourable, maintained
	Seabird assemblage, breeding	n/a	n/a	Favourable, recovered
Forth Islands SPA	Gannet	43,200	150,518	Favourable, maintained
	Kittiwake	16,800	9,084	Unfavourable, no change
	Puffin	28,000	85,846	Favourable, maintained
	Razorbill	1,876	8,500	Favourable, maintained
	Guillemot	21,440	35,584	Favourable, maintained
	Seabird assemblage, breeding	n/a	n/a	Favourable, declining

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
Northumberland Marine SPA	Fulmar	682	Unavailable	Not assessed
	Kittiwake	8,667	Unavailable	Not assessed
	Puffin	108,484 individuals	Unavailable	Not assessed
	Razorbill	572	Unavailable	Not assessed
	Seabird breeding assemblage,	n/a	n/a	Not assessed
St Abb's Head to Fast Castle SPA	Kittiwake	42,340	10,300	Unfavourable, recovering
	Guillemot	42,545	61,513	Favourable, maintained
	Razorbill	2,921	4,381	Favourable, maintained
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Troup, Pennan and Lion's Heads SPA	Kittiwake	63,200	21,232	Unfavourable, declining
	Guillemot	59,764	31,948	Unfavourable, recovering
	Razorbill	6,432	6,743	Favourable, recovered
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Farne Islands SPA	Kittiwake	8,241	8,804	Not assessed
	Puffin	76,798	87,504	Not assessed
	Seabird breeding assemblage,	n/a	n/a	Not assessed
Coquet Island SPA	Fulmar	125	106	Not assessed
	Kittiwake	426	932	Not assessed
	Puffin	31,686	50,058	Not assessed

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
	Seabird breeding assemblage,	n/a	n/a	Not assessed
East Caithness Cliffs SPA	Kittiwake	65,000	48,958	Favourable declining
	Fulmar	30,000	27,928	Favourable maintained
	Razorbill	21,172	44,969	Favourable, maintained
	Seabird breeding assemblage,	n/a	n/a	Favourable, maintained
North Caithness Cliffs SPA	Fulmar	29,400	30,740	Favourable, maintained
	Kittiwake	26,200	11,142	Unfavourable, no change
	Puffin	4,160	6,078	Unfavourable, declining
	Seabird breeding assemblage,	n/a	n/a	Favourable, maintained
Copinsay SPA	Kittiwake	19,100	1,910	Unfavourable declining
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, no change
Hoy SPA	Fulmar	70,000	41,082	Unfavourable, no change
	Kittiwake	6,000	532	Unfavourable, no change
	Puffin	7,000	860	Unfavourable, no change
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Flamborough and Filey Coast SPA	Gannet	16,938	26,784	Not assessed
	Fulmar	2,894	2,514	Not assessed
	Kittiwake	89,040	103,070	Not assessed

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
	Puffin	1,960	8,558	Not assessed
	Razorbill	14,164	45,116	Not assessed
	Seabird breeding assemblage,	n/a	n/a	Not assessed
Calf of Eday SPA	Kittiwake	3,434	672	Unfavourable, declining
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, no change
Rousay SPA	Kittiwake	9,800	660	Unfavourable, no change
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Marwick Head SPA	Kittiwake	15,400	1,812	Unfavourable, recovering
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
West Westray SPA	Kittiwake	47,800	5,510	Unfavourable, declining
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Fair Isle SPA	Fulmar	70,420	64,982	Favourable, maintained
	Gannet	2,332	9,942	Favourable, maintained
	Kittiwake	36,320	896	Unfavourable, Declining
	Puffin	46,000	13,332	Unfavourable, Declining
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, no change

Special Protection Area	Features for which the potential for LSE ² could not be ruled out	Population size at designation (breeding adults, unless otherwise stated)	Population from Seabirds Count (Burnell <i>et al.</i> , 2023) (breeding adults)	Condition Assessment
Noss SPA	Fulmar	12,700	10,184	Unfavourable, no change
	Gannet	13,720	27,530	Favourable, maintained
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Foula SPA	Fulmar	93,600	20,506	Unfavourable, no change
	Puffin	96,000	8,468	Unfavourable, no change
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Fetlar SPA	Fulmar	19,000	18,354	Favourable, recovered
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
Hermaness, Saxa Vord and Valla Field SPA	Fulmar	39,078	26,416	Unfavourable, declining
	Gannet	32,800	59,124	Favourable, maintained
	Puffin	110,000	28,750	Unfavourable, recovering
	Seabird breeding assemblage,	n/a	n/a	Unfavourable, declining
St Kilda SPA	Gannet	100,100	120,580	Favourable, maintained
	Seabird breeding assemblage,	n/a	n/a	Favourable, maintained

Table 5.9: Conservation objectives for all Special Protection Areas and associated qualifying features for which Likely Significant Effects has been identified in relation to impacts associated with Morven North

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
Fowlsheugh SPA	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake Herring gull Guillemot Razorbill
	2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Kittiwake Herring gull Guillemot Razorbill
	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	<ul style="list-style-type: none"> Ensure the breeding population of kittiwake have the ability to recover to the site reference population. Ensure kittiwakes are not at significant risk from injury or mortality. Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> Maintain the breeding population of guillemot at a stable or increasing trend relative to the current site reference population. Ensure guillemots are not at significant risk from injury or mortality. Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site. 	Guillemot
		<ul style="list-style-type: none"> Ensure the breeding population of herring gull have the ability to recover to the site reference population. 	Herring gull

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> • Ensure herring gulls are not at significant risk from injury or mortality. • Ensure herring gull can move safely between the site and important areas of functionally linked land and sea outwith the site. 	
		<ul style="list-style-type: none"> • Maintain the breeding population of razorbills at a stable or increasing trend relative to the current site reference population. • Ensure razorbills are not at significant risk from injury or mortality. • Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site. 	Razorbill
	2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake
	<ul style="list-style-type: none"> • Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site. 	Guillemot	
	<ul style="list-style-type: none"> • Ensure herring gulls continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. 	Herring Gull	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Avoid significant disturbance to herring gulls and ensure individuals can move safely between these areas within the site. 	
		<ul style="list-style-type: none"> Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site. 	Razorbill
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fowlsheugh SPA.</p>	<ul style="list-style-type: none"> Maintain the breeding population of kittiwake at a stable or increasing trend relative to the current site reference population. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats. 	Kittiwake
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for guillemots within the site Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats. 	Guillemot
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for herring gulls within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. 	Herring gull

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Existing water quality should be maintained any increase in nutrients turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. Maintain the extent and distribution of the supporting habitats for razorbill within the site. Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	Razorbill
Outer Firth of Forth and St Andrews Bay Complex SPA	<p>1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p> <p>2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:</p>		<p>Herring gull Guillemot Kittiwake Razorbill Puffin Gannet Red-throated diver Slavonian grebe Eider Shag Long-tailed duck Common scoter Velvet scoter Goldeneye Red-breasted merganser</p>

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2ai. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	<ul style="list-style-type: none"> • Ensure breeding the qualifying species have the ability to recover at the relevant SPA breeding colonies. • Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons. • Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site. 	Kittiwake Herring gull Shag
	2aii. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	<ul style="list-style-type: none"> • Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons • Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site. 	Guillemot Puffin Gannet Razorbill
	2aiii. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	<ul style="list-style-type: none"> • Maintain the population of non-breeding the qualifying species at a stable or increasing trend relative to the site reference population. 	Red-throated diver Slavonian grebe Long-tailed duck Common scoter Velvet scoter Goldeneye

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2aiv. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	<ul style="list-style-type: none"> Maintain the population of non-breeding the qualifying species at a stable or increasing trend relative to the site reference population. Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site. 	Eider Red-breasted merganser
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site. 	Herring gull Guillemot Kittiwake Puffin Red-throated diver Slavonian grebe Eider European shag Long-tailed duck Common Scoter Velvet scoter Goldeneye Red-breasted merganser

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for the qualifying species within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Herring Gull Guillemot Kittiwake Puffin Red-throated diver Slavonian grebe Eider European shag Long-tailed duck Common scoter Velvet scoter Goldeneye Red-breasted merganser
Buchan Ness to Collieston Coast SPA	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Herring gull Kittiwake Guillemot
	2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Herring gull Kittiwake Guillemot
	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	<ul style="list-style-type: none"> Ensure the breeding population of herring gull have the ability to recover to the site reference population. Ensure herring gulls are not a significant risk from injury or mortality. Ensure herring gull can move safely between the site and important areas of functionally linked land and sea outwith the site. 	Herring gull

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Ensure the breeding population of kittiwake have the ability to recover to the site reference population. Ensure kittiwakes are not at significant risk from injury or mortality. Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> Maintain the breeding population of guillemots at a stable or increasing trend relative to the current site reference population. Ensure guillemots are not at significant risk from injury or mortality. Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site. 	Guillemot
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure herring gulls continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site. Avoid significant disturbance to herring gulls and ensure individuals can move safely between these areas within the site. 	Herring gull
	<ul style="list-style-type: none"> Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site. Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake	
	<ul style="list-style-type: none"> Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. 	Guillemot	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site. 	
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA	<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the supporting habitats for herring gulls within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. 	Herring gull
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for kittiwake within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for guillemots within the site Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Guillemot
Forth Islands SPA	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Gannet Kittiwake Puffin Razorbill

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
			Guillemot
	2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Gannet Kittiwake Puffin Razorbill Guillemot
	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	<ul style="list-style-type: none"> • Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population. • Ensure gannet are not at significant risk from injury or mortality during the breeding season. • Ensure gannet can move safely between the site and important areas of functionally linked sea outwith the site. 	Gannet
		<ul style="list-style-type: none"> • Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population. • Ensure kittiwake are not at significant risk from injury or mortality during the breeding season. • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
	<ul style="list-style-type: none"> • Maintain the breeding population of puffins at a stable or increasing trend relative to the site reference population. • Ensure puffins are not at significant risk from injury or mortality during the breeding season. • Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain the breeding population of razorbill at a stable or increasing trend relative to the site reference population. Ensure razorbill are not at significant risk from injury or mortality during the breeding season. Ensure razorbill can move safely between the site and important areas of functionally linked sea outwith the site. 	Razorbill
		<ul style="list-style-type: none"> Maintain the breeding population of guillemots at a stable or increasing trend relative to the site reference population. Ensure guillemots are not at significant risk from injury or mortality Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site. 	Guillemot
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure gannet continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to gannet and ensure individuals can move safely between these areas within the site. 	Gannet
		<ul style="list-style-type: none"> Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake
		<ul style="list-style-type: none"> Ensure puffin continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to puffin and ensure individuals can move safely between these areas within the site. 	Puffin

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> • Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site. 	Razorbill
		<ul style="list-style-type: none"> • Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site. 	Guillemot
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Forth Islands SPA.	<ul style="list-style-type: none"> • Maintain the extent and distribution of the supporting habitats for gannet within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Gannet
		<ul style="list-style-type: none"> • Maintain the extent and distribution of the supporting habitats for kittiwake within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake
<ul style="list-style-type: none"> • Maintain the extent and distribution of the supporting habitats for puffin within the site. 	Puffin		

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for razorbill within the site. Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Razorbill
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for guillemots within the site. Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Guillemot
Northumberland Marine SPA	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		Fulmar Kittiwake Puffin Razorbill

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
St Abb's Head to Fast Castle SPA	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake Guillemot Razorbill
	2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Kittiwake Guillemot Razorbill
	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population. • Ensure kittiwakes are not at significant risk from injury or mortality. • Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain the breeding population of guillemots at a stable or increasing trend relative to the site reference population. • Ensure guillemots are not at significant risk from injury or mortality. • Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site. 	Guillemot
	<ul style="list-style-type: none"> • Ensure the breeding population of razorbill have the ability to recover to the site reference population. • Ensure razorbill are not at significant risk from injury or mortality. • Ensure razorbill can move safely between the site and important areas of functionally linked sea outwith the site. 	Razorbill	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake
		<ul style="list-style-type: none"> • Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site. 	Guillemot
		<ul style="list-style-type: none"> • Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site. 	Razorbill
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored,	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	at St Abb's Head to Fast Castle SPA.	<ul style="list-style-type: none"> • Maintain the extent and distribution of the supporting habitats for guillemot within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Guillemot
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for razorbill within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	Razorbill
Troup, Pennan and Lion's Heads SPA	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake Guillemot Razorbill
	2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Kittiwake Guillemot Razorbill
	2a. The populations of the qualifying features are viable components of the	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population • Ensure kittiwakes are not at significant risk from injury or mortality 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	Troup, Pennan and Lion's Heads SPA.	<ul style="list-style-type: none"> Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	
		<ul style="list-style-type: none"> Ensure the breeding population of guillemot have the ability to recover to the site reference population. Ensure guillemots are not at significant risk from injury or mortality. Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site. 	Guillemot
		<ul style="list-style-type: none"> Maintain the breeding population of razorbills at a stable or increasing trend relative to the site reference population. Ensure razorbills are not at significant risk from injury or mortality Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site. 	Razorbill
	2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by	<ul style="list-style-type: none"> Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site. 	Guillemot
		<ul style="list-style-type: none"> • Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site. 	Razorbill
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Troup, Pennan and Lion's Heads SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for guillemot within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Guillemot

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain the extent and distribution of the supporting habitats for razorbills within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats. 	Razorbill
Farne Islands SPA	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. <p>The distribution of qualifying features within the site.</p>		Kittiwake Puffin
Coquet Island SPA	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		Fulmar Kittiwake Puffin

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
East Caithness Cliffs SPA	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake Razorbill Fulmar
	2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	<ul style="list-style-type: none"> • Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population. • Ensure kittiwakes are not at significant risk from injury or mortality • Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain the breeding population of razorbills at a stable or increasing trend relative to the site reference population. • Ensure razorbills are not at significant risk from injury or mortality • Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site. 	Razorbill
	<ul style="list-style-type: none"> • Maintain the breeding population of fulmars at a stable or increasing trend relative to the site reference population. • Ensure fulmars are not at significant risk from injury or mortality • Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake
		<ul style="list-style-type: none"> • Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site. 	Razorbill
		<ul style="list-style-type: none"> • Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the site. 	Fulmar
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the East Caithness Cliffs SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for razorbill within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. 	Razorbill

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats or prey, should be avoided. 	
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the supporting habitats for fulmar within the site. Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes. Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats or prey, should be avoided. 	Fulmar
North Caithness Cliffs SPA	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Fulmar Kittiwake Puffin
	2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Fulmar Kittiwake Puffin
	2a The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	<ul style="list-style-type: none"> Ensure the breeding population of puffin have the ability to recover the site reference population. Ensure puffins are not at significant risk from injury or mortality. Ensure puffin can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin
		<ul style="list-style-type: none"> Ensure the breeding population of kittiwake have the ability to recover the site reference population. Ensure kittiwake are not at significant risk from injury or mortality. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site. 	
		<ul style="list-style-type: none"> Ensure the breeding population of fulmars have the ability to recover the site reference population. Ensure fulmars are not at significant risk from injury or mortality. Ensure puffin can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site. 	Puffin
	<ul style="list-style-type: none"> Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake	
	<ul style="list-style-type: none"> Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the site. 	Fulmar	
	2c. The supporting habitats and processes relevant to	<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the supporting habitats for puffin within the site. 	Puffin

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA	<ul style="list-style-type: none"> • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar
Copinsay SPA	<ol style="list-style-type: none"> 1. To ensure that the qualifying features of Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. 2. To ensure that the integrity of Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature: 		Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	<p>2a. The populations of the qualifying features are viable components of the Copinsay SPA</p>	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover the site reference population. • Ensure kittiwake from Copinsay SPA are not at significant risk from injury or mortality • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	
	<p>2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.</p>	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.</p>	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided. 	
Hoy SPA	<p>1. To ensure that the qualifying features of Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p>	Kittiwake Fulmar	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2. To ensure that the integrity of Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Puffin
	2a. The populations of the qualifying features are viable components of the Hoy SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population • Ensure kittiwakes are not at significant risk from injury or mortality • Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> • Ensure the breeding population of fulmars have the ability to recover to the site reference population • Ensure fulmars are not at significant risk from injury or mortality • Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar
		<ul style="list-style-type: none"> • Ensure the breeding population of puffins have the ability to recover to the site reference population • Ensure puffins are not at significant risk from injury or mortality • Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	disturbance of the species.	<ul style="list-style-type: none"> • Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the site. 	Fulmar
		<ul style="list-style-type: none"> • Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site. 	Puffin
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for fulmar within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the supporting habitats for puffin within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could 	Puffin
Flamborough and Filey Coast SPA	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		Gannet Fulmar Kittiwake Puffin Razorbill
Calf of Eday SPA	<p>1. To ensure that the qualifying features of Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p> <p>2. To ensure that the integrity of Calf of Eday SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:</p>		Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	<p>2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.</p>	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover the site reference population • Ensure kittiwake are not a significant risk from injury or mortality • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	
	<p>2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.</p>	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site. 	
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Calf of Eday SPA.</p>	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	
Rousay SPA	<p>1. To ensure that the qualifying features of Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p>	Kittiwake	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	<p>2. To ensure that the integrity of Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:</p>		
	<p>2a. The populations of the qualifying features are viable components of the Rousay SPA.</p>	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population. • Ensure kittiwake are not at significant risk from injury or mortality • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	
	<p>2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.</p>	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within this site. 	
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.</p>	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
Marwick Head SPA	1. To ensure that the qualifying features of the Marwick Head SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake
	2. To ensure that the integrity of Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population. • Ensure kittiwake are not at significant risk from injury or mortality • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within this site. 	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	
West Westray SPA	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Kittiwake
	2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a. The populations of the qualifying features are viable components of the West Westray SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of kittiwake have the ability to recover to the site reference population. • Ensure kittiwake are not at significant risk from injury or mortality • Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site. 	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	<p>2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.</p>	<ul style="list-style-type: none"> • Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within this site. 	
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the West Westray SPA.</p>	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	
Fair Isle SPA	<p>1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p>		Fulmar Gannet Kittiwake Puffin
	<p>2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:</p>		
	<p>2a. The populations of the qualifying features are viable components of the Fair Isle SPA.</p>	<ul style="list-style-type: none"> • Ensure the breeding population of puffin has the ability to recover to the site reference population. • Ensure puffin are not at significant risk from injury or mortality. • Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Ensure the breeding population of kittiwake has the ability to recover to the site reference population. Ensure kittiwake are not at significant risk from injury or mortality. Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site. 	Kittiwake
		<ul style="list-style-type: none"> Maintain the breeding population of fulmar at a stable or increasing trend relative to the current site reference population. Ensure fulmars from are not at significant risk from injury or mortality. Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the sites. 	Fulmar
		<ul style="list-style-type: none"> Maintain the breeding population of gannets at a stable or increasing trend relative to the current site reference population. Ensure gannets from are not at significant risk from injury or mortality. Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the sites. 	Gannet
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to puffin and ensure individuals can move safely between these areas within the site. 	Puffin
		<ul style="list-style-type: none"> Ensure kittiwake continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Avoid significant disturbance to kittiwake and ensure individuals can move safely between these areas within the site. 	
		<ul style="list-style-type: none"> Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the site. 	Fulmar
		<ul style="list-style-type: none"> Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site. 	Gannet
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fair Isle SPA.	<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for puffins within the site. Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Puffin
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for kittiwake within the site. Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Kittiwake

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for fulmar within the site. Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for gannets within the site. Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Gannet
Noss SPA	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Fulmar Gannet
	2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a. The populations of the qualifying features are viable components of the Noss SPA.	<ul style="list-style-type: none"> Ensure the breeding population of fulmar has the ability to recover to the site reference population. Ensure fulmar are not at significant risk from injury or mortality. Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Maintain the breeding population of gannets at a stable or increasing trend relative to the current site reference population. Ensure gannets are not at significant risk from injury or mortality. Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site. 	Gannet
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the site. 	Fulmar
		<ul style="list-style-type: none"> Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site. 	Gannet
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for fulmar within the site. Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar
		<ul style="list-style-type: none"> Maintain or enhance the extent and distribution of the support habitats for gannets within the site. 	Gannet

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	
Foula SPA	1. To ensure that the qualifying features of the Foula SPA and the Seas off Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Puffin Fulmar
	2. To ensure that the integrity of the Foula SPA and the Seas off Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a. The populations of the qualifying features are viable components of the Foula SPA and Seas off Foula SPA.	<ul style="list-style-type: none"> Ensure the breeding population of puffin has the ability to recover to the site reference population. Ensure puffin are not at significant risk from injury or mortality. Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin
		<ul style="list-style-type: none"> Ensure the breeding population of fulmar has the ability to recover to the site reference population. Ensure fulmar are not at significant risk from injury or mortality. Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar
2b. The distributions of the qualifying features throughout the Foula SPA and Seas off Foula SPA	<ul style="list-style-type: none"> Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites. Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the sites. 	Puffin	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	are maintained by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites. • Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the sites. 	Fulmar
	2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at the Foula SPA and Seas off Foula SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for puffins within the sites. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover at Foula and Seas of Foula SPAS. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	Puffin
Fetlar SPA	1. To ensure that the qualifying features of the Fetlar SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for fulmar within the sites. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover at Foula and Seas of Foula SPAS. • Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar
	2. To ensure that the integrity of the Fetlar SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2a. The populations of the qualifying features are viable components of the Fetlar SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of fulmar has the ability to recover to the site reference population. • Ensure fulmar are not at significant risk from injury or mortality. • Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites. • Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the sites. 	
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fetlar SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the support habitats for fulmar within the site. • Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	
Hermaness, Saxa Vord and Valla Field SPA	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Fulmar Gannet Puffin
	2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	<ul style="list-style-type: none"> • Ensure the breeding population of fulmar has the ability to recover to the site reference population. • Ensure fulmar are not at significant risk from injury or mortality. • Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	Fulmar
		<ul style="list-style-type: none"> • Maintain the breeding population of gannet at a stable or increasing trend relative to the current site reference population. • Ensure gannets are not at significant risk from injury or mortality. • Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	Gannet
		<ul style="list-style-type: none"> • Ensure the breeding population of puffin have the ability to recover to the site reference population. • Ensure puffins are not at significant risk from injury or mortality. • Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site. 	Puffin
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure fulmar continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites. • Avoid significant disturbance to fulmar and ensure individuals can move safely between these areas within the sites. 	Fulmar
		<ul style="list-style-type: none"> • Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites. • Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the sites. 	Gannet

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
		<ul style="list-style-type: none"> • Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. • Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site. 	Puffin
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Hermaness, Saxa Vord and Valla Field SPA.	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the support habitats for fulmar within the site. • Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided. 	Fulmar
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the support habitats for fulmar within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Gannet
		<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the supporting habitats for puffin within the site. • Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. • Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	Puffin

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
St Kilda SPA	1. To ensure that the qualifying features of the St Kilda SPA and the Seas off St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		Gannet
	2. To ensure that the integrity of the St Kilda SPA and the Seas off St Kilda SPA are restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		
	2a. The populations of qualifying features are viable components of the relevant SPAs.	<ul style="list-style-type: none"> • Maintain the breeding population of gannet at a stable or increasing trend relative to the current site reference population. • Ensure gannets are not at significant risk from injury or mortality. • Ensure fulmar can move safely between the site and important areas of functionally linked sea outwith the site. 	
	2b. The distributions of the qualifying features throughout the St Kilda SPA and the Seas off St Kilda SPA are maintained by avoiding significant disturbance of the species.	<ul style="list-style-type: none"> • Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site(s). • Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site(s). 	

Special Protection Area	Conservation objectives	Site specific advice	To which qualifying features for which the potential for LSE ² could not be ruled out is the objective applicable to?
	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey/food resources are maintained, or where appropriate restored, at St Kilda SPA and/or Seas off St Kilda SPA.</p>	<ul style="list-style-type: none"> • Maintain or enhance the extent and distribution of the support habitats for gannets within the site. • Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes at St Kilda SPA and Seas of St Kilda SPA. • Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided. 	

5.3.3 Highly Pathogenic Avian Influenza (HPAI)

- 5.3.3.1 The current H5N1 strain of Highly Pathogenic Avian Influenza (HPAI) was first recorded in the UK in summer 2021 (Falchieri *et al.*, 2022). Although existing systematic reviews indicate that diseases are seldom a key factor leading to the extinction of vertebrates, diseases can cause population crashes, leading to measurable declines in populations (Young and VanderWerf, 2023). Thousands of seabird mortalities attributed to HPAI were reported across the UK in 2022, with minimum losses of almost 20,000 individuals in Scotland alone (NatureScot, 2023i), and by the end of 2022, 17 of the 25 UK breeding seabird species had tested positive for HPAI (Tremlett *et al.*, 2024a; Tremlett *et al.*, 2024b). Since 2022, seabird populations have been largely unaffected by HPAI, and although a small number of cases continue to be reported, the number of mortalities is negligible compared to 2022.
- 5.3.3.2 In response to the outbreak of HPAI, the RSPB established the HPAI Seabird Surveys Project (Tremlett *et al.*, 2024a,b). This involved a mixture of existing planned surveys, additional volunteer-led surveys and RSPB-led surveys of a number of SPA colonies for 14 priority seabird species, and was undertaken between May and July 2023. The survey method followed standard methods outlined in the Seabird Monitoring Handbook (Walsh *et al.* 1995), enabling comparisons in population changes with the Seabirds Count estimates (Burnell *et al.*, 2023). These surveys were not intended to fully update the Seabirds Count data (for example, there were gaps in coverage of some sites, some counts lacked key information such as survey time, some survey counts were estimates rather than accurate counts) and therefore Seabirds Count is used to inform the assessments presented in this RIAA Part 3. However, Tremlett *et al.* (2024a,b) is a useful indicator of how certain species are faring in light of the recent HPAI outbreak.
- 5.3.3.3 Tremlett *et al.* (2024a,b) showed large declines in gannet of 25% across eight SPAs when compared against the Burnell *et al.* (2023) pre-HPAI baseline, whereas kittiwake increased by 10% across 21 SPAs and guillemot declined by 6% across 21 SPAs. Tremlett *et al.* (2024a,b) concludes that changes in species such as guillemot may be partially due to other factors as they were already in decline, whereas the decline in gannet is almost certainly attributable to HPAI due to the species showing recent population increases. As set out in Volume 3, Appendix 11.1: Offshore Ornithology Baseline Characterisation Report, of the EIA Report, the baseline DAS data was collected between June 2021 and September 2023 and therefore overlaps with the HPAI outbreak.
- 5.3.3.4 The impact of the short, medium and long-term effects of the 2022 HPAI outbreak on seabird colony abundance and vital rates (productivity and survival) on UK breeding colonies is unclear. It is also unclear yet how the distribution and abundance of seabirds at sea was affected during the 2022 summer outbreak. The disease has affected 61 bird species, including species such as gannet, razorbill, guillemot, puffin, Manx shearwater, fulmar, and small and large gull species (Pearce-Higgins *et al.*, 2023). The impact has particularly affected gannet and great skua (Pearce-Higgins *et al.*, 2023), with the United Kingdom supporting over 50% of the global gannet population and 60% of the global great skua population (JNCC, 2021).
- 5.3.3.5 It is acknowledged that, in the short term at least, HPAI is likely to have an effect on changes in seabird populations. However, it is considered that the most appropriate information to use in the assessments presented in this RIAA Part 3 is the baseline survey data, and the Burnell *et al.* (2023) population count and population change data.

5.4 Assessment of the adverse effects of Morven North alone

5.4.1 Direct temporary habitat loss/disturbance

- 5.4.1.1 The impact of direct habitat loss/disturbance has been assessed qualitatively. Project activities that may result in disturbance are expected to be intermittent and spatially limited

at any given time, and therefore a qualitative assessment is considered to be proportional to the magnitude of the anticipated impacts.

- 5.4.1.2 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the construction, operations and maintenance and decommissioning phases, the potential for LSE² could not be ruled out for direct temporary habitat loss/disturbance. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.10.

Table 5.10: European sites and associated qualifying features for which Likely Significant Effects² in relation to direct temporary habitat loss/disturbance impacts associated with Morven North could not be ruled out

European site	Distance to Morven North (km) ³	Feature
Fowlsheugh SPA	59	Guillemot
		Razorbill
		Breeding seabird assemblage
Outer Firth of Forth and St Andrew's Complex SPA	66	Red-throated diver
		Slavonian grebe
		Eider
		Shag
		Long-tailed duck
		Common scoter
		Velvet scoter
		Goldeneye
		Red-breasted merganser
		Non-breeding waterfowl assemblage
		Guillemot
		Razorbill
		Puffin
Breeding seabird assemblage		
Buchan Ness to Collieston Coast SPA	68	Guillemot
		Breeding seabird assemblage
Forth Islands SPA	101	Guillemot
		Razorbill
		Puffin
		Breeding seabird assemblage
Northumberland Marine SPA	102	Puffin

³ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North (km) ³	Feature
		Razorbill
		Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	104	Guillemot
		Razorbill
		Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	107	Guillemot
		Razorbill
		Breeding seabird assemblage
Farne Islands SPA	111	Puffin
		Breeding seabird assemblage
Coquet Island SPA	143	Puffin
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Razorbill (non-breeding seasons only)
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Puffin
		Breeding seabird assemblage
Hoy SPA	243	Puffin
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Puffin
		Breeding seabird assemblage
Fair Isle SPA	289	Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Foula SPA	359	Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Puffin (non-breeding seasons only)
		Breeding seabird assemblage

5.4.1.3 The MDS and designed-in measures considered for the assessment of direct temporary habitat loss/disturbance are shown in Table 5.11 and Table 5.12, respectively.

Table 5.11: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to direct temporary habitat loss/disturbance during all project phases

Project phase	MDS	Justification
Construction	<p>Installation of wind turbine foundations, Offshore Substation Platforms (OSPs) foundations, inter-array and interconnector cables in the Morven North Boundary of up to 511.1km².</p> <p><u>Installation of wind turbines</u></p> <p>Up to 74,055,400m² of subtidal habitat loss/disturbance in total across Morven North.</p> <p>Maximum duration of the offshore construction phase is up to five years.</p> <ul style="list-style-type: none"> • Jack-up events: up to 1,958,400m² of disturbance from the use of jack-up vessels during foundation installation, with up to three jack-up events at each of 96 wind turbines and three jack-up events at each of the five Offshore Substation Platforms (OSPs) – four High Voltage Alternating Current (HVAC) OSPs and one bridge-linked High Voltage Direct Current (HVDC) OSP. • Cable installation (including sandwave clearance and pre-lay preparation including boulder and debris clearance): up to 18,160,000m² of disturbance comprising: <ul style="list-style-type: none"> – Inter-array cables sandwave clearance: up to 1,272,000m² disturbance from installation of up to 424km of inter array cables (assumes 15% requires sandwave clearance with a 20m width of disturbance). – Inter-array cables boulder clearance: up to 7,208,000m² disturbance from installation of up to 424km of inter-array cables (assumes 85% 	<p>Represents the maximum density of wind turbines and structures across the maximum Morven North Boundary that would cause greatest extent of disturbance to birds or the greatest duration of impact.</p> <p>Represents the maximum underwater sound impacts from impact piling for each of the relevant infrastructure foundation options.</p> <p>Represents the maximum number of vessel and helicopter movements that would cause greatest visual and sound disturbance and displacement to birds from Morven North</p>

Project phase	MDS	Justification
	<p>requires boulder clearance with a 20m width of disturbance).</p> <ul style="list-style-type: none"> – Inter-connector cables sandwave clearance: up to 1,452,000m² disturbance from installation of up to 484km of inter-connector cables (assumes 15% requires sandwave clearance with a 20m width of disturbance). – Inter-connector cables boulder clearance: up to 8,228,000m² disturbance from installation of up to 484km of inter-connector cables (assumes 85% requires boulder clearance with a 20m width of disturbance). • Sandwave clearance material deposition: Up to 52,875,000m² of habitat disturbance associated with the deposition of sandwave clearance material comprising: <ul style="list-style-type: none"> – 26,731,800m² from deposition of 13,365,900m³ of sandwave clearance material associated with seabed preparation for wind turbine and OSP foundations. – 26,143,200m² from deposition of 13,071,600m³ of sandwave clearance material associated with seabed preparation for inter-array and inter-connector cables. • Anchor placements: up to 908,000m² of habitat disturbance from 500m² anchor sets (5 anchors per set) every 500m per inter-array/inter-connector cable link during installation. • Cable removal: Up to 100,000m² from the removal of 5,000m of disused cables with a width of disturbance of 20m. 	

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • UXO removal: clearance of up to 15 UXOs within Morven North ranging from 25kg up to 554kg with 132kg the most likely (common) maximum. <p>Piling</p> <p>Single-vessel piling at 102 foundations comprising:</p> <ul style="list-style-type: none"> • 96 wind turbines: <ul style="list-style-type: none"> – Four-legged jacket foundations; – Four 3.7m diameter pin piles per foundation = 384 piles; – Maximum hammer energy of 4,000kJ; – Maximum duration of 9h piling per pile, with a minimum of 2 piles per day; – Maximum of 192 days of piling. • Four HVAC collector OSPs: <ul style="list-style-type: none"> – Six-legged jacket foundations; – 24 x 4.5m (modelled 5.3m) diameter pin piles per foundation = 96 piles; – Maximum hammer energy of 4,000kJ; – Maximum duration of 9h piling per pile, with a minimum of 2 piles per day; – Maximum of 48 days of piling. • One bridge-linked (= two foundations) HVDC converter OSP: <ul style="list-style-type: none"> – Two six-legged jacket foundation; – 24 x 5m (modelled as 5.3m) diameter pin piles per foundation, equals 48 piles for two bridge-linked foundations; – Maximum hammer energy of 4,000kJ; 	

Project phase	MDS	Justification
	<ul style="list-style-type: none"> - Maximum duration of 9h piling per pin pile, with a minimum of 2 piles per day. - Maximum of 24 days of piling. <p>Total duration of piling = 192 + 48 + 24 = 264 days Piling phased over 12 months (start Q4 2034) UXO Clearance:</p> <ul style="list-style-type: none"> • Clearance of up to 15 UXOs within the site boundary; • Maximum charge weight of 554kg Net Explosive Quantity (NEQ); • Most likely charge weight of 132kg NEQ; • Maximum donor charge of 10kg (2 x 5kg); • Maximum of one detonation within 24 hours; • Total duration of UXO clearance campaign 15 days (excluding downtime for e.g. weather); • Clearance during daylight hours only. <p>Vessel movements Up to 1,149 installation vessel movements (return trips) during the construction period (165 main installation and support vessels, 104 tug/anchor handlers, 81 cable lay installation and support vessels, 65 guard vessel, 85 survey vessels, 25 seabed preparation vessels, 544 CTVs and 80 scour protection installation vessels) Up to a total of 41 construction vessels on site at any one time during the construction period Up to 75 return helicopter movements per year by up to two helicopters on site at any one time during the construction period</p>	
Operation and maintenance	Disturbance and displacement from operational activities, wind turbines and associated operations and	

Project phase	MDS	Justification
	<p>maintenance activity, including increased vessel, helicopter and inspection drone activity:</p> <p>Presence of up to 96 operating wind turbines and five OSPs occupying the Morven North Boundary of up to 511.1km²</p> <p>Minimum spacing of 1,000 m between wind turbines</p> <p>Up to 294 operations and maintenance vessel movements (return trips) each year</p> <p>Up to a total of 15 operations and maintenance vessels on site at any one time during the operation and maintenance period</p> <p>Up to 1,660 helicopter return trips per year with up to two on site at any one time during the operation and maintenance period</p> <p>Operational lifetime of up to 35 years</p>	
Decommissioning	<p>Vessels used for a range of decommissioning activities such as removal of foundations</p> <p>Noise from vessels assumed to be as per vessel activity described for construction phase above</p>	

Table 5.12: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to direct temporary habitat loss/disturbance during all project phases

Reference number	Designed-in measures	Justification	Primary or tertiary
MM-7	Development of and adherence to a Navigation Safety and Vessel Management Plan (NSPVMP).	<p>An NSPVMP will be developed to reduce the risk introduced due to the presence of project vessels. The NSPVMP will describe the measures related to navigational safety, including information on Safety Zones, charting, construction buoyage, temporary lighting and marking and means of notification of Morven North activity to other sea users (e.g. via Notices to Mariners). It will confirm the types and numbers of vessels engaged in Morven North and consider vessel coordination, including indicative transit route planning.</p> <p>To ensure Morven North project vessels are suitably managed to minimise the likelihood of involvement in incidents and maximise the ability to assist in the event of a third-party incident.</p> <p>The NSPVMP will include the requirement for Morven North vessels to comply with international marine regulations as adopted by the Flag State, including the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77) and the International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974) through the NSPVMP.</p> <p>The plan will reduce disturbance of seabird species as far as practicable, by avoiding bird populations or migratory routes and allow the identification of standard routes.</p>	Primary

Construction phase

Habitat loss/disturbance affecting guillemot, razorbill, puffin and breeding seabird assemblage qualifying features at the Morven North Boundary

- 5.4.1.4 Disturbance to those qualifying features of SPAs identified in Table 5.10 may occur as a result of increased vessel and helicopter activities in and around Morven North as well as other activities directly associated with the installation of turbines and supporting infrastructure. A total of up to 1,149 vessel movements may occur during the construction period with a

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- maximum of 41 vessels on site at any one time. In addition there may be up to 75 return helicopter movements per year with up to two helicopters on site at any one time.
- 5.4.1.5 Disturbance events during construction activities may disturb and displace birds for the duration of the construction period. Disturbance and temporary loss of habitat (including habitat becoming temporarily unsuitable due to disturbance) will occur intermittently throughout the construction period. The construction period is expected to take up to five years, with activities and locations varying within this time. Any impacts resulting from disturbance and displacement from construction activities are considered likely to be short-term, temporary, and reversible in nature, lasting only for the duration of construction activity, with birds expected to return to the area once construction activities have ceased.
- 5.4.1.6 The MDS (Table 5.11) gives the scenario that would lead to the greatest amount of temporary habitat loss and disturbance during the construction and decommissioning phases. No significant effects are expected on fish, shellfish or benthic invertebrate prey species populations as a result of construction or decommissioning activities (see Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology, of the EIA Report). Therefore, it is expected that disturbance and subsequent displacement would be the main impact pathway.
- 5.4.1.7 The Morven North design includes a NSPVMP (Volume 4, Annex 5: Outline Navigation Safety Plan and Vessel Management Plan (NSPVMP)) which will reduce disturbance of seabird species as far as practicable by avoiding aggregations of birds (see MM-7 in Volume 3, Annex 6.4: EIA Commitments Register, of the EIA Report).
- 5.4.1.8 The potential for LSE² could not be ruled out for three species that are qualifying features of the SPAs identified in Table 5.9, namely guillemot, razorbill and puffin. All three species are considered to have a moderate vulnerability to disturbance associated with vessels and helicopters (Wade *et al.*, 2016).
- 5.4.1.9 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of guillemot is 55.5km when excluding data from Fair Isle where the foraging range of guillemot was unusually high as a result of reduced prey availability during the study year (Woodward *et al.*, 2019). If this foraging range is applied there would be no connectivity between the Morven North site and any SPA. The screening exercise in the Morven Site HRA Screening Report was undertaken applying the mean-maximum foraging range plus one standard deviation, giving a foraging range for guillemot of 95.2km. The use of this foraging range therefore identifies connectivity between Morven North and the Buchan Ness to Collieston Coast SPA and the Fowlsheugh SPA. Tracking of guillemot from the Buchan Ness to Collieston Coast SPA and the Fowlsheugh SPA during the breeding season showed no overlap between birds from these SPAs and Morven North (Birdlife International, 2023) suggesting that the magnitude of any impacts on guillemot from these SPAs from Morven North will be negligible in the breeding season.
- 5.4.1.10 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of razorbill is 73.8km when excluding data from Fair Isle where the foraging range of razorbill was unusually high as a result of reduced prey availability during the study year (Woodward *et al.*, 2019). If this foraging range is applied there would be connectivity between parts of the Morven North Boundary and the Fowlsheugh SPA only. The screening exercise in the Morven Site HRA Screening Report was undertaken applying the mean-maximum foraging range plus one standard deviation, giving a foraging range for razorbill of 122.2km. The use of this foraging range therefore identifies connectivity between Morven North and the Fowlsheugh SPA, St Abb's Head to Fast Castle SPA, the Forth Islands SPA and the Troup, Pennan and Lion's Heads SPA. . Tracking of razorbill from the Forth Islands SPA has shown no connectivity with Morven North (Bogdanova *et al.*, 2020a; Bogdanova *et al.*, 2020b; Bogdanova *et al.*, 2022) with similar results from tracking studies at the Fowlsheugh SPA (O'Donovan *et al.*, 2025). This would therefore

suggest that the magnitude of any impacts on razorbill at these SPAs from Morven North will be negligible in the breeding season.

- 5.4.1.11 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of puffin is 137.1km as recommended by NatureScot, when incorporating data from breeding colonies in northern Scotland (or 119.6km when these data are not included). If this foraging range is applied there is connectivity between Morven North and the Farne Islands SPA, Forth Islands SPA and Coquet Island SPA but no connectivity between Morven North and the North Caithness Cliffs SPA and Flamborough and Filey Coast SPA. The screening exercise in the Morven Site HRA Screening Report was undertaken applying the mean-maximum foraging range plus one standard deviation, giving a foraging range for puffin of 265.4km. The use of this foraging range therefore identifies connectivity between Morven North and the two aforementioned SPAs, although only with the Filey component of the Flamborough and Filey Coast SPA. Tracking data for puffins tagged on the Isle of May shows no connectivity between the birds from the colony and Morven North (Harris *et al.*, 2012). This would therefore suggest that the magnitude of any impacts on puffin at these SPAs from Morven North will be negligible in the breeding season.
- 5.4.1.12 The PDE indicates that there will be a maximum of 42 vessels undertaking construction activities at Morven North at one time with a clearance distance of 500m between vessels. It is not known how vessels will be distributed around the site during the construction period at any one time with different areas exposed to potential disturbance sources at different times. Potential disturbance events are likely to affect the entire sea area occupied by Morven North at some point during the construction period. If therefore it is assumed that connectivity does exist between relevant SPAs and the three species in the breeding season, the proportion of sea area occupied by Morven North (511.1km²) which represents the area within which potential disturbance events may occur throughout the entire construction period but not simultaneously at any one time, in relation to the available foraging area for guillemot from the Buchan Ness to Collieston Coast SPA (21,132km²) and Fowlsheugh SPA (15,853km²) is only 2.42% and 3.22%, respectively. As it is considered that the area used by individual guillemot in the breeding season is comparable to that those same individuals use in non-breeding seasons, these values are also applicable in the post-breeding and non-breeding seasons.
- 5.4.1.13 For razorbill, the same proportions for the Fowlsheugh SPA (available sea area of 28,701km²), St Abb's Head to Fast Castle SPA (available sea area of 23,135km²), the Forth Islands SPA (available sea area of 15,811km²) and the Troup, Pennan and Lion's Heads SPA (available sea area of 30,875km²) are 1.8%, 2.2%, 3.2% and 1.6% respectively.
- 5.4.1.14 For puffin, the same proportions for the Farne Islands SPA (available sea area of 130,940km²), Forth Islands SPA (available sea area of 124,061km²), Coquet Island SPA (available sea area of 128,404km²), and North Caithness Cliffs SPA (available sea area of 175,377km²) are 0.39%, 0.41%, 0.40%, and 0.29%. It should be noted that Morven North is only within foraging range of certain sections of the North Caithness Cliffs SPA and therefore will not impact birds from those sections that are outside of foraging range.
- 5.4.1.15 In non-breeding seasons, the sea area available to razorbill and puffin from relevant SPAs is much greater with birds not constrained to areas around breeding colonies due to the requirement to provision young. For those SPAs that are identified in relation to impacts in the non-breeding season only, the proportion of the sea area available to each species represented by Morven North is negligible.
- 5.4.1.16 The proportions calculated above assume that disturbance may occur throughout the Morven North Boundary area however, it is important to consider that construction activities and therefore potential disturbance events will not occur simultaneously across the entirety of Morven North but, will be focussed within discrete (often small) areas within Morven North and will not extend across the full duration of the construction phase. The temporal and

spatial scales are therefore much reduced than assumed in the calculation of the proportions in the previous paragraphs.

- 5.4.1.17 Based on the distance between Morven North and relevant SPAs for all three species, the negligible proportion of the areas potentially affected by disturbance accounting for the reduced temporal and spatial scale of these disturbance sources it is therefore considered that the impact of direct temporary habitat loss/disturbance from Morven North during the construction phase on guillemot, razorbill, puffin and breeding seabird assemblage qualifying features of relevant SPAs will be negligible.

Habitat loss/disturbance affecting qualifying features of the Outer Firth of Forth and St Andrew's Bay Complex SPA due to vessel movements

- 5.4.1.18 The location of ports to be used to support the construction of Morven North has not been determined prior to application. However, the use of a port or ports located within the Outer Firth of Forth and St Andrews Bay Complex SPA cannot be ruled out. Therefore, the MDS assumes that all vessel movements required for all phases of Morven North will pass through the Outer Firth of Forth and St Andrews Bay Complex SPA. This equates to up to 1,149 return vessel trips per year during construction.
- 5.4.1.19 Construction will take up to five years with a total of 3,060 vessel movements (return trips) across the construction period. Across the construction period this therefore averages out to 1.6 vessel movements per day.
- 5.4.1.20 As shown in Figure 5.1 there are numerous existing vessel routes through the Outer Firth of Forth and St Andrews Bay Complex SPA, and the greatest concentration of these is in coastal waters (data taken from Marine Scotland, 2024). This is also where the greatest numbers of the waterbirds and seabirds occur within the SPA.
- 5.4.1.21 The Morven North project design includes a NSPVMP which will reduce disturbance of seabird species as far as practicable by avoiding aggregations of birds (see MM-7 in Volume 3, Annex 6.4: EIA Commitments Register, of the EIA Report).
- 5.4.1.22 Within the Outer Firth of Forth and St. Andrew's Bay Complex SPA, those non-breeding divers, grebes and sea duck that are qualifying features, are distributed towards the coastal areas, generally close to the coastline (Figure 5.2 - Figure 5.9; data taken from Marine Scotland, 2024). The highest concentrations are recorded off the Forth of Tay, and along the coastline of the Firth of Forth, between Innerleven and Kilconquhar, and between Edinburgh and North Berwick. Some species distributions such as red-throated diver and long-tailed duck, also show higher abundance off Pettycur in the Firth of Forth. The data available (taken from Marine Scotland, 2024) whilst of a coarse resolution, would however suggest the highest concentration of birds avoid existing shipping routes to/from ports i.e. areas of high vessel movement.
- 5.4.1.23 Construction vessels would follow existing shipping routes to/from ports as far as practicable. It is expected that birds present in the Outer Firth of Forth and St. Andrew's Bay Complex SPA as supported by their known distribution, are to some extent habituated to such vessel movements within the existing commercial shipping routes to/from the ports.
- 5.4.1.24 Non-breeding guillemot are less associated with the coastline than other species, with concentrations in the mouth of the Forth Estuary and the outer Firth of Forth between North Berwick and Anstruther (Figure 5.10, data taken from Marine Scotland, 2024). As can be seen in Figure 5.1 these areas of highest concentrations overlap with areas of existing high levels of vessel movements.
- 5.4.1.25 The distribution of razorbill and puffin is not presented in Marine Scotland (2024). However, it is assumed to have a distribution similar to that of guillemot as a proxy species, as these auks have similar foraging requirements. Similarly, the distribution of shag is also not

presented, however it is assumed that the distribution of this species will be similar to other diving species (e.g. divers, grebes and red-breasted merganser).

- 5.4.1.26 Due to the existing high levels of vessel traffic, and the apparent resilience to existing vessel movements (with highest concentrations occurring outwith areas of high vessel activity), then it can be assumed that the impact of disturbance and displacement resulting from an additional 3.1 return trips per day (on average), adhering to existing shipping routes during the construction phase for Morven North alone will be negligible. This is further supported by the JNCC and NatureScot (2022) Conservation and Management Advice, which states that with regards to activities with the potential to affect birds, no additional management is required for commercial shipping along established routes.

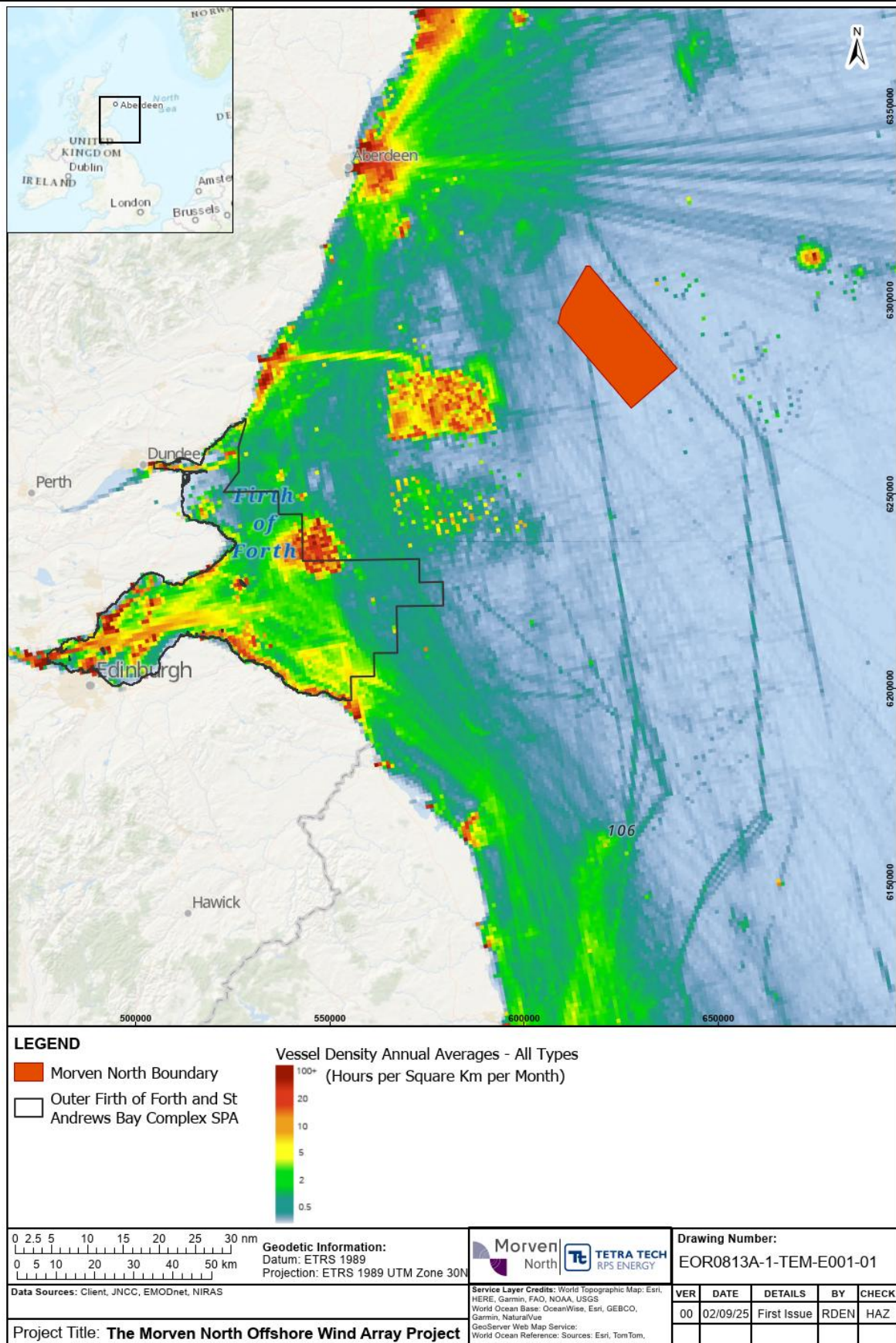


Figure 5.1: Annual averages of vessel movement throughout Outer Firth of Forth and St Andrews Bay Complex Special Protection Area

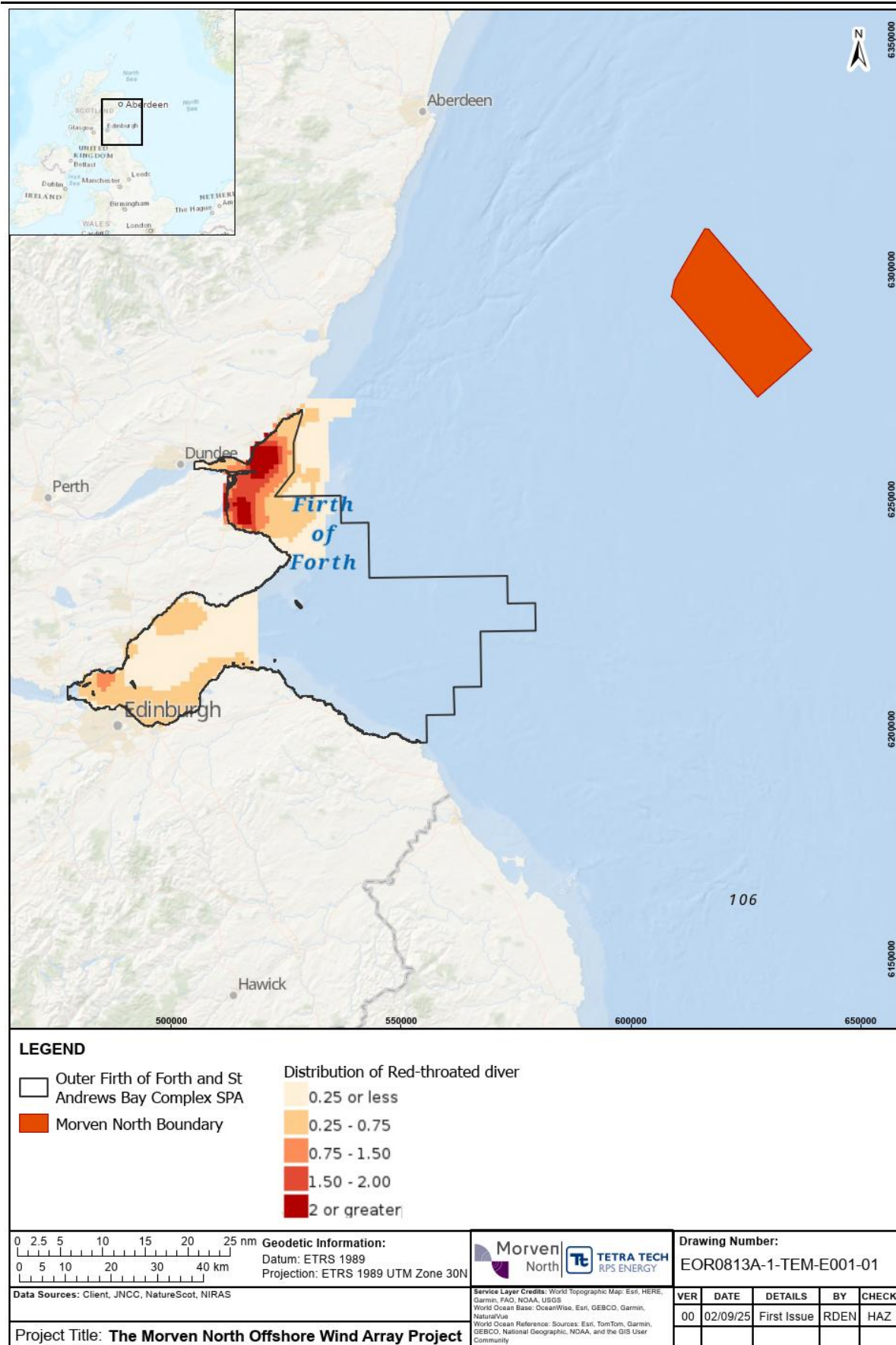


Figure 5.2: Distribution of red-throated diver in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

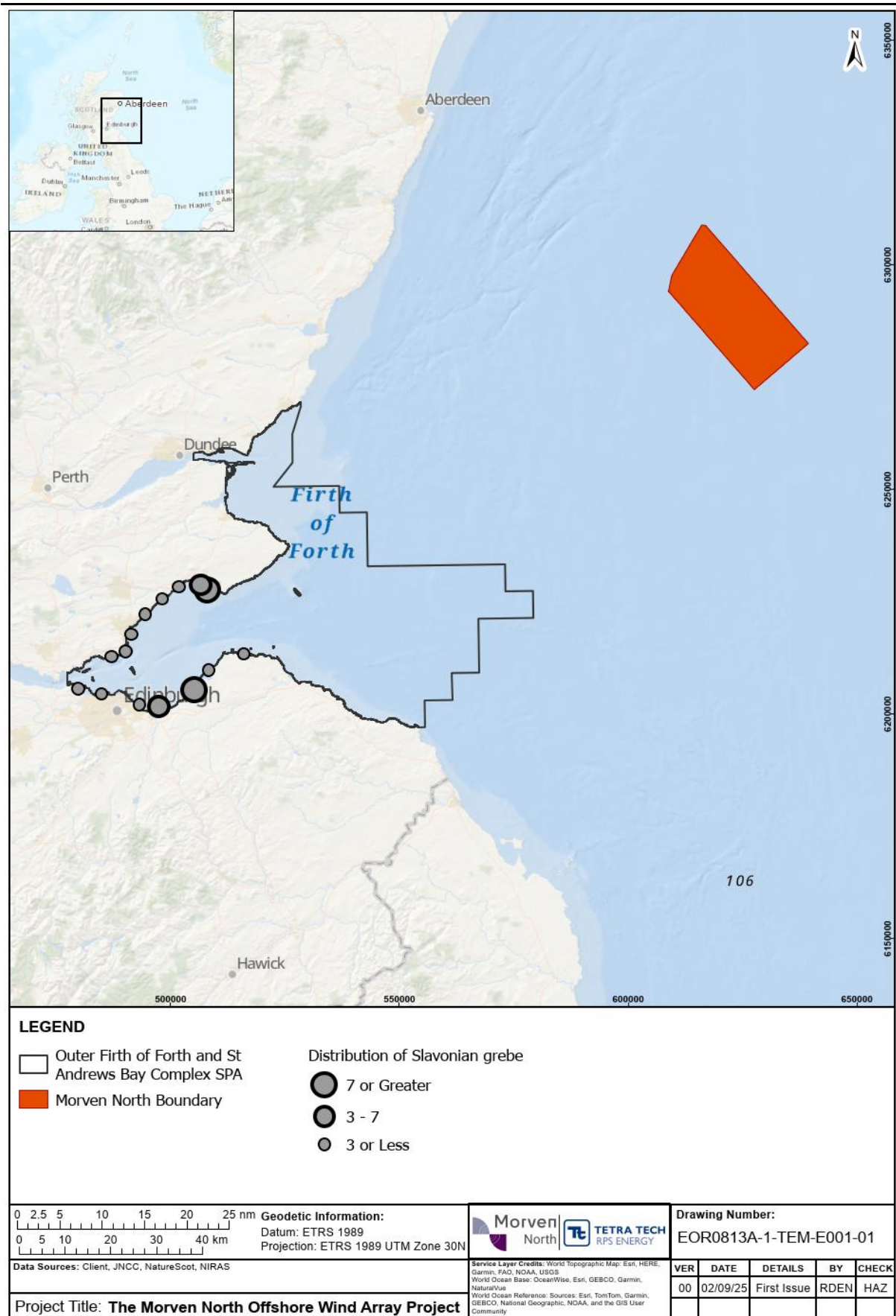


Figure 5.3: Distribution of Slavonian grebe in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

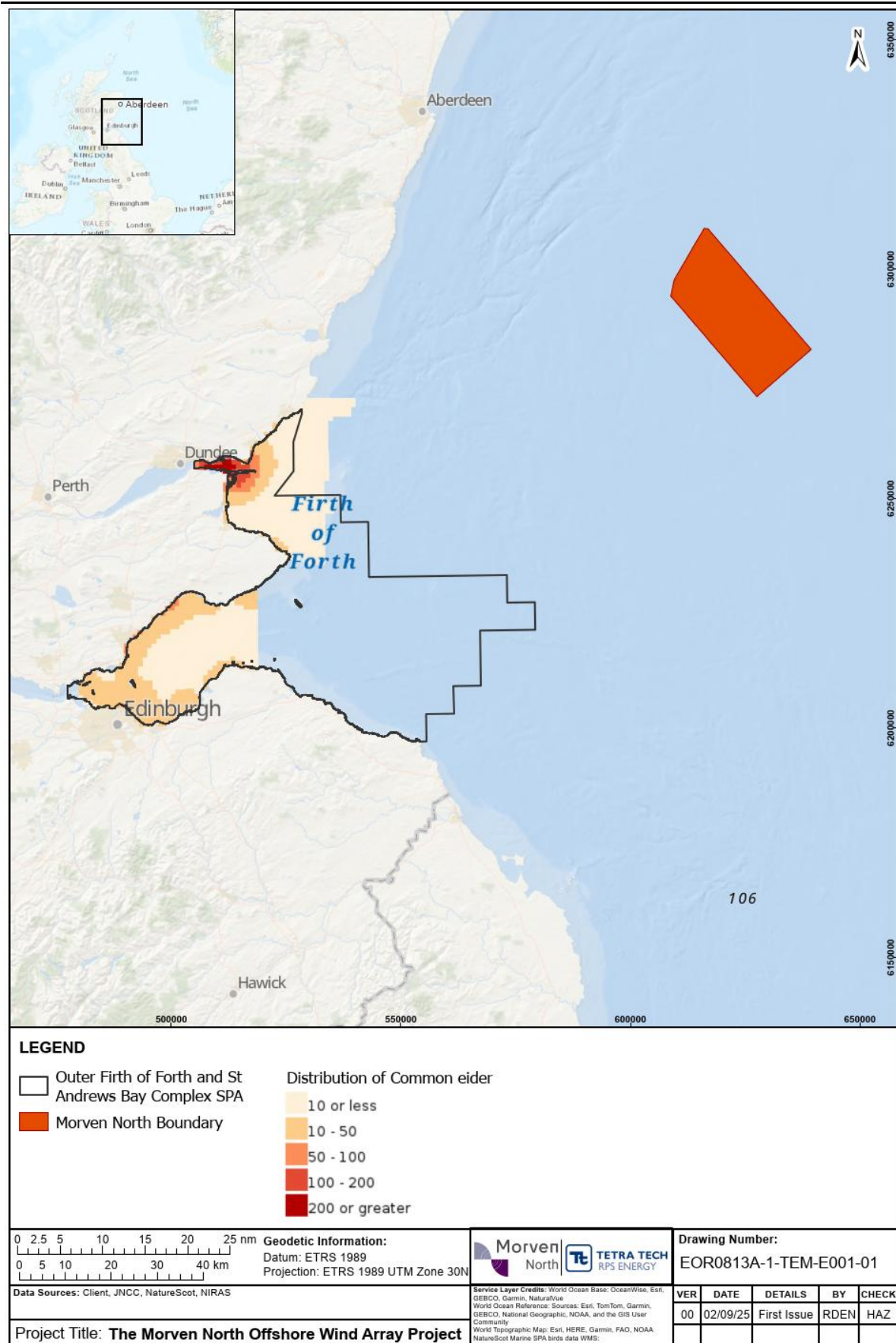


Figure 5.4: Distribution of common eider in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

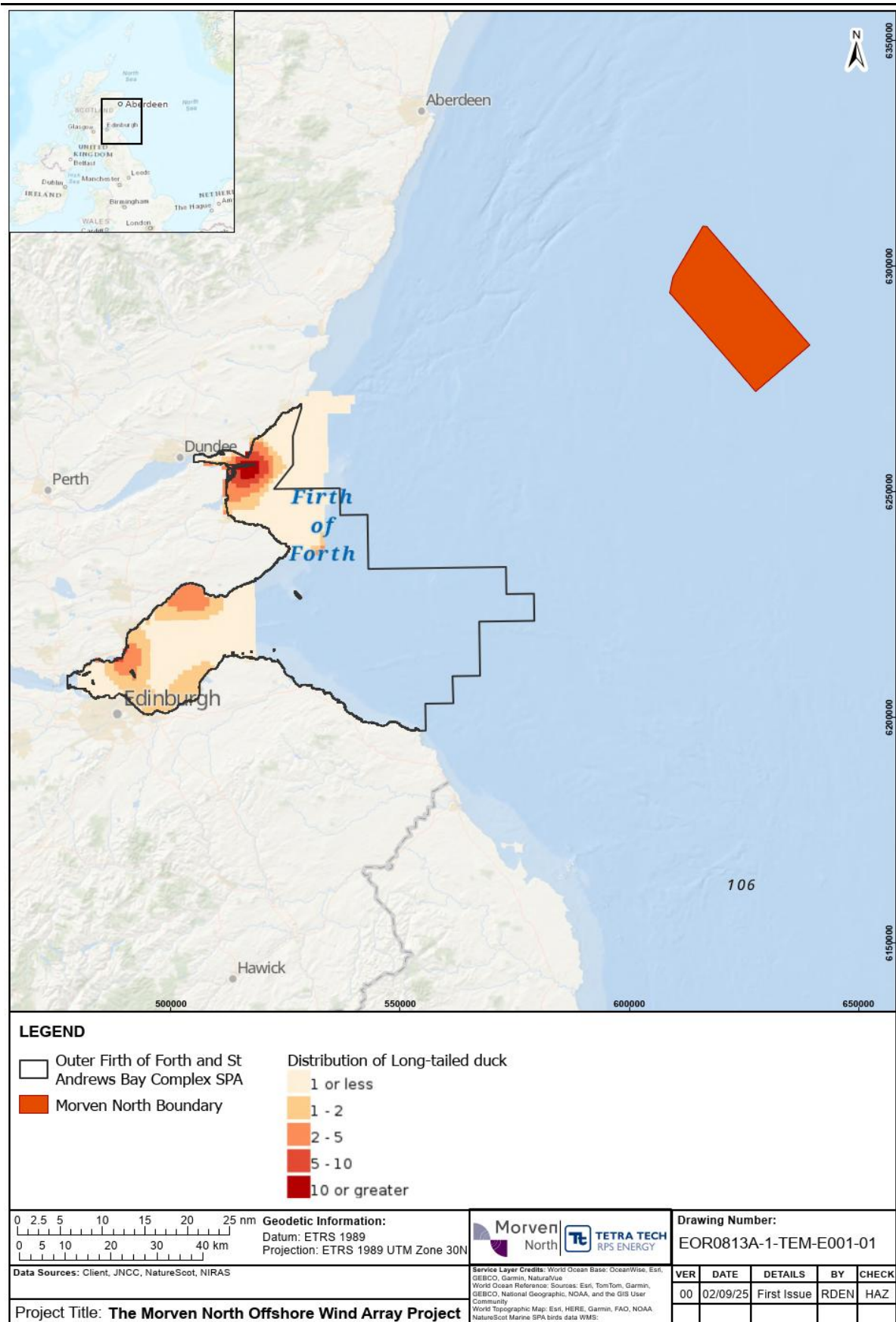


Figure 5.5: Distribution of long-tailed duck in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

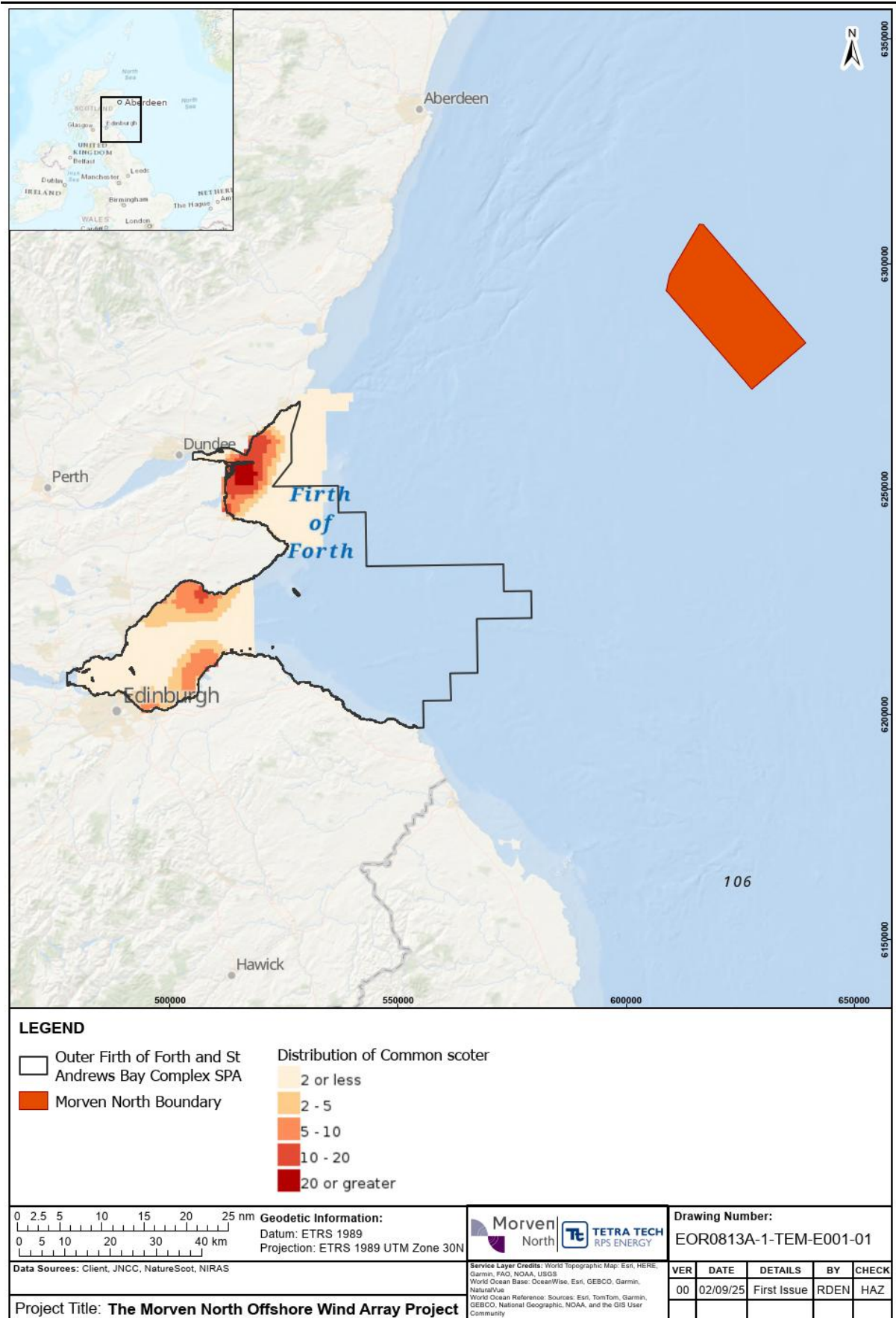


Figure 5.6: Distribution of common scoter in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

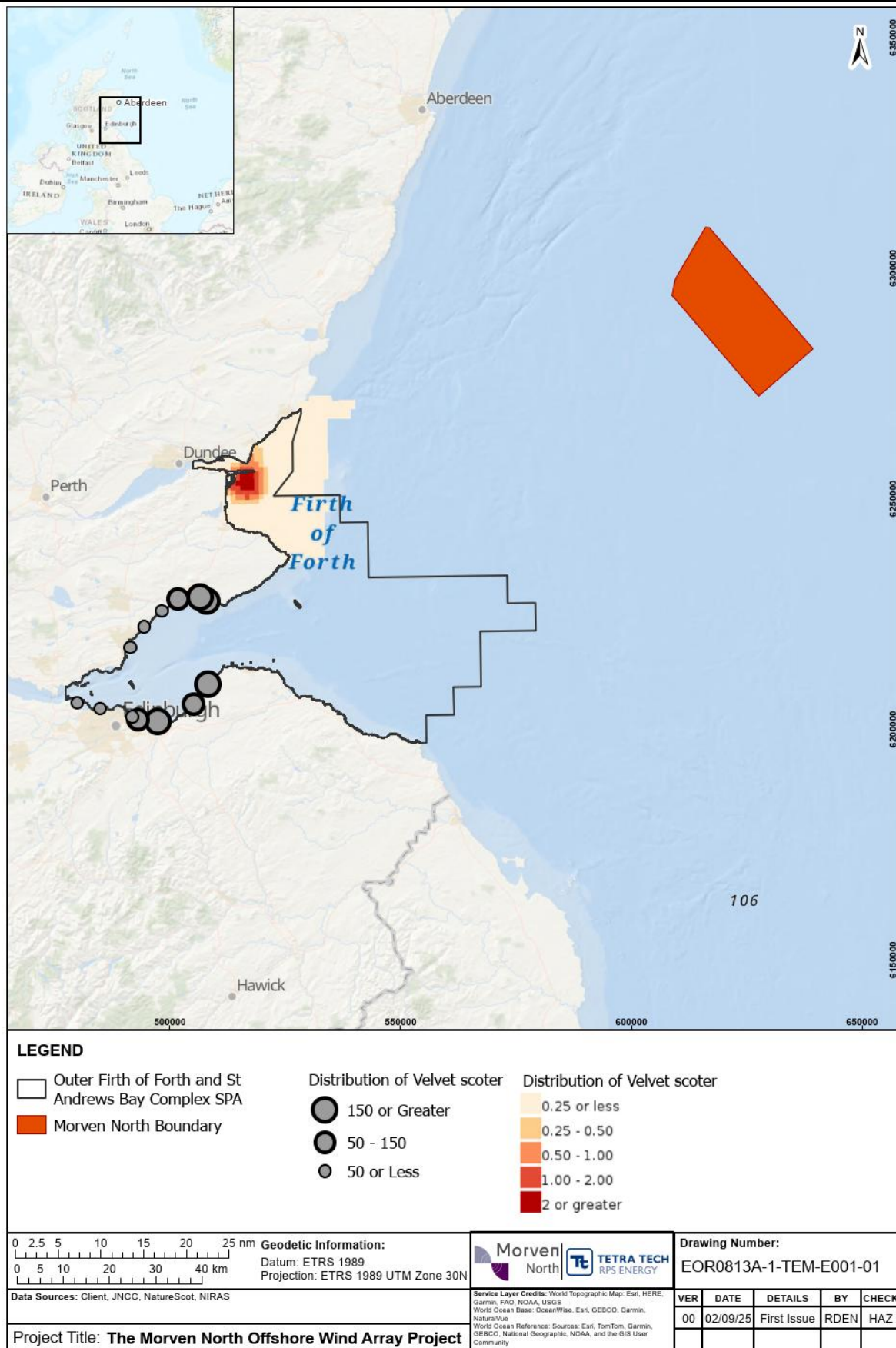


Figure 5.7: Distribution of velvet scoter in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

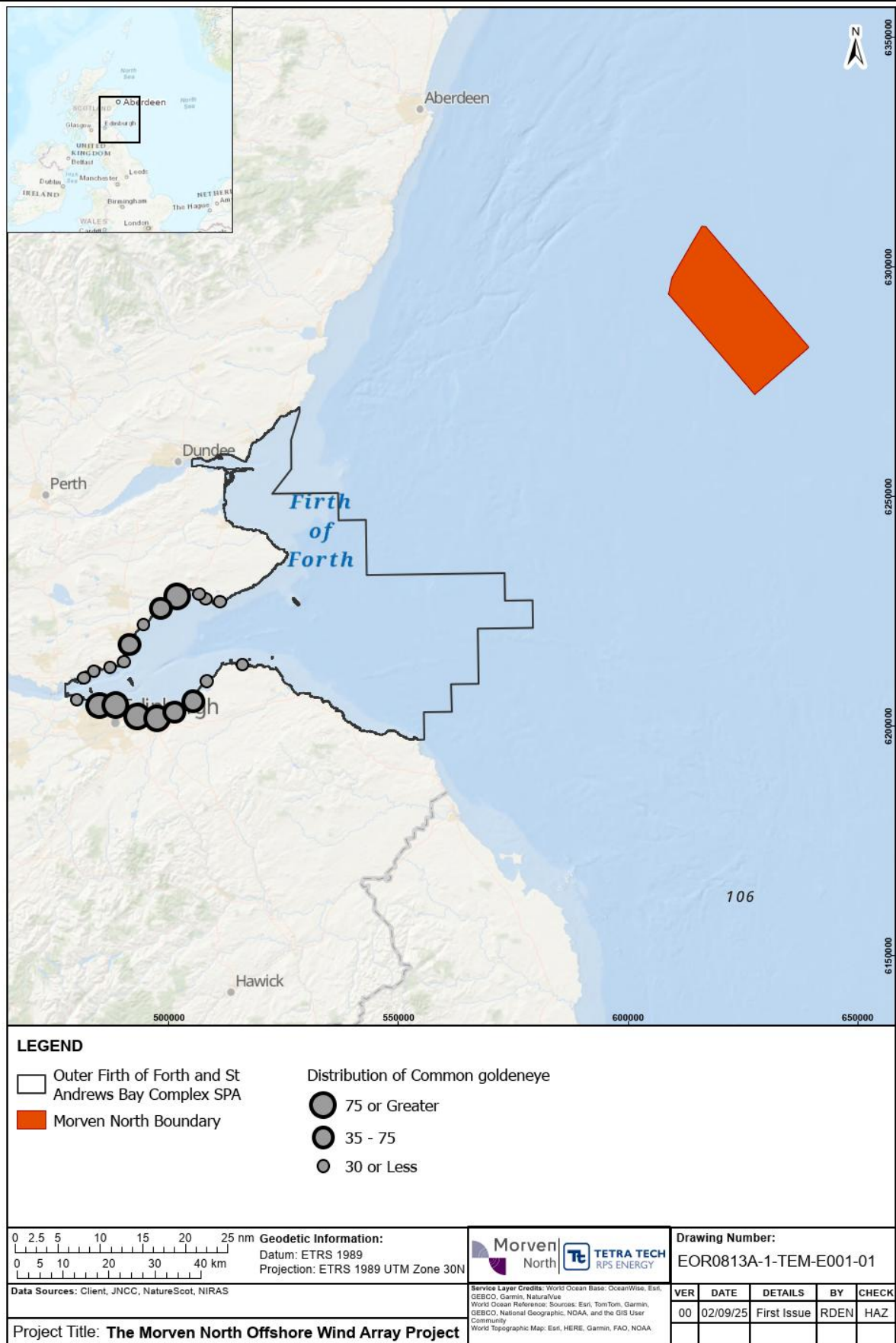


Figure 5.8: Distribution of common goldeneye in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

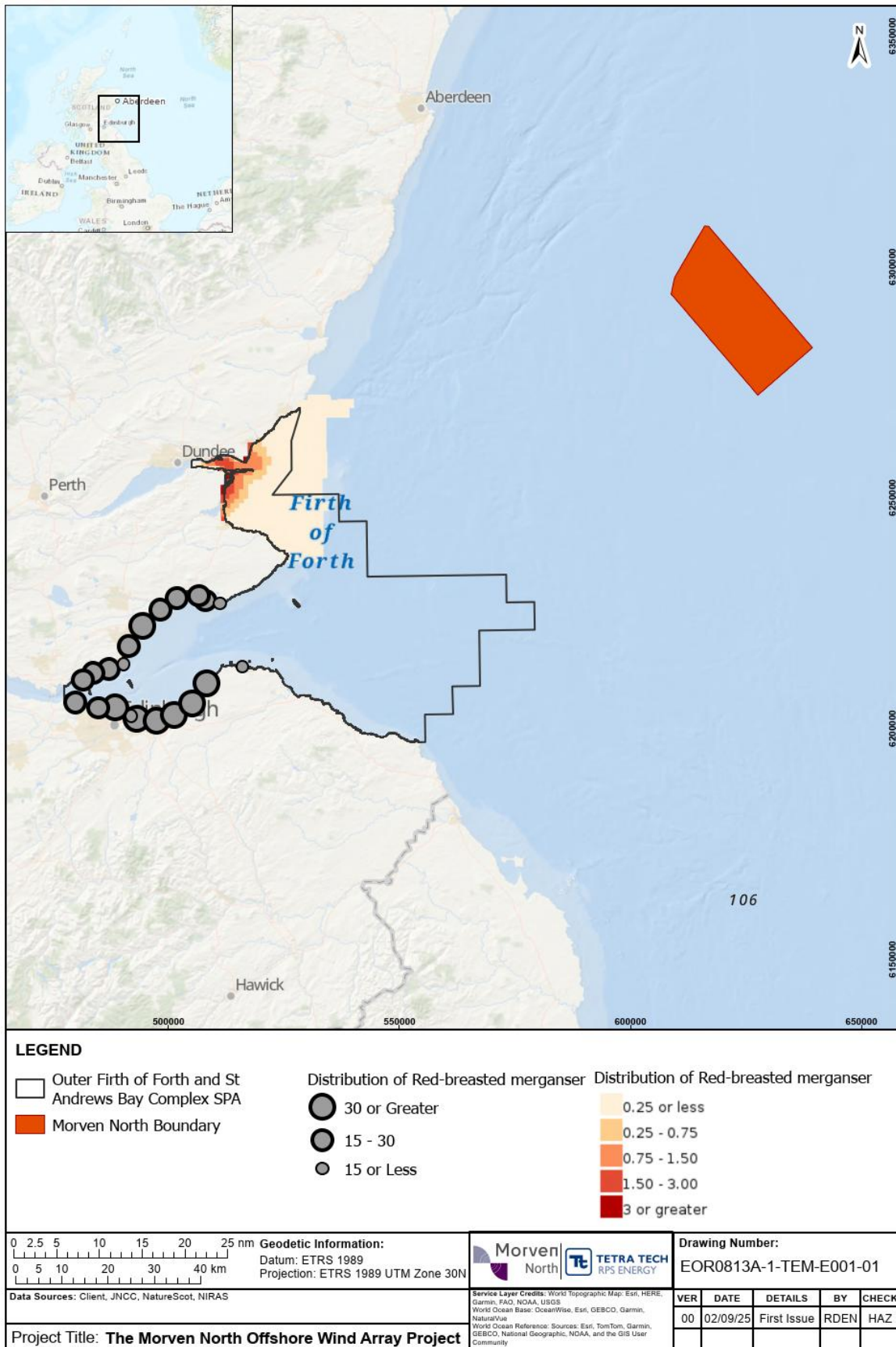


Figure 5.9: Distribution of red-breasted merganser in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

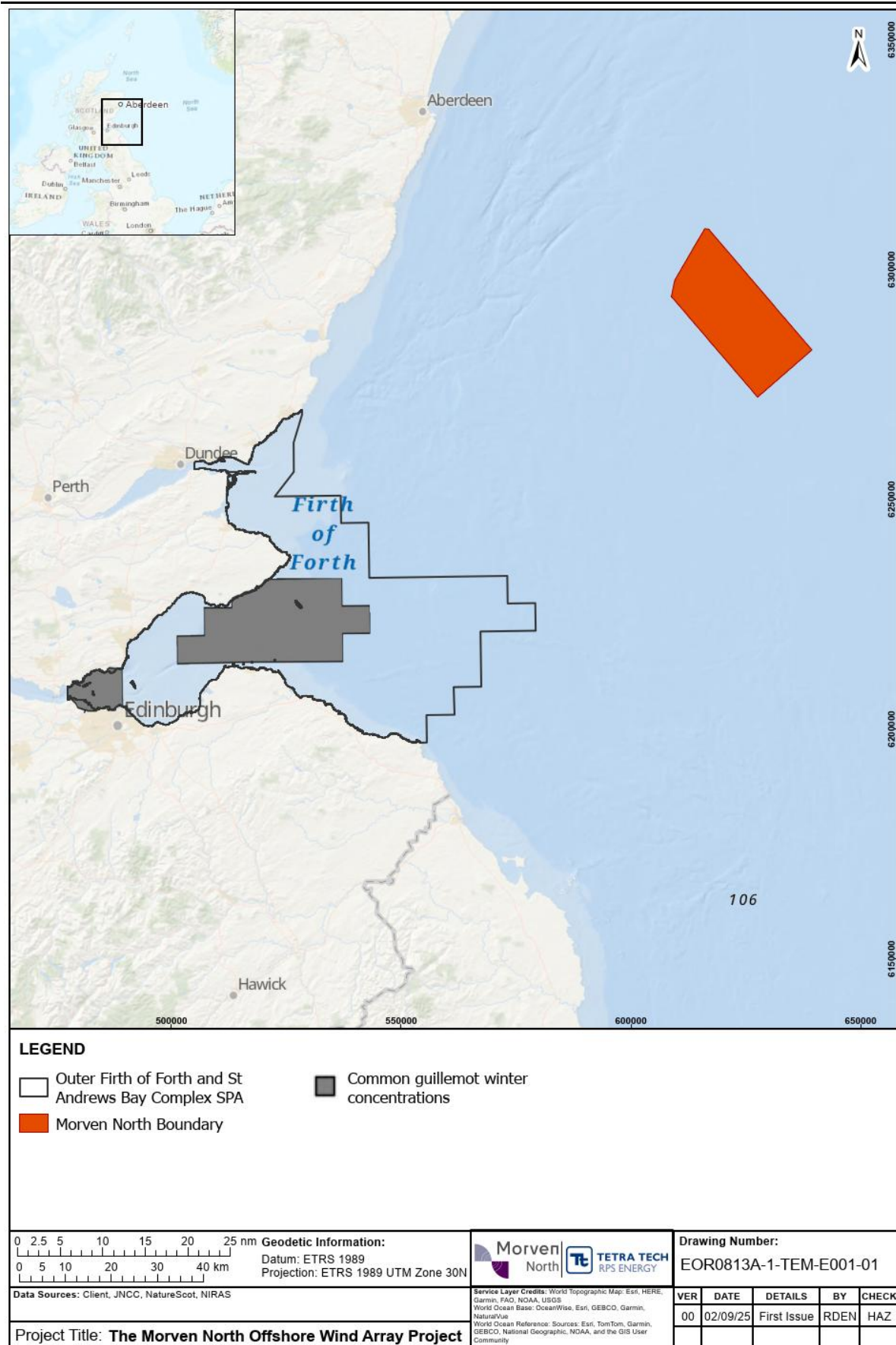


Figure 5.10: Distribution of guillemot in the Outer Firth of Forth and St Andrews Bay Complex Special Protection Area in the non-breeding season

Operation and maintenance phase

Habitat loss/disturbance affecting guillemot, razorbill, puffin and breeding seabird assemblage qualifying features at the Morven North Boundary

- 5.4.1.27 Disturbance to those qualifying features of SPAs identified in Table 5.10 may occur as a result of increased vessel and helicopter activities in and around Morven North. A total of up to 294 vessel movements per year may occur during the operations and maintenance phase with a maximum of 15 vessels on site at any one time. In addition, there may be up to 1,660 return helicopter movements per year with up to two helicopters on site at any one time. This would on average therefore represent less than one vessel movement per day and 4.5 helicopter movements per day.
- 5.4.1.28 Disturbance events during operations and maintenance activities may disturb and displace birds for the duration of the operations and maintenance phase. Disturbance and temporary loss of habitat (including habitat becoming temporarily unsuitable due to disturbance) will occur intermittently throughout the operations and maintenance phase. The lifetime of Morven North is 35 years, with activities and locations varying within this time. Any impacts resulting from disturbance and displacement from operations and maintenance activities are considered likely to be short-term, temporary, and reversible in nature, lasting only for the duration of associated activity, with birds expected to return to the area once activities have ceased.
- 5.4.1.29 The MDS (Table 5.11) gives the scenario that would lead to the greatest amount of disturbance during the operations and maintenance phase. In addition, no significant effects are expected on fish, shellfish or benthic invertebrate populations as a result of operation and maintenance activities (see Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology, of the EIA Report). Therefore, it is expected that disturbance and subsequent displacement would be the main impact pathway.
- 5.4.1.30 The Morven North project design includes a NSPVMP which will reduce disturbance of seabird species as far as practicable by avoiding aggregations of birds (see MM-7 in Volume 3, Annex 6.4: EIA Commitments Register, of the EIA Report).
- 5.4.1.31 The information presented in paragraphs 5.4.1.9 and 5.4.1.17 is also considered applicable to the assessment of disturbance in the operations and maintenance phase. In addition the spatial scale of disturbance impacts is reduced during the operations and maintenance phase and occurring within an area that will also be subject to displacement impacts associated with the presence of the wind farm (see Section 5.4.4).
- 5.4.1.32 Based on the distance between Morven North and relevant SPAs for all three species, the negligible proportion of the areas potentially affected by disturbance accounting for the reduced temporal and spatial scale of these disturbance sources it is therefore considered that the impact of direct temporary habitat loss/disturbance from Morven North during the operation and maintenance phase on guillemot, razorbill, puffin and breeding seabird assemblage qualifying features of relevant SPAs will be negligible.

Habitat loss/disturbance affecting qualifying features of the Outer Firth of Forth and St Andrew's Bay Complex SPA due to vessel movements

- 5.4.1.33 The location of ports for the operation and maintenance of Morven North has not been determined prior to application. However, the use of a port or ports that are located within the Outer Firth of Forth and St Andrews Bay Complex SPA cannot be ruled out. Therefore, the MDS assumes that all vessel movements required for all phases of Morven North will pass through the Outer Firth of Forth and St Andrews Bay Complex SPA. This equates to up to 294 return vessel trips per year and 1,660 return helicopter trips per year during the operations and maintenance phase. This averages out at less than one vessel movement per day and 4.5 helicopter movements per day.

- 5.4.1.34 As shown in Figure 5.1 there are numerous existing vessel routes through the Outer Firth of Forth and St Andrews Bay Complex SPA, and the greatest concentration of these is in the coastal waters, close to the coastline. This is also where the greatest numbers of the waterbirds and seabirds occur within the SPA (as set out in paragraphs 5.4.1.18 to 5.4.1.26, and shown in Figure 5.2 to Figure 5.10).
- 5.4.1.35 Due to the existing high levels of vessel traffic, and the apparent habituation shown by the waterbirds and seabirds (due to highest concentrations occurring in areas of high vessel activity), it can be concluded that the impact of disturbance and displacement resulting from less than one additional return trips (on average) per day, adhering to existing shipping routes where practicable during the operation and maintenance phase for Morven North will be negligible.

Decommissioning phase

All receptors

- 5.4.1.36 Decommissioning activities within Morven North are equal to or less than those carried out during the construction phase within Morven North (see paragraphs 5.4.1.4 to 5.4.1.26). Therefore, for the purpose of this assessment it is assumed that the level of direct temporary habitat loss/disturbance is likely to be similar, if not less, and the potential impact is deemed to be reversible in the short-term as birds are likely to return when activities have been completed.
- 5.4.1.37 Due to the existing high levels of vessel traffic, and the apparent resilience to existing vessel movements shown by the waterbirds and seabirds (with highest concentrations occurring outwith areas of high vessel activity), then it can be assumed that the impact of disturbance and displacement resulting from additional vessel movements, adhering to existing shipping routes where practicable during the decommissioning phase for Morven North alone will be negligible. This is further supported by the JNCC and NatureScot (2022) Conservation and Management Advice, which states that with regards to activities with the potential to affect waterbirds and seabirds, no additional management is required for commercial shipping along established routes.
- 5.4.1.38 Based on the distance between Morven North and relevant SPAs for all receptors, the negligible proportion of the areas potentially affected by disturbance accounting for the reduced temporal and spatial scale of these disturbance sources it is therefore considered that the impact of direct temporary habitat loss/disturbance from Morven North during the construction phase on all qualifying features of relevant SPAs will be negligible.

Conclusion

- 5.4.1.39 Impacts on any SPA and associated qualifying feature combination (Table 5.10) that undermine the conservation objectives of the SPAs will not occur as a result of direct temporary habitat loss/disturbance during all project phases of Morven North. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. For breeding seabird assemblage features and non-breeding waterfowl assemblages the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.
- 5.4.1.40 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to direct temporary habitat loss/disturbance impacts associated with Morven North during all project phases. This is applicable to all SPAs and associated features included in Table 5.13.

Table 5.13: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to direct temporary habitat loss/disturbance impacts associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Guillemot
	Razorbill
	Breeding seabird assemblage
Outer Firth of Forth and St Andrew's Complex SPA	Red-throated diver
	Slavonian grebe
	Eider
	Shag
	Long-tailed duck
	Common scoter
	Velvet scoter
	Goldeneye
	Red-breasted merganser
	Non-breeding waterfowl assemblage
	Guillemot
	Razorbill
	Puffin
Breeding seabird assemblage	
Buchan Ness to Collieston Coast SPA	Guillemot
	Breeding seabird assemblage
Forth Islands SPA	Guillemot
	Razorbill
	Puffin
	Breeding seabird assemblage
Northumberland Marine SPA	Puffin
	Razorbill
	Breeding seabird assemblage
St Abb's Head to Fast Castle SPA	Guillemot
	Razorbill
	Breeding seabird assemblage
Troup, Pennan and Lion's Heads SPA	Guillemot
	Razorbill
	Breeding seabird assemblage
Farne Islands SPA	Puffin
	Breeding seabird assemblage
Coquet Island SPA	Puffin

European site	Feature
	Breeding seabird assemblage
East Caithness Cliffs SPA	Razorbill (non-breeding seasons only)
	Breeding seabird assemblage
North Caithness Cliffs SPA	Puffin
	Breeding seabird assemblage
Hoy SPA	Puffin
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Puffin
	Breeding seabird assemblage
Fair Isle SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Foula SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage

5.4.2 Changes in prey availability due to temporary habitat loss/disturbance

- 5.4.2.1 The impact of changes in prey availability due to temporary habitat loss/disturbance has been assessed qualitatively. Project activities that may result in disturbance are expected to be intermittent and spatially limited at any given time, and therefore a qualitative assessment is considered to be proportional to the magnitude of the anticipated impacts.
- 5.4.2.2 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the construction, operations and maintenance and decommissioning phases, the potential for LSE² could not be ruled out for changes in prey availability due to temporary habitat loss/disturbance. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.14.
- 5.4.2.3 The potential for LSE² could not be ruled out for four species (kittiwake, guillemot, razorbill and puffin), due to these species' vulnerability to indirect effects (impacts on prey), as demonstrated by having a moderate or higher vulnerability score for habitat flexibility, as presented in a detailed study undertaken by Wade et al. (2016).

Table 5.14: European sites and associated qualifying features for which Likely Significant Effects² in relation to changes in prey availability due to temporary habitat loss/disturbance impacts associated with Morven North could not be ruled out

European site	Distance to Morven North Boundary (km) ⁴	Feature
Fowlsheugh SPA	59	Kittiwake

⁴ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North Boundary (km) ⁴	Feature
		Guillemot
		Razorbill
		Breeding seabird assemblage
Outer Firth of Forth and St Andrew's Complex SPA	66	Kittiwake
		Guillemot
		Razorbill
		Puffin
		Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	68	Kittiwake
		Guillemot
		Breeding seabird assemblage
Forth Islands SPA	101	Kittiwake
		Guillemot
		Razorbill
		Puffin
		Breeding seabird assemblage
Northumberland Marine SPA	102	Kittiwake
		Puffin
		Razorbill
		Breeding seabird assemblage
St Abb's Head to Fast Castle SPA	104	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Troup, Pennan and Lion's Heads SPA	107	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Farne Islands SPA	111	Kittiwake
		Puffin
		Breeding seabird assemblage
Coquet Island SPA	143	Kittiwake
		Puffin
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Kittiwake

European site	Distance to Morven North Boundary (km) ⁴	Feature
		Razorbill (non-breeding seasons only)
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Kittiwake
		Puffin
		Breeding seabird assemblage
Copinsay SPA	237	Kittiwake
		Breeding seabird assemblage
Hoy SPA	243	Kittiwake
		Puffin
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Kittiwake
		Razorbill
		Puffin
		Breeding seabird assemblage
Calf of Eday SPA	273	Kittiwake
		Breeding seabird assemblage
Rousay SPA	274	Kittiwake
		Breeding seabird assemblage
Marwick Head SPA	277	Kittiwake
		Breeding seabird assemblage
West Westray SPA	285	Kittiwake
		Breeding seabird assemblage
Fair Isle SPA	289	Kittiwake
		Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Foula SPA	359	Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Puffin (non-breeding seasons only)
		Breeding seabird assemblage

5.4.2.4 The MDS and designed-in measures considered for the assessment of change in prey availability due to temporary habitat loss/disturbance are shown in Table 5.15 and Table 5.16, respectively.

Table 5.15: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to change in prey availability due to temporary habitat loss/disturbance during all project phases

Project phase	MDS	Justification
Construction	As described in Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report for: <ul style="list-style-type: none"> • Temporary habitat loss and disturbance of habitats • Underwater sound impacting fish and shellfish receptors • Increased suspended sediment concentrations (SSCs) and associated sediment deposition • Long-term habitat loss 	As described in Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report.
Operation and maintenance	As described in Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report for: <ul style="list-style-type: none"> • Temporary habitat loss and disturbance of habitats • Increased SSCs and associated sediment deposition • Long-term habitat loss 	
Decommissioning	As described in Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report for: <ul style="list-style-type: none"> • Temporary habitat loss and disturbance of habitats • Underwater sound impacting fish and shellfish receptors • Increased SSCs and associated sediment deposition • Long-term habitat loss 	

Table 5.16: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to direct temporary habitat loss/disturbance during all project phases

Reference number	Designed-in measures	Justification	Primary or tertiary
MM-7	Development of and adherence to a Navigation Safety and Vessel Management Plan (NSPVMP).	An NSPVMP will be developed to reduce the risk introduced due to the presence of project vessels. The NSPVMP will describe the measures related to navigational safety, including information on Safety Zones, charting, construction buoyage, temporary lighting and marking and means of notification of Morven North activity to other sea users (e.g. via	Primary

		<p>Notices to Mariners). It will confirm the types and numbers of vessels engaged in Morven North and consider vessel coordination, including indicative transit route planning.</p> <p>To ensure Morven North project vessels are suitably managed to minimise the likelihood of involvement in incidents and maximise the ability to assist in the event of a third-party incident. The NSPVMP will include the requirement for Morven North vessels to comply with international marine regulations as adopted by the Flag State, including the International Regulations for Preventing Collisions at Sea (COLREGs) (International Maritime Organization (IMO), 1972/77) and the International Convention for the Safety of Life at Sea (SOLAS) (IMO, 1974) through the NSPVMP.</p> <p>The plan will reduce disturbance of seabird species as far as practicable, by avoiding bird populations or migratory routes and allow the identification of standard routes..</p>	
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Construction phase

5.4.2.5 Potential impacts on prey species during the construction phases of Morven North, as identified in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report, may have indirect effects on offshore ornithology site and features (Table 5.14).

5.4.2.6 Detailed assessments of the following potential construction impacts have been undertaken in Volume 2, Chapter 8: Benthic subtidal ecology chapter of the EIA report and Volume 2, Chapter 9: Fish and Shellfish Ecology chapter of the EIA report for key seabird prey species (including cod, sprat, herring, mackerel and sandeel species and bivalves):

- Temporary habitat loss and disturbance of habitats;
- Underwater sound impacting fish and shellfish receptors;
- Increased SSCs and associated sediment deposition;
- Long-term habitat loss.

5.4.2.7 Herring and sandeel are sensitive to offshore wind development (including underwater sound). Both species are listed as main prey items for several seabird species (Cramp and Simmons, 1983). Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA report determined Morven North to be largely unsuitable for herring and sandeel and therefore effects of habitat loss/disturbance on these species are expected to be limited within Morven North, given the

abundance of similar substrate types and the extensive nature of fish spawning grounds across the wider Morven North Fish and Shellfish study area.

- 5.4.2.8 Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report detail the findings of the desktop studies in the Benthic Ecology study area and the Fish and Shellfish Ecology study area. Both chapters assessed the sensitivity of the receptors and the magnitudes of the impacts in order to ascertain the significance of the effects.
- 5.4.2.9 Details of the fish, shellfish and bivalve ecology assessment are summarised in Table 5.17. Justifications for this assessment will not be repeated in this RIAA. Evidence, modelling and justifications for these assessments are provided in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report.

Table 5.17: EIA significance of effects of construction impacts on fish, shellfish and bivalve ecology

Potential impact	Species	EIA significance of effect
Temporary habitat loss and disturbance of habitats	All species	Minor adverse
Underwater sound impacting fish and shellfish receptors	All species	Minor adverse
Increased SSCs and associated sediment deposition	All species	Minor adverse
Long-term habitat loss	All species	Minor adverse

- 5.4.2.10 Utilising the conclusions from the EIA for fish, shellfish and bivalve ecology during the construction phase it can indicate to the indirect effect on seabirds. For all fish, shellfish, and bivalve species, minor adverse significance of effect was determined for all impacts identified in Table 5.17. Due to the nature of the impact, these minor adverse effects on prey species will be extremely localised and will be of negligible magnitude when considered against the wide areas over which seabirds regularly forage (Woodward *et al*, 2019).
- 5.4.2.11 Due to the minor localised impacts on habitats and key prey species, and the large areas over which kittiwake, guillemot, razorbill and puffin forage, it can be concluded that there will be no adverse effects on the prey resources of the features and sites being assessed. Therefore, it is concluded that there is negligible potential for a measurable indirect effect on ornithological features, resulting from changes in prey availability for any of the SPA sites and/or their qualifying ornithology features screened in for assessment.

Operations and maintenance phase

- 5.4.2.12 Potential impacts on prey species during the operations and maintenance phase of Morven North, as identified in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report, may have indirect effects on offshore ornithology site and features (Table 5.14).
- 5.4.2.13 Detailed assessments of the following potential operations and maintenance phase impacts have been undertaken in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report for key seabird prey species (including cod, sprat, herring, mackerel and sandeel species and bivalves) and include:
- Temporary habitat loss and disturbance of habitats;
 - Increased SSCs and associated sediment deposition;

- Long-term habitat loss.

5.4.2.14 Details of the fish, shellfish and bivalve ecology assessment are summarised in Table 5.18. Justifications for this assessment will not be repeated in this RIAA. Evidence, modelling and justifications for these assessments are provided in Volume 2, Chapter 8: Benthic Subtidal Ecology and Volume 2, Chapter 9: Fish and Shellfish Ecology of the EIA Report.

Table 5.18: EIA significance of effects of construction impacts on fish, shellfish and bivalve ecology

Potential impact	Species	EIA significance of effect
Temporary habitat loss and disturbance of habitats	All species	Minor adverse
Increased SSCs and associated sediment deposition	All species	Minor adverse
Long-term habitat loss	All species	Minor adverse

5.4.2.15 Utilising the conclusions from the EIA for fish, shellfish and bivalve ecology during the operations and maintenance phase it can indicate to the indirect effect on seabirds. For all fish, shellfish, and bivalve species, minor adverse significance of effect was determined for all impacts identified in Table 5.18. Due to the nature of the impact, these minor adverse effects on prey species will be extremely localised and will be of negligible magnitude when considered against the wide areas over which seabirds regularly forage (Woodward *et al*, 2019).

5.4.2.16 Due to the minor localised impacts on habitats and key prey species, and the large areas over which kittiwake, guillemot, razorbill and puffin forage, it can be concluded that there will be no adverse effect on the prey resources of the features and sites being assessed. Therefore, it is concluded that there is negligible potential for a measurable indirect effect on ornithological features, resulting from changes in prey availability for any of the SPA sites and/or their qualifying ornithology features screened in for assessment.

Decommissioning phase

5.4.2.17 Decommissioning activities within Morven North are equal to or less than those carried out during the construction phase within Morven North. Therefore, for the purpose of this assessment it is assumed that the impact from changes in prey availability due to temporary habitat loss/disturbance is likely to be similar, if not less, and the potential impact is deemed to be reversible in the short-term as birds are likely to return when activities have been completed.

5.4.2.18 Therefore, it is concluded that there is negligible potential for a measurable indirect effect on ornithological features, resulting from changes in prey availability for any of the SPA sites and/or their qualifying ornithology features screened in for assessment.

Conclusion

5.4.2.19 Impacts on any SPA and associated qualifying feature combination (Table 5.14) that undermine the conservation objectives of the SPAs will not occur as a result of changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.

5.4.2.20 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to direct temporary habitat loss/disturbance impacts associated with Morven North during all project phases. This is applicable to all SPAs and associated features included in Table 5.19.

Table 5.19: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to changes in prey availability due to temporary habitat loss/disturbance impacts associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Outer Firth of Forth and St Andrew’s Complex SPA	Kittiwake
	Guillemot
	Razorbill
	Puffin
	Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	Kittiwake
	Guillemot
	Breeding seabird assemblage
Forth Islands SPA	Kittiwake
	Guillemot
	Razorbill
	Puffin
	Breeding seabird assemblage
Northumberland Marine SPA	Kittiwake
	Puffin
	Razorbill
	Breeding seabird assemblage
St Abb’s Head to Fast Castle SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Troup, Pennan and Lion’s Heads SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Farne Islands SPA	Kittiwake
	Puffin

European site	Feature
	Breeding seabird assemblage
Coquet Island SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
East Caithness Cliffs SPA	Kittiwake
	Razorbill (non-breeding seasons only)
	Breeding seabird assemblage
North Caithness Cliffs SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Copinsay SPA	Kittiwake
	Breeding seabird assemblage
Hoy SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Kittiwake
	Razorbill
	Puffin
	Breeding seabird assemblage
Calf of Eday SPA	Kittiwake
	Breeding seabird assemblage
Rousay SPA	Kittiwake
	Breeding seabird assemblage
Marwick Head SPA	Kittiwake
	Breeding seabird assemblage
West Westray SPA	Kittiwake
	Breeding seabird assemblage
Fair Isle SPA	Kittiwake
	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Foula SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage

5.4.3 Collision risk

- 5.4.3.1 During the operations and maintenance phase of Morven North, the turning rotors of the wind turbines may present a risk of collision for seabirds. Stationary structures, such as the tower, nacelle, or when rotors are not operating, are not expected to result in a material risk of collision. When a collision occurs between the turning rotor blade and the bird, it is assumed to result in direct mortality of the bird, which could potentially result in population level impacts.
- 5.4.3.2 The ability of seabirds to detect and manoeuvre around wind turbine blades is a factor that is considered when modelling and assessing the collision risk. In response to this, it is standard practice to calculate differing levels of avoidance for different species or species groups. Avoidance rates are applied to collision risk models to predict levels of impact more realistically, based on available literature and expert advice about seabird behaviour and their flight response to wind turbines.
- 5.4.3.3 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operation and maintenance phase, the potential for LSE² could not be ruled out for collision risk. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.20.

Table 5.20: European sites and associated qualifying features for which Likely Significant Effects² in relation to collision risk impacts associated with Morven North could not be ruled out

European site	Distance to Morven North Boundary (km) ⁵	Feature
Fowlsheugh SPA	59	Herring gull
		Kittiwake
		Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	66	Kittiwake
		Herring gull (non-breeding)
		Gannet
		Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	68	Herring gull
		Kittiwake
		Breeding seabird assemblage
Forth Islands SPA	101	Gannet
		Kittiwake
		Breeding seabird assemblage
Northumberland Marine SPA	102	Kittiwake
		Breeding seabird assemblage
	104	Kittiwake

⁵ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North Boundary (km) ⁵	Feature
St Abb`s Head to Fast Castle SPA		Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	107	Kittiwake
		Breeding seabird assemblage
Farne Islands SPA	111	Kittiwake
		Breeding seabird assemblage
Coquet Island SPA	143	Kittiwake
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Kittiwake
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Kittiwake
		Breeding seabird assemblage
Copinsay SPA	237	Kittiwake
		Breeding seabird assemblage
Hoy SPA	243	Kittiwake
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Gannet (non-breeding seasons only)
		Kittiwake
		Breeding seabird assemblage
Calf of Eday SPA	273	Kittiwake
		Breeding seabird assemblage
Rousay SPA	274	Kittiwake
		Breeding seabird assemblage
Marwick Head SPA	277	Kittiwake
		Breeding seabird assemblage
West Westray SPA	285	Kittiwake
		Breeding seabird assemblage
Fair Isle SPA	289	Gannet (non-breeding seasons only)
		Kittiwake
		Breeding seabird assemblage
Noss SPA	357	Gannet (non-breeding seasons only)
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Gannet (non-breeding seasons only)

European site	Distance to Morven North Boundary (km) ⁵	Feature
		Breeding seabird assemblage
St Kilda SPA	448	Gannet (non-breeding seasons only)
		Breeding seabird assemblage

5.4.3.4 The MDS and designed-in measures considered for the assessment of collision risk are shown in Table 5.21 and Table 5.22, respectively.

Table 5.21: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to collision risk during the operation and maintenance phase

Project phase	MDS	Justification
Operation and maintenance	<ul style="list-style-type: none"> • Presence of up to 96 wind turbines within the Morven North Boundary. • Minimum lower blade tip height of 34m above Lowest Astronomical Tide (LAT). • Maximum blade tip height of 293m above LAT. • Maximum rotor diameter of 250m. • Maximum chord width of 6.8m. • Average rotor speed of 6.1 rpm (with maximum speed of 8.0rpm). • Monthly proportion of time operational is 98% in all months • A blade pitch of 5.5 degrees • Operational lifetime of up to 35 years. 	The potential for collision risk is derived from wind turbines parameters including rotor diameter, chord width, rotor speed and minimum lower blade tip height. The parameters associated with the most numerous wind turbine parameters (96) represents the MDS because it will result in the greatest potential for collision risk.

Table 5.22: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to collision risk during the operation and maintenance phase

Reference number	Designed-in measures	Justification	Primary or tertiary
MM-43	A minimum lower blade tip height clearance of 34m LAT.	To reduce impact to seabirds as most seabirds fly close to the sea	Primary

Reference number	Designed-in measures	Justification	Primary or tertiary
		surface. Increasing the clearance between blade tip and sea surface reduces potential for collision. This minimum blade tip height clearance is considered appropriately conservative so as to reduce the risk of bird collisions in the specific circumstances of Morven North.	

Operation and maintenance phase

- 5.4.3.5 Collision risk modelling was undertaken using the Stochastic Collision Risk Model (sCRM) (Caneco and Humphries, 2022) which is based on the stochLAB R package as recommended by JNCC *et al.* (2024b) and NatureScot (2025b). The full methodology is provided in Volume 3, Annex 11.2: Offshore Ornithology Collision Risk Modelling Report, of the EIA Report.
- 5.4.3.6 For all species, collision risk modelling has been carried out using the input parameters recommended by NatureScot (2025b) (Table 5.4). However, it should be noted that there is considerable uncertainty around several of the key input parameters, including flight speed and avoidance rates. Therefore, in addition to the approach advocated by NatureScot, a range of other input parameters has also been considered, as detailed in Volume 3, Appendix 11.2: Offshore Ornithology Collision Risk Modelling Report, of the EIA Report and Table 5.4 and presented as the Applicant’s approach in this section. Further discussion on the uncertainty associated with relevant input parameters is provided in Volume 3, Appendix 11.2: Offshore Ornithology Collision Risk Modelling Report, of the EIA Report.
- 5.4.3.7 The quantification of collision mortality provides an estimate of the total number of birds subject to mortality. For the purposes of this RIAA, it is necessary to estimate which of those birds may be associated with specific SPAs, in order to calculate the impact on the population of a qualifying feature for which a site is designated. This is done through the process of apportionment. Full details of the apportionment process and the resulting proportion of birds associated with each SPA are given in Volume 2, Annex 3.1: RIAA: Apportioning.
- 5.4.3.8 Collision risk estimates for each of the qualifying features identified in Table 5.20 apportioned to the relevant SPA are presented on a seasonal basis in Table 5.23 using the parameters advocated by NatureScot and in Table 5.24 using the parameters advocated by the Applicant. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance (NatureScot, 2023h).
- 5.4.3.9 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Table 5.23: Calculation of effect from Morven North alone in relation to collision risk based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion, adult:immature ratio and sabbatical proportion

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Gannet (flight speed 14.9m/s, avoidance rate 0.9929, 70% macro-avoidance applied to pre- and post-breeding seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.3.16													
	Forth Islands SPA	9.7	0.7		0.2	0.43	0.24		0.31	4.2	0.2		0.1	4.4	0.003
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.05		0.06	n/a	0.0		0.0	0.0	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.01		0.02	n/a	0.0		0.0	0.0	<0.001
	Noss SPA (non-breeding seasons only)	9.7	0.7		0.2	0.01	0.03		0.06	0.1	0.0		0.0	0.1	<0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	9.7	0.7		0.2	0.01	0.09		0.14	0.1	0.1		0.0	0.18	<0.001
	St Kilda SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.03		<0.01	n/a	0.0		0.0	0.0	<0.001

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Herring gull (flight speed 12.8 m/s, avoidance rate 0.9940)	Fowlsheugh SPA	0.6		0.3		0.08		0.18		0.1		0.1		0.1	0.005
	Outer Firth of Forth and St Andrews Bay Complex SPA (non-breeding)	See paragraph 5.4.3.23													
	Buchan Ness to Collieston Coast SPA	See paragraphs 5.4.3.17 to 5.4.3.21													
Kittiwake (flight speed 13.1 m/s, avoidance rate 0.9929)	Fowlsheugh SPA	19.8	2.3		2.8	0.14	0.01		0.02	2.9	0.0		0.1	2.9	0.010
	Outer Firth of Forth and St Andrews Bay Complex SPA (non-breeding)	See paragraph 5.4.3.28													
	Buchan Ness to Collieston Coast SPA	19.8	2.3		2.8	0.07	0.02		0.02	1.4	0.0		0.1	1.5	0.007
	Forth Islands SPA	19.8	2.3		2.8	0.02	0.00		0.01	0.4	0.0		0.0	0.4	0.005
	Northumberland Marine SPA	See paragraph 5.4.3.26													
	St Abb's Head to Fast Castle SPA	19.8	2.3		2.8	0.03	0.00		0.01	0.5	0.0		0.0	0.5	0.005

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Troup, Pennan and Lion's Heads SPA	19.8	2.3		2.8	0.03	0.02		0.03	0.5	0.0		0.1	0.7	0.003
	Farne Islands SPA	19.8	2.3		2.8	0.02	0.00		0.01	0.3	0.0		0.0	0.4	0.004
	Coquet Island SPA	19.8	2.3		2.8	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.003
	East Caithness Cliffs SPA	19.8	2.3		2.8	0.02	0.06		0.08	0.5	0.1		0.2	0.8	0.002
	North Caithness Cliffs SPA	19.8	2.3		2.8	<0.01	0.01		0.02	0.0	0.0		0.1	0.1	0.001
	Copinsay SPA	19.8	2.3		2.8	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Hoy SPA	19.8	2.3		2.8	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Flamborough and Filey Coast SPA	19.8	2.3		2.8	0.04	0.05		0.07	0.8	0.1		0.2	1.1	0.001
	Calf of Eday SPA	19.8	2.3		2.8	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Rousay SPA	n/a	2.3		2.8	n/a	<0.01		<0.01	0.0	0.0		0.0	0.0	0.002
	Marwick Head SPA	n/a	2.3		2.8	n/a	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	West Westray SPA	n/a	2.3		2.8	n/a	0.02		0.02	0.0	0.0		0.1	0.1	0.002
	Fair Isle SPA	n/a	2.3		2.8	n/a	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001

Table 5.24: Calculation of effect from Morven North alone in relation to collision risk based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion ,adult:immature ratio and sabbatical proportion

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Gannet (flight speed 13.33 m/s, avoidance rate 0.9929, 70% macro-avoidance applied to all seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA (non-breeding)	See paragraph 5.4.3.16													
	Forth Islands SPA	2.7	0.7		0.2	0.75	0.24		0.31	2.0	0.2		0.1	2.3	0.001
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.05		0.06	n/a	0.0		0.0	0.0	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.01		0.02	n/a	0.0		0.0	0.0	<0.001
	Noss SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.03		0.06	n/a	0.0		0.0	0.0	<0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.09		0.14	n/a	0.1		0.0	0.1	<0.001

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	St Kilda SPA (non-breeding seasons only)	n/a	0.7		0.2	n/a	0.03		<0.01	n/a	0.0		0.0	0.0	<0.001
Herring gull (flight speed 9.8 m/s, avoidance rate 0.9952)	Fowlsheugh SPA	0.4		0.2		0.12		0.18		0.0		0.0		0.1	0.004
	Outer Firth of Forth and St Andrews Bay Complex SPA (non-breeding)	See paragraph 5.4.3.23													
	Buchan Ness to Collieston Coast SPA	See paragraphs 5.4.3.17 to 5.4.3.21													
Kittiwake (flight speed 8.71 m/s, avoidance rate 0.9979)	Fowlsheugh SPA	4.5	0.5		0.6	0.24	0.01		0.02	1.1	0.0		0.0	1.1	0.004
	Outer Firth of Forth and St Andrews Bay Complex SPA (non-breeding)	See paragraph 5.4.3.28													
	Buchan Ness to Collieston Coast SPA	4.5	0.5		0.6	0.11	0.02		0.02	0.5	0.0		0.0	0.5	0.002
	Forth Islands SPA	4.5	0.5		0.6	0.03	<0.01		0.01	0.2	0.0		0.0	0.2	0.002

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Northumberland Marine SPA	See paragraph 5.4.3.26													
	St Abb's Head to Fast Castle SPA	4.5	0.5		0.6	0.04	<0.01		0.01	0.2	0.0		0.0	0.2	0.002
	Troup, Pennan and Lion's Heads SPA	4.5	0.5		0.6	0.04	0.02		0.03	0.2	0.0		0.0	0.2	0.001
	Farne Islands SPA	4.5	0.5		0.6	0.03	<0.01		0.01	0.1	0.0		0.0	0.1	0.002
	Coquet Island SPA	4.5	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	East Caithness Cliffs SPA	4.5	0.5		0.6	0.04	0.06		0.08	0.1	0.0		0.0	0.2	0.001
	North Caithness Cliffs SPA	4.5	0.5		0.6	<0.01	0.01		0.02	0.0	0.0		0.0	0.0	<0.001
	Copinsay SPA	4.5	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Hoy SPA	4.5	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Flamborough and Filey Coast SPA	4.5	0.5		0.6	0.07	0.05		0.07	0.3	0.0		0.0	0.4	<0.001
	Calf of Eday SPA	4.5	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Rousay SPA	n/a	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001

Feature	European site	Unapportioned seasonal collision risk estimates (no. of birds)				Apportioning value				Apportioned collision risk estimate (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Marwick Head SPA	n/a	0.5		0.6	-	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	West Westray SPA	n/a	0.5		0.6	<0.01	0.02		0.02	0.0	0.0		0.0	0.0	<0.001
	Fair Isle SPA	n/a	0.5		0.6	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001

Gannet

- 5.4.3.10 The potential for LSE² in relation to collision risk could not be ruled out six SPAs which are designated to protect breeding populations of gannet (Table 5.20). All but one of these was identified for consideration of collision impacts in non-breeding seasons only. Collision impacts in the breeding season were only considered for the Forth Islands SPA due to gannets exhibiting spatial segregation in foraging areas from individual breeding colonies (Wakefield *et al.*, 2013). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA which is designated to protect sea areas used by gannets from adjacent SPA breeding colonies.
- 5.4.3.11 For SPAs for which collision impacts were considered in non-breeding seasons only, the predicted impact represented less than a 0.02 percentage point change in the associated baseline mortality of each SPA under both NatureScot's (Table 5.23) and the Applicant's (Table 5.24) approach.
- 5.4.3.12 For the Forth Islands SPA for which there was connectivity with Morven North in all seasons, the impact also remained below the 0.02 percentage point threshold for both NatureScot's (Table 5.23) and the Applicant's (Table 5.24) approach.
- 5.4.3.13 As mentioned in paragraph 5.4.3.10, during the breeding period, gannets exhibit spatial segregation in foraging areas between individual breeding colonies (Wakefield *et al.*, 2013). This information was used in the Morven Site HRA Screening Report to conclude that impacts in the breeding season were exclusive to the Forth Islands SPA and discount LSE² for all other SPAs in the breeding season. The predicted impacts in Table 5.23 and Table 5.24 were calculated applying the recommended NatureScot (2018) apportioning approach which utilises three weighting factors (colony proportion, adult:immature proportion and sabbatical rate) to estimate the proportion of breeding adult birds from relevant colonies that may interact with a project site (see Volume 2, Annex 3.1: RIAA: Apportioning for more information). This approach estimated that, of the breeding adult gannets present at Morven North, approximately 87% would originate from the Forth Islands SPA. The remaining 13% of birds were attributed to other breeding colonies, including some that are SPAs. However, as impacts in the breeding season on these SPAs were discounted in the Morven Site HRA Screening Report based on the information in Wakefield *et al.*, (2013) it is considered that the apportioning value is zero and therefore no impact is apportioned to these SPAs in the breeding season.
- 5.4.3.14 The NatureScot (2018) breeding season apportioning approach utilises generic foraging range information, assuming connectivity with any SPA from which the foraging range of a given species, in this case gannet, overlaps with Morven North. The approach is not designed to take into account site-specific foraging range information such as that presented in Wakefield *et al.* (2013). Using the information from Wakefield *et al.* (2013) would suggest that the only breeding adult birds present at Morven North during the breeding season originate from the Forth Islands SPA and therefore it should be assumed that the breeding adult proportion of gannets from the Forth Islands SPA present at Morven North should be 100%. The use of the foraging range data from Wakefield *et al.* (2013) would also mean that there would be no birds from other SPA breeding colonies (e.g. the Flamborough and Filey Coast SPA) present at Morven North, consistent with the assumptions in the Morven Site HRA Screening Report.
- 5.4.3.15 The effect the use of the foraging range data from Wakefield *et al.* (2013) has on the breeding season apportioning values for the Forth Islands SPA in Table 5.23 and Table 5.24 is presented in Table 5.25. The breeding season apportioning value consists of three factors, a colony proportion, which would, based on the information in Wakefield *et al.*, (2013) be 100% for the Forth Islands SPA, an adult:immature proportion (55.2% for the NatureScot approach and 95.9% for the Applicant's approach) and a sabbatical rate (90% for both the NatureScot and Applicant's approaches). This would then give breeding season apportioning values of 49.7% for NatureScot's approach and 86.3% for the Applicant's approach. When applying

NatureScot's approach, this would in turn provide a breeding season impact of 4.8 birds/annum and an annual impact of 5.0 birds/annum. When applying the Applicant's approach this would provide a breeding season impact of 2.3 birds/annum and an annual impact of 2.6 birds/annum. These impacts would not surpass the 0.02 percentage point threshold recommended by NatureScot.

Table 5.25: Calculation of breeding season impacts for gannet at the Forth Islands SPA incorporating foraging range data from Wakefield *et al.* (2013)

Approach	Foraging range data	Colony proportion	Adult:immature proportion	Sabbatical proportion	Breeding season apportioning value
NatureScot	Generic (as incorporated into Table 5.23)	0.868	0.552	0.9	0.431
	Wakefield <i>et al.</i> (2013)	1.000	0.552	0.9	0.497
Applicant	Generic (as incorporated into Table 5.24)	0.868	0.959	0.9	0.749
	Wakefield <i>et al.</i> (2013)	1.000	0.959	0.9	0.863

5.4.3.16 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by gannets from adjacent breeding colonies. For gannet, this includes the Forth Islands SPA only. The conclusions reached for the gannet qualifying feature of the Forth Islands SPA are therefore considered applicable to the gannet qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.

Herring gull

5.4.3.17 As part of the HRA Stage 1 screening exercise for Morven North, connectivity was identified between herring gull at the three SPAs (Buchan Ness to Collieston Coast SPA, Fowlsheugh SPA and the Outer Firth of Forth and St Andrews Bay Complex SPA) and Morven North based on the mean-maximum foraging range (plus one standard deviation) of the species (Woodward *et al.*, 2019).

5.4.3.18 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of herring gull is 58.8km. If this foraging range is applied there would be no connectivity between Morven North and the Fowlsheugh SPA. The HRA Stage 1 screening exercise for Morven North was undertaken following a precautionary approach which applied the mean-maximum foraging range plus one standard deviation, giving a foraging range for herring gull of 85.6km. This distance was measured from the edge of Morven North to the edge of all relevant SPAs. However, Morven North is located between 68.3 and 104.0km from Buchan Ness to Collieston Coast SPA meaning that only part of the Morven North Boundary, representing less than 50% of the total array area, is within foraging range. The distances used in the apportioning approach for Morven North were measured from the centre of Morven North to the centre of the Buchan Ness to Collieston Coast SPA consistent with the recommended approach in NatureScot (2018). As this distance is greater than the mean-maximum foraging range plus one standard

deviation this results in no impact being apportioning to herring gull at the Buchan Ness to Collieston Coast SPA in the breeding season.

- 5.4.3.19 Herring gulls were recorded in only eight of the baseline aerial surveys (see Volume 3, Annex 11.1 Offshore Ornithology Baseline Characterisation Report, of the EIA Report) undertaken to support the Morven North application with birds recorded in November 2021, May, July, October and December 2022 and May, June and July 2023. In all of these surveys the number of birds recorded was less than ten. Of these surveys, birds were only recorded in flight in November 2021, July, October and December 2022 and May and June 2023 with only one bird recorded in flight in all months except May 2023 when two birds were recorded in flight. Of these birds only those recorded in November 2021, October 2022 and May and June 2023 were recorded inside the Morven North Boundary. Finally, the birds recorded in October 2022 and June 2023 were immature birds and therefore not attributable to SPA populations. This means of all the herring gulls recorded during baseline surveys of Morven North only two are at risk of collision and are attributable to SPA populations. The limited number of herring gulls recorded during baseline surveys leads to a total unapportioned collision risk estimate of 0.6 to 0.9 collisions/annum depending on the parameters applied in collision risk modelling.
- 5.4.3.20 As a result, regardless of the extent of connectivity between Morven North and relevant SPA populations, the magnitude of collision impacts on herring gull from Morven North is highly unlikely to lead to a detectable increase in the baseline mortality of the herring gull population at any SPA.
- 5.4.3.21 This is illustrated by the predicted impact on the Fowlsheugh SPA for which Morven North is within the foraging range of herring gull when measuring from the centre of Morven North to the centre of the SPA. For herring gull at the Fowlsheugh SPA, the predicted impact represented less than a 0.02 percentage point increase in the associated baseline mortality of the SPA population under both NatureScot's (Table 5.23) and the Applicant's (Table 5.24) Approach. Although the population of herring gull at the Buchan Ness to Collieston Coast SPA is greater than at the Fowlsheugh SPA, as the Buchan Ness to Collieston Coast SPA is located further from Morven North it is likely that, if it were assumed that the Buchan Ness to Collieston Coast SPA were within foraging range, the impact apportioned to the Buchan Ness to Collieston Coast SPA would be no greater than that predicted for the Fowlsheugh SPA. As the population at the Buchan Ness to Collieston Coast SPA is greater than the population at the Fowlsheugh SPA, the predicted impact would therefore represent less than a 0.02 percentage point increase in the associated baseline mortality of the SPA population and an impact of less than 0.2 birds/annum, the threshold at which an in-combination assessment is required.
- 5.4.3.22 The Applicant has conducted apportioning following the approach recommended in NatureScot (2018) as part of which distances are measured from the centre of a project to the centre of each colony. However, during pre-application consultation (Table 2.1), NatureScot requested that apportioning values be calculated for all SPAs for which the potential for LSE² could not be ruled out by measuring distances from the edge of Morven North to the edge of all relevant colonies. When this approach is applied an apportioning value is then calculated for the Buchan Ness to Collieston Coast SPA. However, as discussed above, as the abundance of herring gull at Morven North was low throughout all baseline surveys, the resulting collision risk estimate calculated for herring gull is therefore also low which leads to less than 0.1 collisions/annum being apportioned to the Buchan Ness to Collieston Coast representing well below the 0.02 percentage point change in baseline mortality as recommended by NatureScot (2023).
- 5.4.3.23 The potential for LSE² could not be ruled out for herring gull at the Outer Firth of Forth and St Andrews Bay Complex SPA in the non-breeding season only. The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by herring gulls. The potential for LSE² could not be ruled out for herring gull at the Outer Firth of Forth and St Andrews Bay Complex SPA by applying the mean-maximum foraging range (plus one standard deviation) of herring gull to the SPA boundary based on NatureScot advice

(NatureScot, 2021; Marine Scotland Science, 2021). The non-breeding season for herring gull is defined as September to March (NatureScot, 2020). Herring gulls were recorded in only three of the fourteen baseline surveys undertaken in this period (November 2021, October 2022 and December 2022) with only one bird recorded in each case. Of these only the birds recorded in October and November were in flight and therefore vulnerable to collision risk. The total unapportioned impact in these months was 0.2 to 0.3 collisions. If this entire impact were attributed to the Outer Firth of Forth and St Andrews Bay Complex SPA it would not surpass the 0.02 percentage point increase in baseline mortality.

Kittiwake

- 5.4.3.24 The potential for LSE² in relation to collision risk could not be ruled out for kittiwake as a qualifying feature at 17 breeding colony SPAs (Table 5.20). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA and Northumberland Marine SPAs which are designated to protect sea areas used by kittiwakes from adjacent SPA breeding colonies.
- 5.4.3.25 For all breeding colony SPAs the predicted impact represented less than a 0.02 percentage point increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.23) and the Applicant's (Table 5.24) approach.
- 5.4.3.26 To identify connectivity between Morven North and SPAs in the Morven Site HRA Screening Report, the Applicant applied an edge to edge measurement as advised by NatureScot (2023b). The distances used in the breeding season apportioning approach for Morven North were measured from the centre of Morven North to the centre of each SPA following the recommended approach in NatureScot (2018). As a result Morven North is located on the limit of the foraging range of kittiwake from a number of SPAs and this results in the breeding season apportioning values for these SPAs being zero. This is applicable to the Fair Isle SPA, Marwick Head SPA, Rousay SPA and West Westray SPA. There are many kittiwake breeding colonies within foraging range of Morven North to which impacts are apportioned, and therefore even if the SPAs excluded by using the NatureScot (2018) apportioning approach had been included (by using the Morven Site HRA Screening Report edge to edge distance measurement), only a very small proportion of the impact would be attributed to those SPAs. This is illustrated by the apportioning value estimated for the Calf of Eday SPA which is located 297km from Morven North (as measured as part of the apportioning approach) and received an apportioning value of less than 0.1%. It is therefore highly unlikely that the predicted impact for these SPAs would surpass the 0.02 percentage point threshold defined by NatureScot (2023h). Therefore the conclusions reached for these SPAs will not be changed if a proportion of the impact associated with Morven North in the breeding season were apportioned to the SPAs based on an edge to edge distance measurement approach as used in the Morven Site HRA Screening Report.
- 5.4.3.27 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by kittiwakes from adjacent breeding colonies. For kittiwake, this includes the Forth Islands SPA only. The conclusions reached for the kittiwake qualifying feature of the Forth Islands SPA are therefore considered applicable to the kittiwake qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.3.28 The Northumberland Marine SPA is designated to protect sea areas used by kittiwakes from adjacent breeding colonies. This includes the Coquet Island SPA and Farne Islands SPA (Natural England, 2025). The conclusions reached for the kittiwake qualifying feature of these SPAs are therefore considered applicable to the kittiwake qualifying feature of the Northumberland Marine SPA.

Conclusion

- 5.4.3.29 The predicted increase in baseline mortality does not exceed the 0.02 percentage point threshold advised by NatureScot (2023h) for any SPA and associated qualifying feature

combination using either the estimates predicted when applying NatureScot's advocated parameters (Table 5.23) or the Applicant's parameters (Table 5.24).

5.4.3.30 Impacts on the qualifying offshore ornithological features of all SPAs identified in Table 5.20 that undermine the conservation objectives of relevant SPAs will not occur as a result of collision risk during the operation and maintenance phase. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.

5.4.3.31 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to collision risk associated with Morven North during the operations and maintenance phase. This is applicable to all SPAs and associated features included in Table 5.26.

Table 5.26: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to collision risk impacts associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Herring gull
	Kittiwake
	Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake
	Herring gull (non-breeding)
	Gannet
	Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	Herring gull
	Kittiwake
	Breeding seabird assemblage
Forth Islands SPA	Gannet
	Kittiwake
	Breeding seabird assemblage
Northumberland Marine SPA	Kittiwake
	Breeding seabird assemblage
St Abb's Head to Fast Castle SPA	Kittiwake
	Breeding seabird assemblage
Troup, Pennan and Lion's Heads SPA	Kittiwake
	Breeding seabird assemblage
Farne Islands SPA	Kittiwake
	Breeding seabird assemblage
Coquet Island SPA	Kittiwake
	Breeding seabird assemblage
East Caithness Cliffs SPA	Kittiwake
	Breeding seabird assemblage

European site	Feature
North Caithness Cliffs SPA	Kittiwake
	Breeding seabird assemblage
Copinsay SPA	Kittiwake
	Breeding seabird assemblage
Hoy SPA	Kittiwake
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Breeding seabird assemblage
Calf of Eday SPA	Kittiwake
	Breeding seabird assemblage
Rousay SPA	Kittiwake
	Breeding seabird assemblage
Marwick Head SPA	Kittiwake
	Breeding seabird assemblage
West Westray SPA	Kittiwake
	Breeding seabird assemblage
Fair Isle SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Breeding seabird assemblage
Noss SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
St Kilda SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage

5.4.4 Displacement

5.4.4.1 The operations and maintenance phase of Morven North may lead to disturbance and displacement of birds. The MDS is represented by the maximum density of wind turbines and structures across the maximum array area that would cause the greatest extent of disturbance and displacement to birds, or the greatest duration of impact. The MDS is summarised in Table 5.28.

5.4.4.2 Disturbance as the result of activities during the operations and maintenance phase of an offshore wind farm has the potential to displace seabirds from an area of sea in which the activity is occurring. In relation to offshore wind farm development, displacement is defined as a reduction in the number of seabirds occurring within or immediately adjacent to an offshore wind farm (Furness *et al.*, 2013).

- 5.4.4.3 As the result of disturbance, displaced birds may move to areas already occupied by other birds and thus face higher intra- or inter-specific competition due to a higher density of individuals competing for the same resource. Alternatively, displaced birds may be forced to move into areas of lower quality (e.g. areas of lower prey availability). Such disturbance and resulting displacement could ultimately affect their demographic fitness (i.e. survival rates and breeding productivity) as well as potentially impacting on other birds in areas that displaced birds move to.
- 5.4.4.4 During the operations and maintenance phase, the presence of operational wind turbines has the potential to directly disturb seabirds leading to displacement from the offshore wind farm array area including an area of variable size or buffer around it (Dierschke *et al.*, 2016). Therefore, the presence of wind turbines at Morven North has the potential to directly disturb and displace seabirds that would normally reside within and around the area of sea.
- 5.4.4.5 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operation and maintenance phase, the potential for LSE² could not be ruled out for displacement. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.27.

Table 5.27: European sites and associated qualifying features for which Likely Significant Effects² in relation to displacement associated with Morven North could not be ruled out

European site	Distance to Morven North Boundary (km) ⁶	Feature
Fowlsheugh SPA	59	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	66	Kittiwake
		Guillemot
		Razorbill
		Puffin
		Gannet
Buchan Ness to Collieston Coast SPA	68	Breeding seabird assemblage
		Kittiwake
		Guillemot
Forth Islands SPA	101	Breeding seabird assemblage
		Gannet
		Kittiwake
		Guillemot
		Razorbill
		Puffin

⁶ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North Boundary (km) ⁶	Feature
		Breeding seabird assemblage
Northumberland Marine SPA	102	Kittiwake
		Puffin
		Razorbill
		Fulmar
		Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	104	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	107	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Farne Islands SPA	111	Kittiwake
		Puffin
		Breeding seabird assemblage
Coquet Island SPA	143	Kittiwake
		Puffin
		Fulmar
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Kittiwake
		Razorbill (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Kittiwake
		Puffin
		Fulmar
		Breeding seabird assemblage
Copinsay SPA	237	Kittiwake
		Breeding seabird assemblage
Hoy SPA	243	Kittiwake
		Puffin
		Fulmar
		Breeding seabird assemblage

European site	Distance to Morven North Boundary (km) ⁶	Feature
Flamborough and Filey Coast SPA	260	Gannet (non-breeding seasons only)
		Kittiwake
		Puffin
		Razorbill (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage
Calf of Eday SPA	273	Kittiwake
		Breeding seabird assemblage
Rousay SPA	274	Kittiwake
		Breeding seabird assemblage
Marwick Head SPA	277	Kittiwake
		Breeding seabird assemblage
West Westray SPA	285	Kittiwake
		Breeding seabird assemblage
Fair Isle SPA	289	Gannet (non-breeding seasons only)
		Kittiwake
		Puffin (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage
Noss SPA	357	Gannet (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage
Foula SPA	359	Puffin (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage
Fetlar SPA	405	Fulmar
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Gannet (non-breeding seasons only)
		Puffin (non-breeding seasons only)
		Fulmar
		Breeding seabird assemblage

European site	Distance to Morven North Boundary (km) ⁶	Feature
St Kilda SPA	448	Gannet (non-breeding seasons only)
		Breeding seabird assemblage

5.4.4.6 The MDS considered for the assessment of displacement is shown in Table 5.11. There are no designed-in measures associated with Morven North relevant to displacement.

Table 5.28: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to displacement during the operation and maintenance phase

Project phase	MDS	Justification
Operation and maintenance	<ul style="list-style-type: none"> • Presence of up to 96 operating wind turbines and five OSPs occupying the Morven North Boundary of up to 511.1km² • Minimum spacing of 1000m between wind turbines • Project lifetime of 35 years 	Represents the maximum density of wind turbines and structures across the maximum area of Morven North that would cause greatest extent of disturbance and displacement to birds or the greatest duration of impact.

Operation and maintenance phase

5.4.4.7 The displacement assessment for Morven North within this RIAA is based on the use of the Displacement Matrix approach (JNCC *et al.*, 2022), which was agreed during consultation with NatureScot (see Table 2.1). As sensitivity to displacement differs considerably between seabird species, species were screened and progressed for the Matrix approach using 'Disturbance Sensitivity' and 'Habitat Specialization' scores from Bradbury *et al.* (2014) and Wade *et al.* (2016) as recommended by JNCC *et al.* (2022). In addition to the species' sensitivity rating, the importance of a species abundance as recorded during baseline surveys of Morven North was considered as to whether species were progressed to the matrix stage (Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report). Additionally, any species for which the assessment of displacement is recommended by NatureScot was included.

5.4.4.8 For each of the species considered (kittiwake, guillemot, razorbill, puffin, fulmar and gannet), displacement impacts were quantified for the population derived within Morven North plus 2km buffer as recommended by NatureScot (2023f). The full approach of the displacement assessment is detailed in Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report.

5.4.4.9 The quantification of displacement mortality provides an estimate of the total number of birds subject to mortality. For the purposes of this RIAA, it is necessary to estimate which of those birds may be associated with specific SPAs, in order to calculate the impact on the population for which each site is designated. This is done through the process of apportionment. Full details of the apportionment process and the resulting proportion of birds associated with each SPA are given in Volume 2, Annex 3.1: RIAA: Apportioning.

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- 5.4.4.10 Displacement mortality for each of the qualifying features identified in Table 5.27 apportioned to the relevant SPA is presented on a seasonal basis in Table 5.29 using the displacement and mortality rates advocated by NatureScot (presented in Table 5.3) and in Table 5.30 using the displacement and mortality rates advocated by the Applicant (presented in Table 5.3). The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance.
- 5.4.4.11 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Table 5.29: Calculation of effect from Morven North alone in relation to displacement based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion ,adult:immature ratio and sabbatical proportion

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Gannet (1% breeding season mortality rate; 1% non-breeding season mortality rate)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.52													
	Forth Islands SPA	5.6	2.4		0.2	0.43	0.24		0.31	2.4	0.6		0.1	3.1	0.002
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.05		0.06	n/a	0.1		0.0	0.1	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.01		0.02	n/a	0.0		0.0	0.0	<0.001
	Noss SPA (non-breeding seasons only)	5.6	2.4		0.2	0.01	0.03		0.06	0.0	0.1		0.0	0.1	<0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	5.6	2.4		0.2	0.01	0.09		0.14	0.1	0.2		0.0	0.3	<0.001
	St Kilda SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.03		<0.01	n/a	0.1		0.0	0.1	<0.001
Gannet (3% breeding season mortality)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.52													
	Forth Islands SPA	16.7	7.3		0.6	0.43	0.24		0.31	7.2	1.8		0.2	9.2	0.006

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
rate; 3% non-breeding season mortality rate)	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	7.3		0.6	n/a	0.05		0.06	n/a	0.4		0.0	0.4	0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	7.3		0.6	n/a	0.01		0.02	n/a	0.1		0.0	0.1	0.001
	Noss SPA (non-breeding seasons only)	16.7	7.3		0.6	0.01	0.03		0.06	0.1	0.3		0.0	0.4	0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	16.7	7.3		0.6	0.01	0.09		0.14	0.2	0.6		0.1	0.9	0.001
	St Kilda SPA (non-breeding seasons only)	n/a	7.3		0.6	n/a	0.03		<0.01	n/a	0.2		0.0	0.2	<0.001
Guillemot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	Fowlsheugh SPA	74.3	138.5	38.7		0.41	0.20	0.20		30.4	27.3	7.6		65.3	0.070
	Buchan Ness to Collieston Coast SPA	74.3	138.5	38.7		0.08	0.08	0.08		6.3	11.5	3.2		21.0	0.053
	Forth Islands SPA	n/a	138.5	38.7		n/a	0.07	0.07		n/a	10.4	2.9		13.3	0.037
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.29													
	St Abb's Head to Fast Castle SPA	n/a	138.5	38.7		n/a	0.13	0.13		n/a	17.9	5.0		22.9	0.037

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Troup, Pennan and Lion's Heads SPA	n/a	138.5	38.7		n/a	0.07	0.07		n/a	9.3	2.6		11.9	0.037
Guillemot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	Fowlsheugh SPA	123.8	415.4	116.1		0.41	0.20	0.20		50.7	81.9	22.9		155.4	0.166
	Buchan Ness to Collieston Coast SPA	123.8	415.4	116.1		0.08	0.08	0.08		10.5	34.5	9.6		54.6	0.138
	Forth Islands SPA	n/a	415.4	116.1		n/a	0.07	0.07		n/a	31.1	8.7		39.8	0.112
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.29													
	St Abb's Head to Fast Castle SPA	n/a	415.4	116.1		n/a	0.13	0.13		n/a	53.7	15.0		68.7	0.112
	Troup, Pennan and Lion's Heads SPA	n/a	415.4	116.1		n/a	0.07	0.07		n/a	27.9	7.8		35.7	0.112
Kittiwake (1% breeding season mortality rate; 1% non-breeding seasons mortality rate)	Fowlsheugh SPA	7.4	1.2		0.4	0.14	0.01		0.02	1.1	0.0		0.0	1.1	0.004
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.14													
	Buchan Ness to Collieston Coast SPA	7.4	1.2		0.4	0.07	0.02		0.02	0.5	0.0		0.0	0.6	0.002
	Forth Islands SPA	7.4	1.2		0.4	0.02	<0.01		0.01	0.2	0.0		0.0	0.2	0.002
	Northumberland Marine SPA	See paragraph 5.4.4.15													

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	St Abb's Head to Fast Castle SPA	7.4	1.2		0.4	0.03	<0.01		0.01	0.2	0.0		0.0	0.2	0.002
	Troup, Pennan and Lion's Heads SPA	7.4	1.2		0.4	0.03	0.02		0.03	0.2	0.0		0.0	0.2	0.001
	Farne Islands SPA	7.4	1.2		0.4	0.02	<0.01		0.01	0.1	0.0		0.0	0.1	0.002
	Coquet Island SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	East Caithness Cliffs SPA	7.4	1.2		0.4	0.02	0.06		0.08	0.2	0.1		0.0	0.3	0.001
	North Caithness Cliffs SPA	7.4	1.2		0.4	<0.01	0.01		0.02	0.0	0.0		0.0	0.0	<0.001
	Copinsay SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Hoy SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Flamborough and Filey Coast SPA	7.4	1.2		0.4	0.04	0.05		0.07	0.3	0.1		0.0	0.4	<0.001
	Calf of Eday SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	Rousay SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Marwick Head SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	West Westray SPA	7.4	1.2		0.4	<0.01	0.02		0.02	0.0	0.0		0.0	0.0	0.001
	Fair Isle SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
Kittiwake	Fowlsheugh SPA	22.3	3.7		1.2	0.14	0.01		0.02	3.2	0.0		0.0	3.3	0.012

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.14													
	Buchan Ness to Collieston Coast SPA	22.3	3.7		1.2	0.07	0.02		0.02	1.6	0.1		0.0	1.7	0.007
	Forth Islands SPA	22.3	3.7		1.2	0.02	<0.01		0.01	0.5	0.0		0.0	0.5	0.005
	Northumberland Marine SPA	See paragraph 5.4.4.15													
	St Abb's Head to Fast Castle SPA	22.3	3.7		1.2	0.03	<0.01		0.01	0.6	0.0		0.0	0.6	0.006
	Troup, Pennan and Lion's Heads SPA	22.3	3.7		1.2	0.03	0.02		0.03	0.6	0.1		0.0	0.7	0.003
	Farne Islands SPA	22.3	3.7		1.2	0.02	<0.01		0.01	0.4	0.0		0.0	0.4	0.005
	Coquet Island SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.003
	East Caithness Cliffs SPA	22.3	3.7		1.2	0.02	0.06		0.08	0.5	0.2		0.1	0.8	0.002
	North Caithness Cliffs SPA	22.3	3.7		1.2	<0.01	0.01		0.02	0.0	0.1		0.0	0.1	0.001
	Copinsay SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Hoy SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Flamborough and Filey Coast SPA	22.3	3.7		1.2	0.04	0.05		0.07	0.9	0.2		0.1	1.2	0.001
	Calf of Eday SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Rousay SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.002
	Marwick Head SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	<0.001
	West Westray SPA	22.3	3.7		1.2	<0.01	0.02		0.02	0.0	0.1		0.0	0.1	0.002
	Fair Isle SPA	22.3	3.7		1.2	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
Puffin (3% breeding season mortality rate; 1% non-breeding season mortality rate)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.43													
	Forth Islands SPA	11.3		8.3		0.21		0.27		2.4		2.2		4.6	0.005
	Northumberland Marine SPA	See paragraph 5.4.4.45													
	Farne Islands SPA	11.3		8.3		0.17		0.17		1.9		1.4		3.3	0.004
	Coquet Island SPA	11.3		8.3		0.06		0.05		0.7		0.4		1.2	0.002
	North Caithness Cliffs SPA	11.3		8.3		<0.01		<0.01		0.0		0.0		0.0	<0.001
	Hoy SPA	11.3		8.3		<0.01		0.03		0.0		0.0		0.0	0.004
	Flamborough and Filey Coast SPA	11.3		8.3		<0.01		<0.01		0.0		0.0		0.0	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a		8.3		n/a		0.01		n/a		0.1		0.1	0.001
	Foula SPA (non-breeding seasons only)	n/a		8.3		n/a		0.03		n/a		0.2		0.2	0.003

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	n/a		8.3		n/a		0.03		n/a		0.3		0.3	0.001
Puffin (5% breeding season mortality rate; 3% non-breeding season mortality rate)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.43													
	Forth Islands SPA	18.8		24.9		0.21		0.27		4.0		6.7		10.6	0.012
	Northumberland Marine SPA	See paragraph 5.4.4.45													
	Farne Islands SPA	18.8		24.9		0.17		0.17		3.1		4.3		7.4	0.008
	Coquet Island SPA	18.8		24.9		0.06		0.05		1.2		1.3		2.5	0.005
	North Caithness Cliffs SPA	18.8		24.9		<0.01		<0.01		0.0		0.0		0.0	0.001
	Hoy SPA	18.8		24.9		<0.01		0.03		0.0		0.1		0.1	0.013
	Flamborough and Filey Coast SPA	18.8		24.9		<0.01		<0.01		0.0		0.1		0.1	0.001
	Fair Isle SPA (non-breeding seasons only)	n/a		24.9		n/a		0.01		n/a		0.3		0.3	0.003
	Foula SPA (non-breeding seasons only)	n/a		24.9		n/a		0.03		n/a		0.7		0.7	0.009
Hermaness, Saxa Vord and Valla Field SPA	n/a		24.9		n/a		0.03		n/a		0.8		0.8	0.003	

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	(non-breeding seasons only)														
Razorbill (3% breeding season mortality rate; 1% non-breeding season mortality rate)	Fowlsheugh SPA	5.7	39.2	3.2	0.7	0.28	0.01	0.01	0.01	1.6	0.5	0.0	0.0	2.1	0.010
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.34													
	Forth Islands SPA	5.7	39.2	3.2	0.7	0.06	0.01	0.01	0.01	0.4	0.3	0.0	0.0	0.7	0.009
	Northumberland Marine SPA	See paragraph 5.4.4.38													
	St Abb's Head to Fast Castle SPA	5.7	39.2	3.2	0.7	0.03	<0.01	<0.01	<0.01	0.2	0.2	0.0	0.0	0.3	0.008
	Troup, Pennan and Lion's Heads SPA	5.7	39.2	3.2	0.7	<0.01	0.01	<0.01	0.01	0.0	0.2	0.0	0.0	0.2	0.004
	East Caithness Cliffs SPA (non-breeding seasons only)	n/a	39.2	3.2	0.7	n/a	0.04	0.03	0.04	n/a	1.7	0.1	0.0	1.8	0.004
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	39.2	3.2	0.7	n/a	0.03	0.03	0.03	n/a	1.3	0.1	0.0	1.4	0.003
Razorbill (5% breeding season mortality rate; 3% non-	Fowlsheugh SPA	9.5	117.6	9.5	2.0	0.28	0.01	0.01	0.01	2.6	1.4	0.1	0.0	4.1	0.0197
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.34													

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
breeding season mortality rate)	Forth Islands SPA	9.5	117.6	9.5	2.0	0.06	0.01	0.01	0.01	0.6	1.0	0.1	0.0	1.7	0.020
	Northumberland Marine SPA	See paragraph 5.4.4.38													
	St Abb`s Head to Fast Castle SPA	9.5	117.6	9.5	2.0	0.03	<0.01	<0.01	<0.01	0.3	0.5	0.0	0.0	0.8	0.018
	Troup, Pennan and Lion`s Heads SPA	9.5	117.6	9.5	2.0	<0.01	0.01	<0.01	0.01	0.0	0.7	0.0	0.0	0.7	0.011
	East Caithness Cliffs SPA (non-breeding seasons only)	n/a	117.6	9.5	2.0	n/a	0.04	0.03	0.04	n/a	5.0	0.3	0.1	5.4	0.012
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	117.6	9.5	2.0	n/a	0.03	0.03	0.03	n/a	4.0	0.3	0.1	4.3	0.010
Fulmar (1% mortality rate – all seasons)	Northumberland Marine SPA	See paragraph 5.4.4.47													
	Coquet Island SPA	5.8	0.5	1.0	0.7	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0	0.003
	East Caithness Cliffs SPA	5.8	0.5	1.0	0.7	0.05	0.03	0.03	0.03	0.3	0.0	0.0	0.0	0.4	0.001
	North Caithness Cliffs SPA	5.8	0.5	1.0	0.7	0.04	0.03	0.04	0.03	0.2	0.0	0.0	0.0	0.3	0.001
	Hoy SPA	5.8	0.5	1.0	0.7	0.05	0.04	0.05	0.04	0.3	0.0	0.0	0.0	0.4	0.001
	Flamborough and Filey Coast SPA	5.8	0.5	1.0	0.7	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0	0.001

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (%)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Fair Isle SPA	5.8	0.5	1.0	0.7	0.06	0.06	0.07	0.06	0.4	0.0	0.1	0.0	0.5	0.001
	Noss SPA	5.8	0.5	1.0	0.7	0.01	0.01	0.01	0.01	0.0	0.0	0.0	0.0	0.1	0.001
	Foula SPA	5.8	0.5	1.0	0.7	0.01	0.04	0.05	0.04	0.1	0.0	0.1	0.0	0.2	0.001
	Fetlar SPA	5.8	0.5	1.0	0.7	0.01	0.02	0.02	0.02	0.1	0.0	0.0	0.0	0.1	0.001
	Hermaness, Saxa Vord and Valla Field SPA	5.8	0.5	1.0	0.7	0.01	0.01	0.02	0.01	0.1	0.0	0.0	0.0	0.1	<0.001
Fulmar (3% mortality rate – all seasons)	Northumberland Marine SPA	See paragraph 5.4.4.47													
	Coquet Island SPA	17.3	1.4	3.1	2.0	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0	0.008
	East Caithness Cliffs SPA	17.3	1.4	3.1	2.0	0.05	0.03	0.03	0.03	0.9	0.0	0.1	0.1	1.1	0.004
	North Caithness Cliffs SPA	17.3	1.4	3.1	2.0	0.04	0.03	0.04	0.03	0.7	0.0	0.1	0.1	0.9	0.003
	Hoy SPA	17.3	1.4	3.1	2.0	0.05	0.04	0.05	0.04	0.8	0.1	0.1	0.1	1.1	0.003
	Flamborough and Filey Coast SPA	17.3	1.4	3.1	2.0	<0.01	<0.01	<0.01	<0.01	0.1	0.0	0.0	0.0	0.1	0.003
	Fair Isle SPA	17.3	1.4	3.1	2.0	0.06	0.06	0.07	0.06	1.1	0.1	0.2	0.1	1.5	0.002
	Noss SPA	17.3	1.4	3.1	2.0	0.01	0.01	0.01	0.01	0.1	0.0	0.0	0.0	0.2	0.002
	Foula SPA	17.3	1.4	3.1	2.0	0.01	0.04	0.05	0.04	0.2	0.1	0.2	0.1	0.5	0.002
	Fetlar SPA	17.3	1.4	3.1	2.0	0.01	0.02	0.02	0.02	0.2	0.0	0.1	0.0	0.3	0.002
Hermaness, Saxa Vord and Valla Field SPA	17.3	1.4	3.1	2.0	0.01	0.01	0.02	0.01	0.2	0.0	0.1	0.0	0.3	0.001	

Table 5.30: Calculation of effect from Morven North alone in relation to displacement based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, NB = non-breeding season, Pre = pre-breeding season). ¹ Represents a combination of colony proportion, adult:immature ratio and sabbatical proportion

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Gannet (1% mortality rate – all seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.52													
	Forth Islands SPA	5.6	2.4		0.2	0.75	0.24		0.31	4.2	0.6		0.1	4.8	0.003
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.05		0.06	n/a	0.1		0.0	0.1	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.01		0.02	n/a	0.0		0.0	0.0	<0.001
	Noss SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.03		0.06	n/a	0.1		0.0	0.1	<0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.09		0.14	n/a	0.2		0.0	0.2	<0.001
	St Kilda SPA (non-breeding seasons only)	n/a	2.4		0.2	n/a	0.03		<0.01	n/a	0.1		0.0	0.1	<0.001

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
Guillemot (1% mortality rate – all seasons)	Fowlsheugh SPA	20.6	115.4	32.2		0.41	0.20	0.20		8.4	22.7	6.4		37.5	0.040
	Buchan Ness to Collieston Coast SPA	20.6	115.4	32.2		0.08	0.08	0.08		1.7	9.6	2.7		14.0	0.036
	Forth Islands SPA	n/a	115.4	32.2		n/a	0.07	0.07		n/a	8.6	2.4		11.0	0.031
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.29													
	St Abb's Head to Fast Castle SPA	n/a	115.4	32.2		n/a	0.13	0.13		n/a	14.9	4.2		19.1	0.031
	Troup, Pennan and Lion's Heads SPA	n/a	115.4	32.2		n/a	0.07	0.07		n/a	7.8	2.2		9.9	0.031
Kittiwake (1% mortality rate – all seasons)	Fowlsheugh SPA	7.4	1.2		0.4	0.24	0.01		0.02	1.8	0.0		0.0	1.8	0.006
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.14													
	Buchan Ness to Collieston Coast SPA	7.4	1.2		0.4	0.11	0.02		0.02	0.9	0.0		0.0	0.9	0.004
	Forth Islands SPA	7.4	1.2		0.4	0.03	<0.01		0.01	0.3	0.0		0.0	0.3	0.003
	Northumberland Marine SPA	See paragraph 5.4.4.15													

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	St Abb's Head to Fast Castle SPA	7.4	1.2		0.4	0.04	<0.01		0.01	0.3	0.0		0.0	0.3	0.003
	Troup, Pennan and Lion's Heads SPA	7.4	1.2		0.4	0.04	0.02		0.03	0.3	0.0		0.0	0.4	0.002
	Farne Islands SPA	7.4	1.2		0.4	0.03	<0.01		0.01	0.2	0.0		0.0	0.2	0.002
	Coquet Island SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.002
	East Caithness Cliffs SPA	7.4	1.2		0.4	0.04	0.06		0.08	0.3	0.1		0.0	0.4	0.001
	North Caithness Cliffs SPA	7.4	1.2		0.4	<0.01	0.01		0.02	0.0	0.0		0.0	0.1	<0.001
	Copinsay SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Hoy SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Flamborough and Filey Coast SPA	7.4	1.2		0.4	0.07	0.05		0.07	0.5	0.1		0.0	0.6	0.001
	Calf of Eday SPA	7.4	1.2		0.4	<0.01	<0.01		<0.01	0.0	0.0		0.0	0.0	0.001
	Rousay SPA	n/a	1.2		0.4	n/a	<0.01		n/a	0.0	0.0		0.0	0.0	0.001
	Marwick Head SPA	n/a	1.2		0.4	n/a	<0.01		n/a	0.0	0.0		0.0	0.0	<0.001
	West Westray SPA	n/a	1.2		0.4	n/a	0.02		n/a	0.0	0.0		0.0	0.0	0.001

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	Fair Isle SPA	n/a	1.2		0.4	n/a	<0.01		n/a	0.0	0.0		0.0	0.0	<0.001
Puffin (1% mortality rate – all seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.43													
	Forth Islands SPA	3.1		6.9		0.21		0.27		0.7		1.9		2.5	0.003
	Northumberland Marine SPA	See paragraph 5.4.4.45													
	Farne Islands SPA	3.1		6.9		0.17		0.17		0.5		1.2		1.7	0.002
	Coquet Island SPA	3.1		6.9		0.06		0.05		0.2		0.4		0.6	0.001
	North Caithness Cliffs SPA	3.1		6.9		<0.01		<0.01		0.0		0.0		0.0	<0.001
	Hoy SPA	3.1		6.9		<0.01		0.03		0.0		0.0		0.0	0.004
	Flamborough and Filey Coast SPA	3.1		6.9		<0.01		<0.01		0.0		0.0		0.0	<0.001
	Fair Isle SPA (non-breeding seasons only)	n/a		6.9		n/a		0.01		n/a		0.1		0.1	0.001
	Foula SPA (non-breeding seasons only)	n/a		6.9		n/a		0.03		n/a		0.2		0.2	0.002
Hermaness, Saxa Vord and Valla Field	n/a		6.9		n/a		0.03		n/a		0.2		0.2	0.001	

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
	SPA (non-breeding seasons only)														
Razorbill (1% mortality rate – all seasons)	Fowlsheugh SPA	1.6	32.7	2.6	0.5	0.28	0.01	0.01	0.01	0.4	0.4	0.0	0.0	0.9	0.004
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.4.34													
	Forth Islands SPA	1.6	32.7	2.6	0.5	0.06	0.01	0.01	0.01	0.1	0.3	0.0	0.0	0.4	0.005
	Northumberland Marine SPA	See paragraph 5.4.4.38													
	St Abb's Head to Fast Castle SPA	1.6	32.7	2.6	0.5	0.03	<0.01	<0.01	<0.01	0.0	0.1	0.0	0.0	0.2	0.004
	Troup, Pennan and Lion's Heads SPA	1.6	32.7	2.6	0.5	<0.01	0.01	<0.01	0.01	0.0	0.2	0.0	0.0	0.2	0.003
	East Caithness Cliffs SPA (non-breeding seasons only)	n/a	32.7	2.6	0.5	n/a	0.04	0.03	0.04	n/a	1.4	0.1	0.0	1.5	0.00
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	32.7	2.6	0.5	n/a	0.03	0.03	0.03	n/a	1.1	0.1	0.0	1.2	0.003
Fulmar (1% mortality rate)	Northumberland Marine SPA	See paragraph 5.4.4.47													

Feature	European site	Unapportioned seasonal displacement mortality (no. of birds)				Apportioning value				Apportioned displacement mortality (no. of birds)				Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	NB	Pre	B ¹	Post	NB	Pre	B	Post	NB	Pre		
– all seasons)	Coquet Island SPA	2.9	0.2	0.5	0.3	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0	0.001
	East Caithness Cliffs SPA	2.9	0.2	0.5	0.3	0.05	0.03	0.03	0.03	0.1	0.0	0.0	0.0	0.2	0.001
	North Caithness Cliffs SPA	2.9	0.2	0.5	0.3	0.04	0.03	0.04	0.03	0.1	0.0	0.0	0.0	0.2	0.001
	Hoy SPA	2.9	0.2	0.5	0.3	0.05	0.04	0.05	0.04	0.1	0.0	0.0	0.0	0.2	<0.001
	Flamborough and Filey Coast SPA	2.9	0.2	0.5	0.3	<0.01	<0.01	<0.01	<0.01	0.0	0.0	0.0	0.0	0.0	<0.001
	Fair Isle SPA	2.9	0.2	0.5	0.3	0.06	0.06	0.07	0.06	0.2	0.0	0.0	0.0	0.2	<0.001
	Noss SPA	2.9	0.2	0.5	0.3	0.01	0.01	0.01	0.01	0.0	0.0	0.0	0.0	0.0	<0.001
	Foula SPA	2.9	0.2	0.5	0.3	0.01	0.04	0.05	0.04	0.0	0.0	0.0	0.0	0.1	<0.001
	Fetlar SPA	2.9	0.2	0.5	0.3	0.01	0.02	0.02	0.02	0.0	0.0	0.0	0.0	0.0	<0.001
Hermaness, Saxa Vord and Valla Field SPA	2.9	0.2	0.5	0.3	0.01	0.01	0.02	0.01	0.0	0.0	0.0	0.0	0.0	<0.001	

Kittiwake

- 5.4.4.12 The potential for LSE² in relation to displacement impacts could not be ruled out for kittiwake as a qualifying feature at 17 breeding colony SPAs (Table 5.27). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA and Northumberland Marine SPAs which are designated to protect sea areas used by kittiwakes from adjacent SPA breeding colonies.
- 5.4.4.13 For all breeding colony SPAs the predicted impact represented less than a 0.02 percentage point increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.14 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by kittiwakes from adjacent breeding colonies (NatureScot, 2022). For kittiwake, this includes the Forth Islands SPA, St Abb's Head to Fast Castle SPA, Fowlsheugh SPA, Buchan Ness to Collieston Coast SPA, and Troup, Pennan and Lion's Head SPA (NatureScot, 2022) The conclusions reached for the kittiwake qualifying feature of these SPAs are therefore considered applicable to the kittiwake qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.4.15 The Northumberland Marine SPA is designated to protect seas areas used by kittiwakes from adjacent breeding colonies. This includes the Coquet Island SPA and Farne Islands SPA. The conclusions reached for the kittiwake qualifying feature of these SPAs are therefore considered applicable to the kittiwake qualifying feature of the Northumberland Marine SPA.

Guillemot

- 5.4.4.16 The potential for LSE² in relation to displacement impacts could not be ruled out for guillemot as a qualifying feature at the Fowlsheugh SPA and Buchan Ness to Collieston Coast SPA in all seasons. The potential for LSE² could also not be ruled out for the Forth Islands SPA, St Abb's Head to Fast Castle SPA and Troup, Pennan and Lion's Heads SPA in non-breeding seasons only. The impacts predicted applying both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach surpassed the 0.02 percentage point increase in the associated baseline mortality of each SPA and as a result population modelling has been undertaken.
- 5.4.4.17 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of guillemot is 55.5km when excluding data from Fair Isle where the foraging range of guillemot was unusually high as a result of reduced prey availability during the study year (Woodward *et al.*, 2019). If this foraging range is applied there would be no connectivity between the Morven North site and any SPA. The screening exercise in the Morven Site HRA Screening Report was undertaken following a precautionary approach which applied the mean-maximum foraging range plus one standard deviation, giving a foraging range for guillemot of 95.2km. The use of this foraging range therefore identifies connectivity between Morven North and the Buchan Ness to Collieston Coast SPA and the Fowlsheugh SPA. Tracking of guillemot from the Buchan Ness to Collieston Coast SPA and the Fowlsheugh SPA during the breeding season showed no overlap between birds from these SPAs and Morven North (Birdlife International, 2023) suggesting that the magnitude of any impacts on guillemot from these SPAs from Morven North will be negligible in the breeding season.
- 5.4.4.18 PVA modelling for the guillemot population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median Counterfactual of Population Size (CPS) of 0.937 to 0.973 (i.e. the population after 35 years, would be 2.7% to 6.3% smaller than the CPS with a 50th percentile value of 36.2 to 44.6 (Table 5.31)). In terms of the population size, this means that the median of the impacted population fell within the 36th or 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within

the margin of error of the non-impacted scenario. However, the Counterfactual of Growth Rate (CGR) is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1% to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

- 5.4.4.19 When modelling the annual impact associated with the Applicant's approach for guillemot at the Fowlsheugh SPA, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.984 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.6% smaller than the counterfactual population size). The 50th percentile value is 47.0, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.20 The population of guillemot at the Fowlsheugh SPA remained stable between the Seabird 2000 and Seabirds Count national censuses but has increased subsequently (BTO *et al.*, 2025). Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the presence of Morven North.
- 5.4.4.21 PVA modelling for the guillemot population at the Buchan Ness to Collieston Coast SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.947 to 0.979 (i.e. the population after 35 years, would be 2.1% to 5.3% smaller than the CPS with a 50th percentile value of 38.2 to 45.3 (Table 5.31)). In terms of the population size, this means that the median of the impacted population fell within the 38th or 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 0.999 which translates to a growth rate 0.1 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.22 When modelling the annual impact associated with the Applicant's approach for guillemot at the Buchan Ness to Collieston Coast SPA, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.986 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.4% smaller than the counterfactual population size). The 50th percentile value is 46.9, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.23 The population of guillemot at the Buchan Ness to Collieston Coast SPA remained stable between the Seabird 2000 and Seabirds Count national censuses but has decreased slightly since Seabirds Count. Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the presence of Morven North.
- 5.4.4.24 For the Forth Islands SPA, the PVA model conducted for guillemot when applying the annual season impact calculated using NatureScot's advocated approach indicates a median CPS of 0.957 to 0.985; (i.e. the population after 35 years would be 1.5 to 4.3% smaller than the

CPS with a 50th percentile value of 39.7 to 46.3 (Table 5.31)). In terms of the population size, this means that the median of the impacted population fell within the 46th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate <0.1 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

- 5.4.4.25 When modelling the annual impact associated with the Applicant's approach for guillemot at the Forth Islands SPA, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.988 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.2% smaller than the counterfactual population size). The 50th percentile value is 46.9, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.26 For the St Abb's Head to Fast Castle SPA, the PVA model conducted for guillemot when applying the annual season impact calculated using NatureScot's advocated approach indicates a median CPS of 0.957 to 0.986; (i.e. the population after 35 years would be 1.4 to 4.3% smaller than the CPS with a 50th percentile value of 40.8 to 47.4 (Table 5.31)). In terms of the population size, this means that the median of the impacted population fell within the 41st to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate <0.1 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.4.4.27 When modelling the annual impact associated with the Applicant's approach for guillemot at the St Abb's Head to Fast Castle SPA, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.988 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.2% smaller than the counterfactual population size). The 50th percentile value is 47.9, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.28 For the Troup, Pennan and Lion's Heads SPA, the PVA model conducted for guillemot when applying the annual season impact calculated using NatureScot's advocated approach indicates a median CPS of 0.957 to 0.986; (i.e. the population after 35 years would be 1.4 to 4.3% smaller than the CPS with a 50th percentile value of 39.8 to 46.3 (Table 5.31)). In terms of the population size, this means that the median of the impacted population fell within the 39th to 46th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate <0.1 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

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- 5.4.4.29 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by guillemots from adjacent breeding colonies. For guillemot, this includes the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA and the Buchan Ness to Collieston Coast SPA. The conclusions reached for the guillemot qualifying feature of these SPAs are therefore considered applicable to the guillemot qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.4.30 The populations of guillemot estimated at Morven North from site-specific surveys that have been used to inform displacement analyses were estimated incorporating availability bias factors from Thaxter 2010). This approach was agreed with NatureScot in pre-application consultation (Table 2.1). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to estimate the population estimates used in the assessments presented above and therefore these populations likely represent an over-estimate of the number of guillemot present at Morven North between July and March.

Table 5.31: Summary of population viability analysis results for displacement impacts on the guillemot feature of the Fowlsheugh, Buchan Ness to Collieston Coast, Forth Islands, St Abb's Head to Fast Castle and Troup, Pennan and Lion's Heads Special Protection Areas after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Fowlsheugh SPA								
Baseline	-	-	354,894	1.025	138.8	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	65.3	0.070	345,547	1.024	132.6	0.999	0.973	44.6
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	155.4	0.166	333,117	1.023	123.7	0.998	0.937	36.2
Applicant	37.5	0.040	349,577	1.025	135.2	1.000	0.984	47.0
Buchan Ness to Collieston Cliffs SPA								
Baseline	-	-	146,425	1.025	139.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	21.0	0.053	143,490	1.025	134.5	0.999	0.979	45.3
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	54.6	0.138	138,725	1.024	126.8	0.999	0.947	38.2
Applicant	14.0	0.036	144,479	1.025	135.9	1.000	0.986	46.9
Forth Islands SPA								
Baseline	-	-	125,462	1.025	139.2	-	-	-

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	13.3	0.037	123,654	1.025	135.8	1.000	0.985	46.3
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	39.8	0.112	120,207	1.024	129.0	0.999	0.957	39.7
Applicant	11.0	0.061	124,015	1.025	136.3	1.000	0.988	46.9
St Abb's Head to Fast Castle SPA								
Baseline	-	-	232,797	1.025	138.9	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	22.9	0.037	229,809	1.025	135.4	1.000	0.986	47.4
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	68.7	0.112	223,034	1.024	128.6	0.999	0.957	40.8
Applicant	19.1	0.061	230,509	1.025	136.1	1.000	0.988	47.9
Troup, Pennan and Lion's Heads SPA								
Baseline	-	-	124,364	1.025	140.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	11.9	0.037	122,461	1.025	136.7	1.000	0.986	46.3
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	35.7	0.112	118,904	1.024	129.9	0.999	0.957	39.8
Applicant	9.9	0.061	122,699	1.025	137.1	1.000	0.988	46.9

Razorbill

- 5.4.4.31 The potential for LSE² in relation to displacement impacts could not be ruled out for razorbill as a qualifying feature at seven breeding colony SPAs (Table 5.27). Of these, five were identified for consideration in all seasons with the East Caithness Cliffs SPA and Flamborough and Filey Coast SPA requiring consideration in non-breeding seasons only. In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA and Northumberland Marine SPAs which are designated to protect sea areas used by razorbills from adjacent SPA breeding colonies.
- 5.4.4.32 When applying the upper mortality rates associated with NatureScot's approach (Table 5.29), the predicted impact for the Forth Islands SPA surpassed the 0.02 percentage point threshold as defined by NatureScot. As a result, population modelling has been conducted for this SPA. For all remaining SPAs, the 0.02 percentage point threshold as defined by NatureScot was not surpassed under both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.33 The mean-maximum foraging range (i.e. the average of the maximum foraging range lengths recorded during studies incorporated into the analysis) of razorbill is 73.8km when excluding data from Fair Isle where the foraging range of razorbill was unusually high as a result of reduced prey availability during the study year (Woodward *et al.*, 2019). If this foraging range is applied there would be connectivity between parts of the Morven North site and Fowlsheugh SPA only. The screening exercise undertaken in Morven Site HRA Screening Report was undertaken following a precautionary approach which applied the mean-maximum foraging range plus one standard deviation, giving a foraging range for razorbill of 122.2km. The use of this foraging range therefore identifies connectivity between Morven North and the Fowlsheugh SPA, St Abb's Head to Fast Castle SPA, the Forth Islands SPA and the Troup, Pennan and Lion's Heads SPA.. Tracking of razorbill from the Forth Islands SPA has shown no connectivity with Morven North (Bogdanova *et al.*, 2020a; Bogdanova *et al.*, 2020b; Bogdanova *et al.*, 2022) with similar results from tracking studies at the Fowlsheugh SPA (O'Donovan *et al.*, 2025). This would therefore suggest that the magnitude of any impacts on razorbill at these SPAs from Morven North will be negligible.
- 5.4.4.34 PVA modelling for the razorbill population at the Forth Islands SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.991; (i.e. the population after 35 years, would be 0.9% smaller than the CPS with a 50th percentile value of 49.3 (Table 5.32)). In terms of the population size, this means that the median of the impacted population fell within the 49th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which represents a negligible change to the growth rate associated with the SPA population. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population and would therefore be undetectable against natural population fluctuations.
- 5.4.4.35 The population of razorbill at the Forth Islands SPA increased between the Seabird 2000 and Seabirds Count national censuses and has increased further subsequently (BTO *et al.*, 2025). This is in contrast to the PVA model which suggests that the razorbill population at the Forth Islands SPA will decline under both the baseline and impacted scenarios. This therefore suggests that the PVA outputs should be treated with caution.
- 5.4.4.36 To identify connectivity between Morven North and SPAs in the Morven Site HRA Screening Report, the Applicant applied an edge to edge measurement as advised by NatureScot (2023b). The distances used in the breeding season apportioning approach for Morven North were measured from the centre of Morven North to the centre of each SPA following the recommended approach in NatureScot (2018). As a result Morven North is located on the

limit of the foraging range of razorbill from the Troup, Pennan and Lion's Heads SPA and this results in the breeding season apportioning value for this SPA being zero. There are many razorbill breeding colonies within foraging range of Morven North to which impacts are apportioned and therefore even if the SPAs excluded by using the NatureScot (2018) apportioning approach had been included (by using the Morven Site HRA Screening Report edge to edge distance measurement) only a very small proportion of the impact would be attributed to this SPA. It is therefore highly unlikely that the predicted impact for these SPAs would surpass the 0.02 percentage point threshold defined by NatureScot (2023h). Therefore the conclusions reached for this SPA will not be changed if a proportion of the impact associated with Morven North in the breeding season were apportioned to the SPA based on an edge to edge distance measurement approach as used in the Morven Site HRA Screening Report.

- 5.4.4.37 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by razorbills during the non-breeding season. The conservation and management advice for the site suggests that razorbills may visit their colonies in the pre-breeding period. The only breeding colony of razorbill within the Outer Firth of Forth and St Andrews Bay Complex SPA is the Forth Islands SPA. In the absence of any further advice as to the size of the population of razorbill present in the Outer Firth of Forth and St Andrews Bay Complex SPA it is considered that the conclusions reached for the razorbill qualifying feature of the Forth Islands SPA are applicable to the razorbill qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.4.38 The Northumberland Marine SPA is designated to protect seas areas used by razorbills from adjacent breeding colonies. This includes the Farne Islands SPA (Natural England, 2015). The conclusions reached for the razorbill qualifying feature of these SPAs are therefore considered applicable to the razorbill qualifying feature of the Northumberland Marine SPA.
- 5.4.4.39 The populations of razorbill estimated at Morven North from site-specific surveys that have been used to inform displacement analyses were estimated incorporating availability bias factors from Thaxter 2010). This approach was agreed with NatureScot in pre-application consultation (Table 2.1). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to estimate the population estimates used in the assessments presented above with the exception of January and therefore these populations likely represent an over-estimate of the number of razorbill present at Morven North between July and December.

Table 5.32: Summary of population viability analysis results for displacement impacts on the razorbill feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Baseline	-	-	2,374	0.976	-57.0	-	-	-
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	1.7	0.020	2,351	0.976	-57.3	1.000	0.991	49.3

Puffin

- 5.4.4.40 The potential for LSE² in relation to displacement impacts could not be ruled out for puffin as a qualifying feature at nine breeding colony SPAs (Table 5.27). Of these, six were identified for consideration in all seasons with the Fair Isle SPA, Foula SPA and Hermaness, Saxa Vord and Valla Field SPA requiring consideration in non-breeding seasons only. In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA and Northumberland Marine SPAs which are designated to protect sea areas used by puffins from adjacent SPA breeding colonies.
- 5.4.4.41 For SPAs for which there was connectivity with Morven North in all seasons, the impact remained below the 0.02 percentage point threshold as defined by NatureScot for both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.42 For SPAs for which displacement impacts were considered in non-breeding seasons only the predicted impact also represented less than a 0.02 percentage point increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.43 To identify connectivity between Morven North and SPAs in the Morven Site HRA Screening Report, the Applicant applied an edge to edge measurement as advised by NatureScot (2023b). The distances used in the breeding season apportioning approach for Morven North were measured from the centre of Morven North to the centre of each SPA following the recommended approach in NatureScot (2018). As a result Morven North is located on the limit of the foraging range of puffin from a number of SPAs and this results in the breeding season apportioning values for these SPAs being zero. This is applicable to the Flamborough and Filey Coast SPA and Hoy SPA. There are many puffin breeding colonies within foraging range of Morven North to which impacts are apportioned and therefore even if the SPAs excluded by using the NatureScot (2018) apportioning approach had been included (by using the Morven Site HRA Screening Report edge to edge distance measurement) only a very small proportion of the impact would be attributed to this SPA. This is illustrated by the apportioning value estimated for the North Caithness Cliffs SPA which is located 250km from Morven North (as measured as part of the apportioning approach) and has a population similar to the Flamborough and Filey Coast SPA and larger than the Hoy SPA. This SPA received an apportioning value of less than 0.1%. It is therefore highly unlikely that the predicted impact for these SPAs would surpass the 0.02 percentage point threshold defined by NatureScot (2023h). Therefore the conclusions reached for these SPAs will not be changed if a proportion of the impact associated with Morven North in the breeding season were apportioned to the SPAs based on an edge to edge distance measurement approach as used in the Morven Site HRA Screening Report.
- 5.4.4.44 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by puffins from adjacent breeding colonies. For puffin, this includes the Forth Islands SPA only. The conclusions reached for the puffin qualifying feature of the Forth Islands SPA are therefore considered applicable to the puffin qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.4.45 The Northumberland Marine SPA is designated to protect seas areas used by puffins from adjacent breeding colonies. This includes the Coquet Island SPA and Farne Islands SPA. The conclusions reached for the puffin qualifying feature of these SPAs are therefore considered applicable to the puffin qualifying feature of the Northumberland Marine SPA.

Fulmar

- 5.4.4.46 The potential for LSE² in relation to displacement impacts could not be ruled out for ten SPAs which are designated to protect breeding populations of fulmar (Table 5.27). All SPAs were identified for consideration of displacement impacts in all seasons. For all SPAs, the predicted impact represented less than a 0.02 percentage point increase in the associated

baseline mortality of each SPA under both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.

- 5.4.4.47 The Northumberland Marine SPA is designated to protect seas areas used by fulmars from adjacent breeding colonies. This includes the Coquet Island SPA. The conclusions reached for the fulmar qualifying feature of this SPA are therefore considered applicable to the fulmar qualifying feature of the Northumberland Marine SPA.

Gannet

- 5.4.4.48 The potential for LSE² in relation to displacement impacts could not be ruled out for six SPAs which are designated to protect breeding populations of gannet (Table 5.27). All but one of these was identified for consideration of displacement impacts in non-breeding seasons only. Displacement impacts in the breeding season were considered for the Forth Islands SPA due to gannets exhibiting spatial segregation in foraging areas from individual breeding colonies (Wakefield *et al.*, 2013). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA which is designated to protect sea areas used by gannets from adjacent SPA breeding colonies.
- 5.4.4.49 For SPAs for which displacement impacts were considered in non-breeding seasons only the predicted impact represented less than a 0.02 percentage point increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.50 For the Forth Islands SPA for which there was connectivity with Morven North in all seasons, the impact also remained below the 0.02 percentage point threshold as defined by NatureScot for both NatureScot's (Table 5.29) and the Applicant's (Table 5.30) approach.
- 5.4.4.51 As mentioned in paragraph 5.4.4.48, gannets exhibit spatial segregation in foraging areas between individual breeding colonies. The predicted impacts in Table 5.29 and Table 5.30 were calculated applying the NatureScot (2018) apportioning approach which utilises three weighting factors to estimate the proportion of breeding adult birds from relevant colonies that may interact with a project site (see Volume 2, Annex 3.1: RIAA: Apportioning for more information). This approach estimated that, of the breeding adult gannets present at Morven North, approximately 87% would originate from the Forth Islands SPA. The NatureScot (2018) apportioning approach is not designed to take into account information such as that presented in Wakefield *et al.*, (2013) which would suggest that the breeding adult proportion of gannets present at Morven North should be 100%. If a breeding adult proportion of 100% were to be incorporated into the calculation of impacts on the Forth Islands SPA gannet population this would provide an overall breeding season apportioning value of 50% (incorporating consideration of the adult:immature ratio and sabbatical proportions). This would in turn provide a breeding season impact of 2.8 to 8.3 birds/annum and an annual impact of 3.4 to 10.3 birds/annum, when applying NatureScot's approach. This impact would not surpass the 0.02 percentage point threshold recommended by NatureScot and would therefore not alter the conclusions against the conservation objectives for the Forth Islands SPA reached in Appendix A.
- 5.4.4.52 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by gannets from adjacent breeding colonies. In order to calculate the impact applicable to this SPA it is therefore necessary to total the impacts apportioned to the adjacent SPAs. For gannet, this includes the Forth Islands SPA only. The conclusions reached for the gannet qualifying feature of the Forth Islands SPA are therefore considered applicable to the gannet qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.

Conclusion

- 5.4.4.53 The predicted increase in baseline mortality does not exceed the 0.02 percentage point threshold advised by NatureScot (2023h) for any SPA at which kittiwake, gannet, puffin and

fulmar when using either the estimates predicted when applying NatureScot’s advocated parameters (Table 5.29) or the Applicant’s parameters (Table 5.30).

- 5.4.4.54 For guillemot the predicted impacts for the Fowlsheugh SPA and Buchan Ness to Collieston Coast SPA surpassed the 0.02 percentage point threshold advised by NatureScot (2023h) and therefore population modelling was conducted. PVA outputs showed that the growth rate of guillemot at the SPA would remain positive and therefore the population would continue to grow albeit at a lower rate than in the absence of impacts associated with Morven North. It is therefore considered that the predicted impacts would not be sufficient to cause a decline in the population at either SPA or significantly prevent future growth, and therefore will not adversely affect the conservation objectives of each SPA.
- 5.4.4.55 For razorbill the predicted impacts for the Fowlsheugh SPA, Forth Islands SPA and St Abb’s Head to Fast Castle SPA surpassed the 0.02 percentage point threshold advised by NatureScot (2023h) and therefore population modelling was conducted. PVA outputs showed that the growth rate of razorbill at all three SPAs would not be materially affected. It is therefore considered that the predicted impacts would not be sufficient to alter the population trends at any of the three SPAs, and therefore will not adversely affect the conservation objectives of each SPA. For all other SPAs at which razorbill is a qualifying feature, the 0.02 percentage point threshold advised by NatureScot (2023h) was not surpassed.
- 5.4.4.56 Impacts on the qualifying offshore ornithological features of all SPAs identified in Table 5.27 that undermine the conservation objectives of relevant SPAs will not occur as a result of displacement during operations and maintenance phase. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.
- 5.4.4.57 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to displacement associated with Morven North during the operations and maintenance phase. This is applicable to all SPAs and associated features included in Table 5.33.

Table 5.33: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to displacement impacts associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake
	Guillemot
	Razorbill
	Puffin
	Gannet
	Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	Kittiwake
	Guillemot
	Breeding seabird assemblage

European site	Feature
Forth Islands SPA	Gannet
	Kittiwake
	Guillemot
	Razorbill
	Puffin
	Breeding seabird assemblage
Northumberland Marine SPA	Kittiwake
	Puffin
	Razorbill
	Fulmar
	Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Farne Islands SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Coquet Island SPA	Kittiwake
	Puffin
	Fulmar
	Breeding seabird assemblage
East Caithness Cliffs SPA	Kittiwake
	Razorbill (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
North Caithness Cliffs SPA	Kittiwake
	Puffin
	Fulmar
	Breeding seabird assemblage
Copinsay SPA	Kittiwake
	Breeding seabird assemblage

European site	Feature
Hoy SPA	Kittiwake
	Puffin
	Fulmar
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Puffin
	Razorbill (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
Calf of Eday SPA	Kittiwake
	Breeding seabird assemblage
Rousay SPA	Kittiwake
	Breeding seabird assemblage
Marwick Head SPA	Kittiwake
	Breeding seabird assemblage
West Westray SPA	Kittiwake
	Breeding seabird assemblage
Fair Isle SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Puffin (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
Noss SPA	Gannet (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
Foula SPA	Puffin (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
Fetlar SPA	Fulmar
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)
	Puffin (non-breeding seasons only)
	Fulmar
	Breeding seabird assemblage
St Kilda SPA	Gannet (non-breeding seasons only)

European site	Feature
	Breeding seabird assemblage

5.4.5 Combined collision and displacement

- 5.4.5.1 Two species are known to be affected by both displacement and collision during the operations and maintenance phase, these are kittiwake and gannet. For these species, impacts must be combined in order for the true magnitude of impact to be understood.
- 5.4.5.2 It is recognised that assessing these two potential impacts together could amount to double counting, as birds that are subject to displacement could not be subject to potential collision risk as they are already assumed to have not entered Morven North. Equally, birds estimated to be subject to collision risk mortality would not be subjected to displacement mortality as well.
- 5.4.5.3 Whilst the methods used to estimate collision risk and displacement mortality for gannet go some way to take this into account (through the reduction of gannet densities in collision risk modelling by 70%), a similar approach is not applied for kittiwake due to a lack of appropriate data to inform the quantification of the likely scale of required reduction. As a more refined method to consider displacement and collision together whilst reducing any double counting of impacts is not agreed with SNCBs, the precautionary and highly unlikely approach of simply summing the two impacts which is therefore likely to be an over-estimate is presented in this assessment.
- 5.4.5.4 Outputs from the impact assessments from collision risk (Section 5.4.3) and displacement (Section 5.4.4) combined are tabulated and presented in the following sections.
- 5.4.5.5 The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance
- 5.4.5.6 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operation and maintenance phase, the potential for LSE² could not be ruled out for combined collision and displacement. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.34.

Table 5.34: European sites and associated qualifying features for which Likely Significant Effects² in relation to combined collision and displacement impacts associated with Morven North could not be ruled out

European site	Distance to Morven North boundary (km) ⁷	Feature
Fowlsheugh SPA	59	Kittiwake
		Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	66	Kittiwake
		Gannet

⁷ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North boundary (km) ⁷	Feature
		Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	68	Kittiwake
		Breeding seabird assemblage
Forth Islands SPA	101	Kittiwake
		Gannet
		Breeding seabird assemblage
Northumberland Marine SPA	102	Kittiwake
		Breeding seabird assemblage
St Abb's Head to Fast Castle SPA	104	Kittiwake
		Breeding seabird assemblage
Troup, Pennan and Lion's Heads SPA	107	Kittiwake
		Breeding seabird assemblage
Farne Islands SPA	111	Kittiwake
		Breeding seabird assemblage
Coquet Island SPA	143	Kittiwake
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Kittiwake
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Kittiwake
		Breeding seabird assemblage
Copinsay SPA	237	Kittiwake
		Breeding seabird assemblage
Hoy SPA	243	Kittiwake
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Kittiwake
		Gannet (non-breeding seasons only)
		Breeding seabird assemblage
Calf of Eday SPA	273	Kittiwake
		Breeding seabird assemblage
Rousay SPA	274	Kittiwake
		Breeding seabird assemblage
Marwick Head SPA	277	Kittiwake
		Breeding seabird assemblage
West Westray SPA	285	Kittiwake

European site	Distance to Morven North boundary (km) ⁷	Feature
		Breeding seabird assemblage
Fair Isle SPA	289	Kittiwake
		Gannet (non-breeding seasons only)
		Breeding seabird assemblage
Noss SPA	357	Gannet (non-breeding seasons only)
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Gannet (non-breeding seasons only)
		Breeding seabird assemblage
St Kilda SPA	448	Gannet (non-breeding seasons only)
		Breeding seabird assemblage

5.4.5.7 The MDS considered for the assessment of displacement is shown in Table 5.28 with the MDS for collision shown in Table 5.21. Designed-in measures for collision are provided in Table 5.22. There are no designed-in measures associated with Morven North relevant to displacement.

Operation and maintenance phase

5.4.5.8 The assessment for combined collision and displacement impacts utilises the information presented in Section 5.4.3 (collision risk) and Section 5.4.4 (displacement) for the two contributory impacts. For detailed methodologies for each impact please see Volume 3, Appendix 11.2: Offshore Ornithology Collision Risk Modelling Report and Volume 3, Annex 11.4: Offshore Ornithology Displacement Modelling Report (Matrix Approach), of the EIA Report.

5.4.5.9 The predicted mortality for each of the qualifying features identified in Table 5.34 apportioned to the relevant SPA is presented on a seasonal basis in Table 5.35 using the approach to collision and displacement analyses advocated by NatureScot and in Table 5.36 using the approaches advocated by the Applicant. The predicted annual apportioned impact for each SPA is compared against the baseline mortality of the most recent SPA population as provided in Table 5.8.

5.4.5.10 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Table 5.35: Calculation of effect from Morven North alone in relation to collision and displacement combined based on the parameters advocated by NatureScot (B = breeding season, Post = post-breeding season, Pre = pre-breeding season)

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
Gannet (Displacement: 1% breeding season mortality rate; 1% non-breeding season mortality rate; Collision: flight speed 14.9m/s, avoidance rate 0.9929, 70% macro-avoidance applied to pre- and post-breeding seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.21							
	Forth Islands SPA	4.2	0.2	0.1	2.4	0.6	0.1	7.4	0.005
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.2	0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.0	0.0	0.1	0.001
	Noss SPA (non-breeding seasons only)	0.1	0.0	0.0	0.1	0.1	0.0	0.2	0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	0.2	0.1	0.0	0.3	0.2	0.0	0.5	0.001
	St Kilda SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.1	0.000
Gannet (Displacement: 3% breeding season mortality rate; 3% non-breeding)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.21							
	Forth Islands SPA	4.2	0.2	0.1	7.2	1.8	0.2	13.5	0.009
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.4	0.0	0.4	0.002

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
season mortality rate; Collision: flight speed 14.9m/s, avoidance rate 0.9929, 70% macro-avoidance applied to pre and post-breeding seasons)	Fair Isle SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.1	0.001
	Noss SPA (non-breeding seasons only)	0.1	0.0	0.0	0.4	0.3	0.0	0.5	0.002
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	0.2	0.1	0.0	0.9	0.6	0.1	1.0	0.002
	St Kilda SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.2	0.0	0.2	0.000
Kittiwake (Displacement: 1% breeding season mortality rate; 1% non-breeding season mortality rate; Collision: flight speed 13.1 m/s, avoidance rate 0.9929)	Fowlsheugh SPA	2.9	0.0	0.1	1.1	0.0	0.0	4.0	0.014
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.14							
	Buchan Ness to Collieston Coast SPA	1.4	0.0	0.1	0.5	0.0	0.0	2.0	0.009
	Forth Islands SPA	0.4	0.0	0.0	0.2	0.0	0.0	0.6	0.007
	Northumberland Marine SPA	See paragraph 5.4.5.16							
	St Abb's Head to Fast Castle SPA	0.5	0.0	0.0	0.2	0.0	0.0	0.7	0.007
	Troup, Pennan and Lion's Heads SPA	0.5	0.0	0.1	0.2	0.0	0.0	0.9	0.004
	Farne Islands SPA	0.3	0.0	0.0	0.1	0.0	0.0	0.5	0.006
Coquet Island SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004	

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
	East Caithness Cliffs SPA	0.5	0.1	0.2	0.2	0.1	0.0	1.1	0.002
	North Caithness Cliffs SPA	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.002
	Copinsay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
	Hoy SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002
	Flamborough and Filey Coast SPA	0.8	0.1	0.2	0.3	0.1	0.0	1.5	0.001
	Calf of Eday SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002
	Rousay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003
	Marwick Head SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000
	West Westray SPA	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.002
	Fair Isle SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
Kittiwake (Displacement: 3% breeding season mortality rate; 3% non-breeding season mortality rate; Collision: flight speed 13.1 m/s,	Fowlsheugh SPA	2.9	0.0	0.1	3.2	0.0	0.0	6.2	0.022
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.14							
	Buchan Ness to Collieston Coast SPA	1.4	0.0	0.1	1.6	0.1	0.0	3.1	0.014
	Forth Islands SPA	0.4	0.0	0.0	0.5	0.0	0.0	0.9	0.010
	Northumberland Marine SPA	See paragraph 5.4.5.16							
	St Abb's Head to Fast Castle SPA	0.5	0.0	0.0	0.6	0.0	0.0	1.1	0.011
Troup, Pennan and Lion's Heads SPA	0.5	0.0	0.1	0.6	0.1	0.0	1.4	0.006	

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
avoidance rate 0.9929)	Farne Islands SPA	0.3	0.0	0.0	0.4	0.0	0.0	0.8	0.009
	Coquet Island SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.006
	East Caithness Cliffs SPA	0.5	0.1	0.2	0.5	0.2	0.1	1.6	0.003
	North Caithness Cliffs SPA	0.0	0.0	0.1	0.0	0.1	0.0	0.3	0.002
	Copinsay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002
	Hoy SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.002
	Flamborough and Filey Coast SPA	0.8	0.1	0.2	0.9	0.2	0.1	2.3	0.002
	Calf of Eday SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003
	Rousay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.004
	Marwick Head SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.000
	West Westray SPA	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.004
Fair Isle SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001	

Table 5.36: Calculation of effect from Morven North alone in relation to collision and displacement combined based on the parameters advocated by the Applicant (B = breeding season, Post = post-breeding season, Pre = pre-breeding season)

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
Gannet (Displacement: 1% mortality rate – all seasons; Collision: flight speed 13.33m/s, avoidance rate 0.9929, 70% macro-avoidance applied to all seasons)	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.21							
	Forth Islands SPA	2.0	0.2	0.1	4.2	0.6	0.1	7.1	0.005
	Flamborough and Filey Coast SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.2	0.001
	Fair Isle SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.0	0.0	0.1	0.001
	Noss SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.1	<0.001
	Hermaness, Saxa Vord and Valla Field SPA (non-breeding seasons only)	n/a	0.1	0.0	n/a	0.2	0.0	0.3	0.001
	St Kilda SPA (non-breeding seasons only)	n/a	0.0	0.0	n/a	0.1	0.0	0.1	<0.001
Kittiwake (Displacement: 1% mortality rate – all seasons; Collision: flight speed 8.71 m/s,	Fowlsheugh SPA	1.8	0.0	0.0	1.1	0.0	0.0	2.8	0.010
	Outer Firth of Forth and St Andrews Bay Complex SPA	See paragraph 5.4.5.14							
	Buchan Ness to Collieston Coast SPA	0.9	0.0	0.0	0.5	0.0	0.0	1.4	0.006

Feature	European site	Apportioned collision risk estimate (no. of birds)			Apportioned displacement mortality (no. of birds)			Total apportioned impact (no. of birds)	Increase in baseline mortality (percentage point change)
		B	Post	Pre	B	Post	Pre		
avoidance rate 0.9979)	Forth Islands SPA	0.3	0.0	0.0	0.2	0.0	0.0	0.4	0.005
	Northumberland Marine SPA	See paragraph 5.4.5.16							
	St Abb`s Head to Fast Castle SPA	0.3	0.0	0.0	0.2	0.0	0.0	0.5	0.005
	Troup, Pennan and Lion`s Heads SPA	0.3	0.0	0.0	0.2	0.0	0.0	0.6	0.003
	Farne Islands SPA	0.2	0.0	0.0	0.1	0.0	0.0	0.4	0.004
	Coquet Island SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.003
	East Caithness Cliffs SPA	0.3	0.1	0.0	0.2	0.1	0.0	0.6	0.001
	North Caithness Cliffs SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.001
	Copinsay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
	Hoy SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
	Flamborough and Filey Coast SPA	0.3	0.0	0.0	0.5	0.1	0.0	1.0	0.001
	Calf of Eday SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
	Rousay SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.001
	Marwick Head SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.001
	West Westray SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.001
Fair Isle SPA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	<0.001	

Kittiwake

- 5.4.5.11 The potential for LSE² in relation to combined collision and displacement could not be ruled out for kittiwake as a qualifying feature at 17 breeding colony SPAs (Table 5.34). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA and Northumberland Marine SPAs which are designated to protect sea areas used by kittiwakes from adjacent SPA breeding colonies.
- 5.4.5.12 For all breeding colony SPAs the predicted impact represented less than a 0.02 percentage point threshold increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.35) and the Applicant's (Table 5.36) approach with the exception of the Fowlsheugh SPA for which population modelling has therefore been conducted.
- 5.4.5.13 PVA modelling for the kittiwake population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.991; (i.e. the population after 35 years, would be 0.9% smaller than the CPS with a 50th percentile value of 49.3 (Table 5.37)). In terms of the population size, this means that the median of the impacted population fell within the 49th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which represents a negligible change to the growth rate associated with the SPA population. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations.
- 5.4.5.14 The population of kittiwake at the Fowlsheugh SPA decreased significantly between the Seabird 2000 and Seabirds Count national censuses but has shown slight signs of recovery since (BTO *et al.*, 2025). The counterfactual scenario predicts a negative population growth rate. However, the difference between the growth rate predicted for the baseline and impacted scenarios is limited suggesting that the impact associated with Morven North alone will not exacerbate the current population trend at the colony.
- 5.4.5.15 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by kittiwakes from adjacent breeding colonies. For kittiwake, this includes the Forth Islands SPA only. The conclusions reached for the kittiwake qualifying feature of the Forth Islands SPA are therefore considered applicable to the kittiwake qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.
- 5.4.5.16 The Northumberland Marine SPA is designated to protect seas areas used by kittiwakes from adjacent breeding colonies. This includes the Coquet Island SPA and Farne Islands SPA. The conclusions reached for the kittiwake qualifying feature of these SPAs are therefore considered applicable to the kittiwake qualifying feature of the Northumberland Marine SPA.

Table 5.37: Summary of population viability analysis results for combined collision and displacement impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Fowlsheugh SPA								
Baseline	-	-	31,588	1.002	8.3	-	-	-
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	6.2	0.022	31,322	1.002	7.4	1.000	0.991	49.3

Gannet

- 5.4.5.17 The potential for LSE² in relation to combined collision and displacement impacts could not be ruled out for six SPAs which are designated to protect breeding populations of gannet (Table 5.34). All but one of these was identified for consideration of combined collision and displacement impacts in non-breeding seasons only. Combined collision and displacement impacts in the breeding season were considered for the Forth Islands SPA due to gannets exhibiting spatial segregation in foraging areas from individual breeding colonies (Wakefield *et al.*, 2013). In addition, the potential for LSE² could not be ruled out for the Outer Firth of Forth and St Andrews Bay Complex SPA which is designated to protect sea areas used by gannets from adjacent SPA breeding colonies.
- 5.4.5.18 For SPAs for which combined collision and displacement impacts were considered in non-breeding seasons only, the predicted impact represented less than a 0.02 percentage point increase in the associated baseline mortality of each SPA under both NatureScot's (Table 5.35) and the Applicant's (Table 5.36) approach.
- 5.4.5.19 For the Forth Islands SPA for which there was connectivity with Morven North in all seasons, the impact also remained below the 0.02 percentage point threshold as defined by NatureScot for both NatureScot's (Table 5.35) and the Applicant's (Table 5.36) approach.
- 5.4.5.20 As mentioned in paragraph 5.4.5.17, gannets exhibit spatial segregation in foraging areas between individual breeding colonies. The predicted impacts in Table 5.35 and Table 5.36 were calculated applying the NatureScot (2018) apportioning approach which utilises three weighting factors to estimate the proportion of breeding adult birds from relevant colonies that may interact with a project site (see Volume 2, Annex 3.1: RIAA: Apportioning for more information). This approach estimated that, of the breeding adult gannets present at Morven North, approximately 87% would originate from the Forth Islands SPA. The NatureScot (2018) apportioning approach is not designed to take into account information such as that presented in Wakefield *et al.*, (2013) which would suggest that the breeding adult proportion of gannets present at Morven North should be 100%. If a breeding adult proportion of 100% were to be incorporated into the calculation of impacts on the Forth Islands SPA gannet population this would provide an overall breeding season apportioning value of 50% (incorporating consideration of the adult:immature ratio and sabbatical proportions). This would in turn provide a breeding season impact of 7.6 to 13.1 birds/annum and an annual impact of 8.5 to 15.3 birds/annum, when applying NatureScot's Approach. This impact would not surpass the 0.02 percentage point threshold recommended by NatureScot and would therefore not alter the conclusions against the conservation objectives for the Forth Islands SPA reached in Appendix A.
- 5.4.5.21 The Outer Firth of Forth and St Andrews Bay Complex SPA is designated to protect seas areas used by gannets from adjacent breeding colonies. For gannet, this includes the Forth Islands SPA only. The conclusions reached for the gannet qualifying feature of the Forth Islands SPA are therefore considered applicable to the gannet qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA.

Conclusion

- 5.4.5.22 The predicted increase in baseline mortality does not exceed the 0.02 percentage point threshold advised by NatureScot (2023h) for all but one of the SPAs and associated qualifying feature combination using either the estimates predicted when applying NatureScot's advocated parameters (Table 5.35) or the Applicant's parameters (Table 5.36).
- 5.4.5.23 For kittiwake at the Fowlsheugh SPA the 0.02 percentage point threshold was surpassed and therefore population modelling was conducted. PVA outputs showed that the growth rate of kittiwake at the SPA would not be materially affected. It is therefore considered that the predicted impacts would not be sufficient to alter the population trends at the SPA, and therefore will not adversely affect the conservation objectives of the SPA.

5.4.5.24 Impacts on the qualifying offshore ornithological features of all SPAs identified in Table 5.30 that undermine the conservation objectives of relevant SPAs will not occur as a result of combined collision and displacement during operations and maintenance phase. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.

5.4.5.25 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to combined collision and displacement associated with Morven North during the operations and maintenance phase. This is applicable to all SPAs and associated features included in Table 5.33.

Table 5.38: SPAs and associated features for which there will be no Adverse Effect On Integrity in relation to combined collision and displacement impacts associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Kittiwake
	Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake
	Gannet
	Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	Kittiwake
	Breeding seabird assemblage
Forth Islands SPA	Kittiwake
	Gannet
	Breeding seabird assemblage
Northumberland Marine SPA	Kittiwake
	Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	Kittiwake
	Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	Kittiwake
	Breeding seabird assemblage
Farne Islands SPA	Kittiwake
	Breeding seabird assemblage
Coquet Island SPA	Kittiwake
	Breeding seabird assemblage
East Caithness Cliffs SPA	Kittiwake
	Breeding seabird assemblage
North Caithness Cliffs SPA	Kittiwake
	Breeding seabird assemblage
Copinsay SPA	Kittiwake

European site	Feature
	Breeding seabird assemblage
Hoy SPA	Kittiwake
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Kittiwake
	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
Calf of Eday SPA	Kittiwake
	Breeding seabird assemblage
Rousay SPA	Kittiwake
	Breeding seabird assemblage
Marwick Head SPA	Kittiwake
	Breeding seabird assemblage
West Westray SPA	Kittiwake
	Breeding seabird assemblage
Fair Isle SPA	Kittiwake
	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
Noss SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
St Kilda SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage

5.4.6 Barrier effects

5.4.6.1 JNCC *et al.* (2022) defines barrier effects as ‘A barrier is a physical factor that limits the migration, or free movement of individuals or populations, thus requiring them to divert from their intended path in order to reach their original destination. This effect is expected to increase the energy expenditure of birds if they have to fly around the area in question in order to reach their goal’.

5.4.6.2 Barrier effects are typically considered to affect birds in flight only, either whilst they are on migration between breeding and wintering areas (for example) or between a breeding colony and a foraging area. The latter of these scenarios may impose an additional energetic cost to movements at a key period in the annual cycle when seabirds are making daily commutes between foraging grounds at sea and breeding sites. Additional energetic costs could have long-term implications for individuals, impacting bird fitness (breeding productivity and survival) and for populations.

- 5.4.6.3 Barrier effects are considered to be less impactful when affecting migratory flights as avoidance of a single wind farm may be trivial relative to the total length and cost of the journey.
- 5.4.6.4 For breeding seabirds, NatureScot (2023f) consider barrier effects alongside displacement as “distributional responses”. This is because it can be difficult to distinguish barrier effects from the effects of displacement for breeding seabirds foraging in the region. NatureScot (2023f) advise that distributional responses are assessed using the matrix approach, and therefore for breeding seabirds, no separate assessment of barrier to movement is carried out, with impacts considered to be included in the assessments carried out in Section 5.4.4. This section therefore only considers the impact of the barrier to movement during migratory seasons.
- 5.4.6.5 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operation and maintenance phase, the potential for LSE² could not be ruled out for barrier effects. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.39.

Table 5.39: European sites and associated qualifying features for which Likely Significant Effects² in relation to barrier effects associated with Morven North could not be ruled out

European site	Distance to Morven North boundary (km) ⁸	Feature
Fowlsheugh SPA	59	Kittiwake
		Guillemot
		Razorbill
		Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	66	Kittiwake
		Guillemot
		Razorbill
		Puffin
		Gannet
Breeding seabird assemblage		
Buchan Ness to Collieston Coast SPA	68	Kittiwake
		Guillemot
		Breeding seabird assemblage
Forth Islands SPA	101	Gannet
		Kittiwake
		Razorbill
		Puffin
Breeding seabird assemblage		

⁸ Measured from the edge of Morven North to the edge of the SPA

European site	Distance to Morven North boundary (km) ⁸	Feature
Northumberland Marine SPA	102	Kittiwake
		Puffin
		Razorbill
		Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	104	Kittiwake
		Razorbill
		Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	107	Kittiwake
		Razorbill
		Breeding seabird assemblage
Farne Islands SPA	111	Kittiwake
		Puffin
		Breeding seabird assemblage
Coquet Island SPA	143	Kittiwake
		Puffin
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Kittiwake
		Razorbill (non-breeding seasons only)
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Kittiwake
		Puffin
		Breeding seabird assemblage
Copinsay SPA	237	Kittiwake
		Breeding seabird assemblage
Hoy SPA	243	Kittiwake
		Puffin
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Gannet (non-breeding seasons only)
		Kittiwake
		Puffin
		Razorbill (non-breeding seasons only)
		Breeding seabird assemblage
Calf of Eday SPA	273	Kittiwake
		Breeding seabird assemblage

European site	Distance to Morven North boundary (km) ⁸	Feature
Rousay SPA	274	Kittiwake
		Breeding seabird assemblage
Marwick Head SPA	277	Kittiwake
		Breeding seabird assemblage
West Westray SPA	285	Kittiwake
		Breeding seabird assemblage
Fair Isle SPA	289	Gannet (non-breeding seasons only)
		Kittiwake
		Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Noss SPA	357	Gannet (non-breeding seasons only)
		Breeding seabird assemblage
Foula SPA	359	Puffin (non-breeding seasons only)
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Gannet (non-breeding seasons only)
		Puffin (non-breeding seasons only)
		Breeding seabird assemblage
St Kilda SPA	448	Gannet (non-breeding seasons only)
		Breeding seabird assemblage

5.4.6.6 The MDS considered for the assessment of barrier effects is shown in Table 5.40. There are no designed-in measures associated with Morven North relevant to barrier effects.

Table 5.40: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to barrier effects during the operation and maintenance phase

Project phase	MDS	Justification
Operation and maintenance	<ul style="list-style-type: none"> Presence of up to 96 wind turbines, five OSPs within the Morven North Boundary of 511.1km² Minimum spacing of 1,000m between rows of wind turbines 	Maximum density of wind turbines and structures across Morven North, which maximises the potential barrier to foraging grounds and migration routes for bird species.

Operation and maintenance phase

- 5.4.6.7 The diversion of flight lines as a result of a barrier effect created by the presence of Morven North for migratory birds is considered less of an impact than for those barrier effects to daily foraging flights. A number of studies have calculated that the costs of one-off avoidances during migration were small, accounting for less than 2% of available fat reserves (e.g. Masden *et al.*, 2010; Speakman *et al.*, 2009).
- 5.4.6.8 Masden *et al.* (2010) found additional costs, expressed in relation to typical daily energetic expenditures, to be the highest per unit flight for seabirds with high wing loadings, such as gannets. For example, results suggest that increasing gannet flight distance by 2km increases energetic cost by 1.25%. A 10km increase may result in a 4.50% increase in energy expenditure. However, this is based on a foraging range of 160km, where 10km represents a 6.25% increase in distance flown. Scaling this to the mean maximum plus 1SD foraging range of 709km (Woodward *et al.*, 2019), an additional flight distance of 10km (4.5%) represents a scaled 1.02% increase in expenditure. This minimal increase in energy expenditure is unlikely to result in notable mortalities. Most importantly, Masden *et al.* (2010) found costs of extra flight to avoid a wind farm to appear to be much less than those imposed by low food abundance or adverse weather, although such costs will be additive to these.

Conclusion

- 5.4.6.9 Impacts on the qualifying offshore ornithological features of all SPAs identified in Table 5.39 that undermine the conservation objectives of the SPA will not occur as a result of barrier effects during the operation and maintenance phase. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.4.6.10 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to barrier effects associated with Morven North during the operations and maintenance phase. This is applicable to all SPAs and associated features included in Table 5.41.

Table 5.41: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to barrier effects associated with Morven North alone

European site	Feature
Fowlsheugh SPA	Kittiwake
	Guillemot
	Razorbill
	Breeding seabird assemblage
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake
	Guillemot
	Razorbill
	Puffin
	Gannet
	Breeding seabird assemblage
Buchan Ness to Collieston Coast SPA	Kittiwake
	Guillemot
	Breeding seabird assemblage
Forth Islands SPA	Gannet

European site	Feature
	Kittiwake
	Razorbill
	Puffin
	Breeding seabird assemblage
Northumberland Marine SPA	Kittiwake
	Puffin
	Razorbill
	Breeding seabird assemblage
St Abb`s Head to Fast Castle SPA	Kittiwake
	Razorbill
	Breeding seabird assemblage
Troup, Pennan and Lion`s Heads SPA	Kittiwake
	Razorbill
	Breeding seabird assemblage
Farne Islands SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Coquet Island SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
East Caithness Cliffs SPA	Kittiwake
	Razorbill (non-breeding seasons only)
	Breeding seabird assemblage
North Caithness Cliffs SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Copinsay SPA	Kittiwake
	Breeding seabird assemblage
Hoy SPA	Kittiwake
	Puffin
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Puffin
	Razorbill (non-breeding seasons only)
	Breeding seabird assemblage

European site	Feature
Calf of Eday SPA	Kittiwake
	Breeding seabird assemblage
Rousay SPA	Kittiwake
	Breeding seabird assemblage
Marwick Head SPA	Kittiwake
	Breeding seabird assemblage
West Westray SPA	Kittiwake
	Breeding seabird assemblage
Fair Isle SPA	Gannet (non-breeding seasons only)
	Kittiwake
	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Noss SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage
Foula SPA	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)
	Puffin (non-breeding seasons only)
	Breeding seabird assemblage
St Kilda SPA	Gannet (non-breeding seasons only)
	Breeding seabird assemblage

5.4.7 Attraction to light

- 5.4.7.1 There is the potential for artificial light associated with offshore wind farms to impact birds at the construction, operations and maintenance, and decommissioning phases.
- 5.4.7.2 There are significant knowledge gaps regarding the effects of artificial lighting associated with offshore wind farms on seabirds. These include: the range over which light attraction may occur (and therefore the size of the light catch basin for wind farms and related activities or infrastructure); the extent to which light attraction is exacerbated by particular meteorological conditions (e.g. fog, rain); the influence of wavelength and pattern of illumination (flashing/steady); and the extent to which light attraction differentially affects adults and juveniles and for how long after fledging juveniles may remain particularly susceptible to light attraction.
- 5.4.7.3 Whilst Deakin *et al.* (2022) provides a comprehensive review of seabird attraction to artificial light, they fail to account for the characteristics of lighting associated with offshore wind farms. The review highlights the attraction of seabirds to light sources such as village lights, lighthouses, and hydrocarbon platforms. It is notable that the intensity of light associated with these sources is significantly greater than that associated with an offshore wind farm. This was highlighted by Furness (2018), who determined that lighting on wind turbines is in orders of magnitude lower than light intensities produced by ports, towns, lighthouses, oil and gas

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- platforms, or ships. Furness (2018) concluded that the lights associated with offshore wind turbines are unlikely to have any detectable effect on birds.
- 5.4.7.4 Additionally, Furness (2018) found that phototaxis of seabirds only occurs over short distances (hundreds of metres) in response to bright white light close to colonies of these species. It is not seen over large distances or with the moderate light levels used in obstruction or navigation lighting. In addition, no evidence was found to suggest that obstruction or navigation lights affect ability of marine birds to feed at night, or attract marine prey animals to aggregate, or that they could affect predation risk for nocturnal migrant birds. No evidence was found to suggest that obstruction or navigation lights cause displacement of marine birds due to avoidance of light.
- 5.4.7.5 Nevertheless, it is anticipated that lighting associated with Morven North will meet minimum requirements, namely as set out in the International Association of Marine Aids to Navigation and Lighthouse Authorities (IALA) Recommendation O-117 on 'The Marking of Offshore Wind Farms' for navigation lighting and by the Civil Aviation Authority in the Air Navigation Orders (CAP 393 and guidance in CAP 764). In keeping with the minimum legal requirements, this will minimise the potential risks of birds becoming attracted to or disorientated by turbines at night or in poor weather.
- 5.4.7.6 Appropriate lighting, in line with MCA (2021) guidance, will ensure the offshore structures are visible for search and rescue and emergency response procedures. In addition, marine navigational lighting for the OSS will be fitted at the platform level on significant peripheral structures.
- 5.4.7.7 In terms of attraction to lit structures, the MDS for Morven North would involve 96 turbines and the maximum number of ancillary structures. For maximum visibility, each structure would be fitted with lighting requirements for aviation and shipping. All project phases are considered as the number of turbines will gradually increase or decrease respectively during the construction and decommissioning phases. The indicative lighting design is below:
- Flashing yellow 5s lights on Significant Peripheral Structures with nominal 5nm range, 360° visibility, located between 6m and 30m above HAT, all synchronised;
 - Flashing yellow 2.5s lights on Intermediate Peripheral Structures with nominal 2nm range, 360° visibility, located between 6m and 30m above HAT;
 - For ID markers – low level baffled lighting with mean luminance between 5cd/m² and 10cd/m²;
 - Aviation warning lights – red 2,000cd dimmable to 200cd when visibility greater than 5km at night, off during day, 360° visibility, synchronised flashing Morse "W";
 - (Search and Rescue) SAR lights – red 200cd, off unless requested by MCA, steady when in use, 360° visibility; and
 - Heli-hoist lights – low intensity green light, off when not safe for heli-hoist, flashing when being prepared, steady when ready, 360° visibility.
- 5.4.7.8 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during all project phases, the potential for LSE² could not be ruled out for attraction to light. This relates to the following site(s) and relevant offshore ornithological features shown in Table 5.42.

Table 5.42: European sites and associated qualifying features for which Likely Significant Effects² in relation to attraction to light associated with Morven North could not be ruled out

European site	Distance to Morven North boundary (km) ⁹	Feature
Northumberland Marine SPA	102	Fulmar
		Breeding seabird assemblage
Coquet Island SPA	143	Fulmar
		Breeding seabird assemblage
East Caithness Cliffs SPA	199	Fulmar
		Breeding seabird assemblage
North Caithness Cliffs SPA	218	Fulmar
		Breeding seabird assemblage
Hoy SPA	243	Fulmar
		Breeding seabird assemblage
Flamborough and Filey Coast SPA	260	Fulmar
		Breeding seabird assemblage
Fair Isle SPA	289	Fulmar
		Breeding seabird assemblage
Noss SPA	357	Fulmar
		Breeding seabird assemblage
Foula SPA	359	Fulmar
		Breeding seabird assemblage
Fetlar SPA	405	Fulmar
		Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	425	Fulmar
		Breeding seabird assemblage

The MDS and designed-in measures considered for the assessment of attraction to light are shown in Table 5.11 and Table 5.12, respectively.

⁹ Measured from the edge of Morven North to the edge of the SPA

Table 5.43: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to attraction to light during all project phases

Project phase	MDS	Justification
Construction	<ul style="list-style-type: none"> Up to a total of 41 construction vessels on site at any one time 	Maximum density of wind turbines and structures across Morven North, offering the maximum amount of light transmission to which birds may be attracted.
Operation and maintenance	<ul style="list-style-type: none"> Presence of up to 96 operating wind turbines and five OSPs occupying the Morven North Boundary of up to 511.1km² Maximum blade tip height of 293m above LAT 	
Decommissioning	<ul style="list-style-type: none"> Vessels used for a range of decommissioning activities such as removal of foundations 	

Table 5.44: Designed-in measures considered for the assessment of potential impacts to offshore ornithological features to attraction to light during all project phases

Reference number	Designed-in measures	Justification	Primry or tertiary
MM-34	Development of and adherence to a Lighting and Marking Plan (LMP).	<p>To reduce impacts on offshore ornithology: The LMP will detail compliance with legal requirements including IALA G1162 (IALA, 2021), and will assist with SAR operations and will ensure that appropriate lighting and marking of wind turbines and offshore substation platforms will be established in accordance with Civil Aviation Authority (CAA) regulations and guidance (CAP 393 and the Air Navigation Order (ANO)) and in accordance with the Civil Aviation Authority CAA and the Defence Infrastructure Organisation (DIO), which is responsible for the safeguarding of Ministry of Defence (MOD) assets. Secured through the LMP.</p> <p>The approach to Aids to Navigation will be outlined in the LMP.</p> <p>Adopting the LMP, and therefore reducing lighting to be compliant with MM-34, will provide the minimum amount and intensity of</p>	Tertiary

Reference number	Designed-in measures	Justification	Primry or tertiary
		lighting that Morven North can legally have whilst remaining compliant with mandatory Health and Safety lighting requirements.	

All project phases

- 5.4.7.9 Precise numbers of marine birds moving through Morven North are unknown, but in relation to national or international populations, proportions travelling through Morven North during hours of darkness are likely to be low (see Wade *et al.*, 2016) for determination of nocturnal activity rates), particularly as most flights would be below potential collision height. The magnitude of impact is therefore considered qualitatively for all receptors.
- 5.4.7.10 The nature of lighting at Morven North is not considered comparable to the light sources associated with significant attraction events (e.g. those that may occur at lighthouses or other significant light sources), representing a much lower risk due to lower light intensity and the colour of the light.
- 5.4.7.11 There is no evidence from any existing offshore wind farms that suggests that mass attraction events occur as a result of the typical navigational and aviation lighting for offshore wind farms. Furness (2018) concluded that the evidence indicates that obstruction or navigation lights on turbines will have no significant effects on marine birds.
- 5.4.7.12 Fulmar have high flight at night activity (four out of five in Wade *et al.*, 2016), which is likely due to the long duration of foraging trips undertaken by the species. However, very few flights are likely to be at risk height (Wade *et al.*, 2016). Wade *et al.* (2016) give an overall collision risk vulnerability score of zero for fulmar.
- 5.4.7.13 There is limited evidence for the effects of artificial lighting on fulmar including in relation to lighting associated with offshore wind farms. Dupuis *et al.* (2021) state that they did not find any evidence in the literature that the lights of wind turbine fields attract fulmar. Atchoi *et al.* (2020) also state that, to the best of their knowledge, surface-nesting petrels such as fulmars or albatrosses have not been recorded at fallout events nor in light attraction events at sea.
- 5.4.7.14 There is evidence for Procellariiformes being attracted to and/or disorientated by lit fishing vessels, with significant potential negative impacts (e.g. Arcos and Oro, 2002; Montevecchi, 2006; Ronconi *et al.*, 2015). However, Dupuis *et al.* (2021) argue that apparent seabird attraction to fishing boat lights may actually be primarily due to olfaction, with birds more attracted by the fishing activity itself than by the light.
- 5.4.7.15 The Scottish Government's review of offshore wind farm impacts on petrels and shearwaters (Deakin *et al.*, 2022) also highlights the potential for attraction in nocturnally active Procellariiformes, including fulmar, particularly around offshore infrastructure.

Conclusion

- 5.4.7.16 Impacts on the qualifying offshore ornithological features of all SPAs identified in Table 5.42 that undermine the associated conservation objectives of each SPA will not occur as a result of attraction to light during all project phases. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A. .
- 5.4.7.17 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI for any SPA and associated qualifying feature combination in relation to attraction to light

associated with Morven North during all project phases. This is applicable to all SPAs and associated features included in Table 5.51.

Table 5.45: SPAs and associated features for which there will be no Adverse Effects On Integrity in relation to attraction to light associated with Morven North alone

European site	Feature
Northumberland Marine SPA	Fulmar
	Breeding seabird assemblage
Coquet Island SPA	Fulmar
	Breeding seabird assemblage
East Caithness Cliffs SPA	Fulmar
	Breeding seabird assemblage
North Caithness Cliffs SPA	Fulmar
	Breeding seabird assemblage
Hoy SPA	Fulmar
	Breeding seabird assemblage
Flamborough and Filey Coast SPA	Fulmar
	Breeding seabird assemblage
Fair Isle SPA	Fulmar
	Breeding seabird assemblage
Noss SPA	Fulmar
	Breeding seabird assemblage
Foula SPA	Fulmar
	Breeding seabird assemblage
Fetlar SPA	Fulmar
	Breeding seabird assemblage
Hermaness, Saxa Vord and Valla Field SPA	Fulmar
	Breeding seabird assemblage

5.5 Assessment of the adverse effects of Morven North in-combination with other plans and projects

5.5.1.1 The other plans and projects that have been identified as having the potential for in-combination effects are presented in Figure 5.11 and Table 5.46.

5.5.1.2 The potential impacts that have been considered in the in-combination assessment is a subset of those considered for the Morven North alone assessment. This is because some of the potential impacts identified and assessed for the Morven North alone assessment are localised and temporary in nature or have been assessed to have negligible adverse significance. It is considered therefore, that these potential impacts have limited or no potential to interact with similar changes associated with other plans or projects. These have

therefore been screened out of the whole project, Morven Programme and in-combination assessment. These impacts include:

- direct temporary habitat loss/disturbance;
- changes in prey availability due to temporary habitat loss/disturbance;
- barrier effects;
- attraction to light.

5.5.1.3 Similarly, some of the potential impacts considered within the Morven North alone assessment are specific to a particular phase of development (e.g. construction, operations and maintenance, or decommissioning). Where in-combination effects with other plans or projects only have potential to occur where there is spatial or temporal overlap with Morven North during certain phases of development, impacts associated with a certain phase may be omitted from further consideration where no plans or projects have been identified that have the potential for in-combination effects during this period. The impacts and associated species to be considered in the in-combination assessments are therefore:

- collision risk;
- displacement;
- combined collision and displacement.

5.5.1.4 The projects included in Figure 5.11 and Table 5.46 are those for which quantitative information was available six months prior to the application submission date for Morven South was available (see Section 4.6) to inform the in-combination assessments for these effects.

5.5.1.5 There are no collision impacts associated with the MHPGC Project or MBAGC Project. Similarly, there are no displacement impacts associated with the MHPGC Project or MBAGC Project. Whilst there may be disturbance effects associated with the MHPGC Project or MBAGC Project such impacts will be short-term in nature and highly unlikely to be detectable and will not contribute to any existing in-combination impact. The whole project assessments associated with Scenarios 1 and 2 (see paragraph 4.6.1.2) are therefore not required and consideration of the MHPGC Project or MBAGC Project as part of Scenario 3 is also not required. Scenario 3 will therefore incorporate Morven North and Morven South only.

5.5.1.6 Some of the projects considered in-combination only have potential to impact species during a specific season (e.g. breeding or non-breeding seasons). During the breeding season, projects within a species' foraging range were considered as there is the potential for individuals to have connectivity with Morven North and the other plans/projects specific to each species. Foraging ranges presented in Volume 3, Annex 11.1: Offshore Ornithology Baseline Characterisation Report, of the EIA Report, have been used (Woodward *et al.*, 2019). Within the non-breeding season all developments within the BDMPS area relevant to a species (Furness, 2015) are included, with the exception of guillemot and herring gull where the mean-maximum foraging range is applied following NatureScot guidance in relation to identifying connectivity (NatureScot, 2023b). As such, all 'breeding season' projects are also included within the non-breeding period given that the BDMPS areas defined by Furness (2015) are larger than the breeding foraging ranges. Additional projects not included within a breeding season assessment may be included within the non-breeding season assessment.

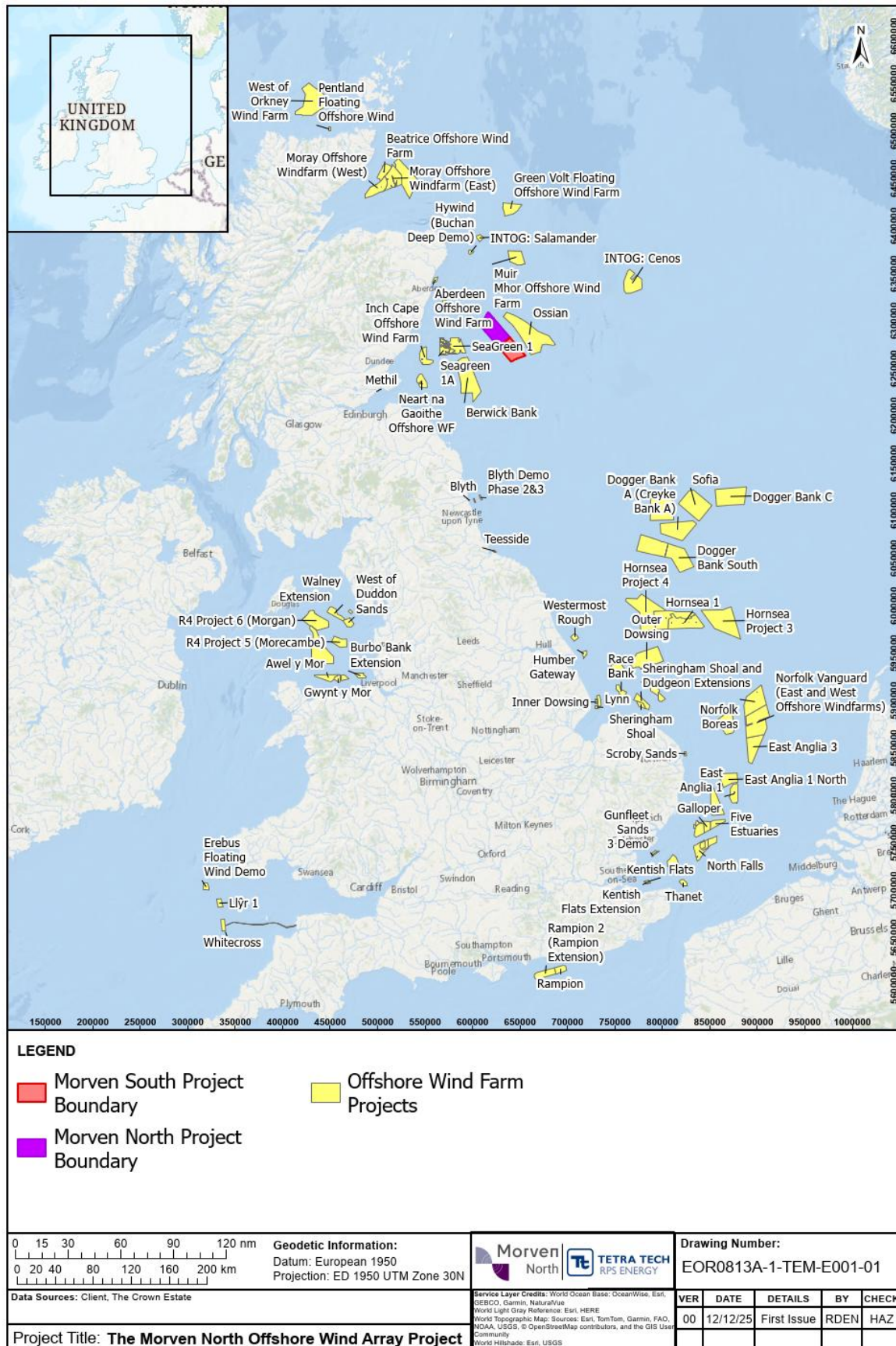


Figure 5.11: Location of other plans and projects considered for the in-combination effects assessment on Special Protection Areas with offshore ornithological features

Table 5.46: List of other plans and projects with potential for in-combination effects on offshore ornithological features

Plan/project	Status	Description	Overlap with Morven North
Tier 1			
Aberdeen Offshore Wind Farm	Operational	Consists of up to 11 turbines at a capacity of 96.8MW	Operation phase overlaps with Morven North construction and operation and maintenance phases.
Awel y Mor	Under construction	Proposed to consist of 50 turbines at a capacity of 500MW	Operation phase overlaps with Morven North construction and operation and maintenance phases.
INTOG: Aspen	Application submitted/ Awaiting decision	Proposed for up to 1,008MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Beatrice Offshore Wind Farm	Operational	Consists of 84 turbines at a capacity of 588MW	Operation phase overlaps with Morven North construction and operation and maintenance phases
Berwick Bank	Consented/ Pre-construction	Up to 307 turbines with a capacity of up to 4,100MW	Proposed operation phase overlaps with Morven North construction phase, followed by the Morven North operation and maintenance phase
Blyth Demo Phase 1	Operational	Consists of up to 15 turbines at a capacity of 41.5MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Blyth Demo Phase 2&3	Operational	Consented for up to 5 floating turbines at a capacity of 58.4MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Buchan	Application submitted/ Awaiting decision	Proposed for up to 60 turbines at a capacity of 960MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

Plan/project	Status	Description	Overlap with Morven North
Burbo Bank Extension ¹⁰	Operational	Consists of 32 turbines at a capacity of 258MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Caledonia Offshore Wind Farm	Application submitted/ Awaiting decision	Proposed for up to 150 turbines at a capacity of 2,000MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
INTOG: Cenos	Application submitted/ Awaiting decision	Proposed for up to 1,350MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Dogger Bank A (Creyke Bank A)	Operational	Consented for up to 95 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Dogger Bank B (Creyke Bank B)	Under construction	Consented for up to 95 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Dogger Bank C	Under construction	Consented for up to 87 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Dogger Bank South	Consented/ Pre-construction	Proposed for up to 200 turbines at a capacity of 3,000MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Dudgeon	Operational	Consists of up to 67 turbines at a capacity of 402MW	Operation phase overlaps with Morven North construction phase. Decommissioning begins at the end of the Morven North and Morven South construction window so whether or not there is operation phase overlap depends on the

¹⁰ Of relevance to gannet at the St Kilda SPA only

Plan/project	Status	Description	Overlap with Morven North
			sequence of construction for Morven North and Morven South
Dudgeon Extension Project	Under construction	Proposed for up to 30 turbines at a capacity of 402MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
East Anglia One	Operational	Consists of up to 102 turbines at a capacity of up to 714MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
East Anglia One North	Under construction	Consented for up to 67 turbines at a capacity of 800MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
East Anglia Two	Under construction	Consented for up to 75 turbines at a capacity of 900MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
East Anglia Three	Under construction	Consists of up to 172 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Erebus	Under construction	Proposed to consist of 10 turbines at a capacity of 100MW	Operation phase overlaps with Morven North construction and operation and maintenance phases.
Five Estuaries	Consented/ Pre-construction	Proposed for up 79 turbines at a capacity of 353MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Galloper	Operational	Consists of up to 56 turbines at a capacity of 353MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Green Volt Floating Offshore Wind Farm	Consented/ Pre-construction	Proposed for up to 35 turbines at a capacity of 560MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

Plan/project	Status	Description	Overlap with Morven North
Gunfleet Sands 3 Demo	Operational	Consists of 2 turbines at a capacity of 12MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Gwynt y Môr ¹⁰	Operational	Consists of 160 turbines at a capacity of 576MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Hornsea Project One	Operational	Consists of up to 174 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Hornsea Project Two	Operational	Consists of up to 165 turbines at a capacity of 1,300MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Hornsea Project Three	Under construction	Consented for up to 231 turbines at a capacity of 2,850MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Hornsea Four	Consented	Proposed for up to 180 turbines at a capacity of 2,600MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Humber Gateway	Operational	Consists of 73 turbines at a capacity of 219MW	Operation phase overlaps with six years of the Morven North and Morven South construction window. There will be one year of operation phase overlap between either Morven North or Morven South, depending on the sequence of construction of Morven North and Morven South
Inch Cape Offshore Wind Farm	Under construction	Consented for up to 72 turbines at a capacity of 1,100MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Kentish Flats	Operational	Consists of up to 30 turbines at a capacity of 90MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

Plan/project	Status	Description	Overlap with Morven North
Kentish Flats Extension	Operational	Consists of up to 15 turbines at a capacity of 49.5MW	Operation phase overlaps with nine years of the Morven North and Morven South construction window. Operation overlap with the Morven North operation phase depends on the sequence of construction of Morven North and Morven South
Kincardine Offshore Windfarm	Operational	Consists of 6 turbines at a capacity of 50MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Lincs	Operational	Consists of 75 turbines at a capacity of 270MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Llŷr 1	Application submitted/ awaiting decision	Proposed to consist of 10 turbines	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Mona Offshore Wind Project ¹⁰	Consented/ pre-construction	Consented for up to 107 turbines at a capacity of 945MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Moray Offshore Wind Farm (East)	Operational	Consists of up to 100 turbines at a capacity of 950MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Moray Offshore Windfarm (West)	Operational	Consented for up to 60 turbines at a capacity of 882MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Morecambe Offshore Wind Farm ¹⁰	Consented/ pre-construction	Consented for up to 40 turbines at a capacity of 480MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Morgan Offshore Wind Project ¹⁰	Consented/ pre-construction	Consented for up to 107 turbines at a capacity of 1,500MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

Plan/project	Status	Description	Overlap with Morven North
Morven South Offshore Wind Array Project	Application submitted/ awaiting decision	Proposed for up to 95 turbines at a capacity of 1,500MW	Identical timeline to Morven North and, as such, there is complete overlap between the two projects
Muir Mhòr Offshore Wind Farm	Application submitted/ awaiting decision	Proposed for a capacity of 798MW	One year in which construction phase overlaps with the Morven North and Morven South construction window, followed by overlap between operation phase and the Morven North construction phase, then many years of operation phase overlap between the two projects
Neart na Gaoithe Offshore Wind	Operational	Consented for up to 54 turbines at a capacity of 450MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Norfolk Boreas	Under construction	Consented for up to 158 turbines at a capacity of 1,400MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Norfolk Vanguard (East and West Offshore Windfarms)	Under construction	Proposed for up to 200 turbines at a capacity of 1,400MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
North Falls	Application submitted/ Awaiting decision	Proposed for up to 71 turbines at a capacity of 504MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Ormonde	Operational	Consists of 30 turbines at a capacity of 150MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Ossian	Application submitted/ Awaiting decision	Proposed for up to 3,610MW capacity	The Ossian construction phase overlaps with the Morven North and Morven South construction window for 6 years, before Ossian is operational for a further 4 years of the Morven North and Morven South construction window. There are then many years of operation phase overlap between the two projects

Plan/project	Status	Description	Overlap with Morven North
Outer Dowsing	Consented/ pre-construction	Proposed for up to 1.5GW capacity	Target operation phase overlaps with Morven North construction phase and operation and maintenance phase
Pentland Floating Offshore Wind	Under construction	Consented for up to 10 turbines at a capacity of 100MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Race Bank	Operational	Consists of up to 91 turbines at a capacity of 573MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Rampion	Operational	Consists of up to 116 turbines at a capacity of 400MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Rampion 2 (Rampion Extension)	Under construction	Proposed for up to 116 turbines at a capacity of 1,200MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
INTOG: Salamander	Consented/ pre-construction	Proposed for up 100MW capacity	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
SeaGreen 1	Operational	Consists of up to 114 turbines at a capacity of 1,075MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
SeaGreen 1A	Under construction	Consented for up to 36 turbines with no maximum generating capacity	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Sheringham Shoal Extension	Under construction	Proposed for up to 27 turbines at a capacity of 317MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Sofia	Under construction	Consists of up to 100 turbines at a capacity of 1,400MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

Plan/project	Status	Description	Overlap with Morven North
Teesside	Operational	Consists of 27 turbines at a capacity of 62MW	Operation phase overlaps with six years of the Morven North and South construction window. There will be one year of operation phase overlap between either Morven North or Morven South, depending on the sequence of construction of Morven North and Morven South
Thanet	Operational	Consists of up to 100 turbines at a capacity of 300MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Triton Knoll	Operational	Consists of up to 90 turbines at a capacity of 857MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Walney Extension (Walney 3 & 4/ Walney Extension East & West) ¹⁰	Operational	Consists of up to 87 turbines at a capacity of 659MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
West of Duddon Sands ¹⁰	Operational	Consists of up to 108 turbines at a capacity of 389MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
West of Orkney Wind Farm	Consented/ pre-construction	Proposed for up to 125 turbines at a capacity of 2,000MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase
Westermost Rough	Operational	Consists of up to 35 turbines at a capacity of 210MW	Operation phase overlaps with eight years of the Morven North and Morven South construction window. Operation overlap with the Morven North operation phase depends on the sequence of construction of Morven North and Morven South
White Cross	Consented/ pre-construction	Proposed for up to 8 turbines at a capacity of 100MW	Operation phase overlaps with Morven North construction phase and operation and maintenance phase

5.5.2 Collision risk

5.5.2.1 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operations and maintenance phase, the potential for LSE² could not be ruled out for potential in-combination collision risk. The impact predicted for Morven North alone exceeded the 0.2 birds/annum impact threshold as recommended by NatureScot for the following sites and relevant offshore ornithological features and therefore they are progressed to in-combination assessments:

- Kittiwake at the Buchan Ness to Collieston Coast SPA;
- Kittiwake at the East Caithness Cliffs SPA;
- Kittiwake at the Farne Islands SPA;
- Kittiwake at the Flamborough and Filey Coast SPA;
- Kittiwake at the Forth Islands SPA;
- Kittiwake at the Fowlsheugh SPA;
- Kittiwake at the St Abb's Head to Fast Castle SPA;
- Kittiwake at the Troup, Pennan and Lion's Heads SPA;
- Gannet at the Forth Islands SPA.

5.5.2.2 The predicted impact for all other SPA and qualifying features combinations included in Table 5.23 and Table 5.24 is considered to be undetectable against the existing baseline mortality of each population and therefore Morven North will make no measurable contribution to any existing in-combination impact.

5.5.2.3 In addition, a number of SPAs that support the breeding populations of features from SPAs included in the list above are also included in the in-combination assessment. This is applicable to the Outer Firth of Forth and St Andrew's Bay Complex SPA which supports kittiwake from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA and gannet from the Forth Islands SPA. Consideration is also given to the Northumberland Marine SPA which supports kittiwake from the Farne Islands SPA.

5.5.2.4 The MDS considered for this in-combination assessment is shown in Table 5.47. The designed-in measures are presented in Table 5.12 for the assessment of Morven North alone are also relevant for the in-combination assessment.

5.5.2.5 Throughout the following assessment sections it is important to take account of the following uncertainties associated with the PVA modelling used to inform the assessment:

- Over-estimation of in-combination impacts. The PVA modelling does not account for changes in the predicted in-combination total due to the decommissioning of projects considered in-combination. Over the lifetime of Morven North the in-combination impact will reduce significantly when licences for current projects expire and decommissioning occurs. The PVA metrics are therefore highly precautionary.
- No consideration has been made for density dependent compensation of demographic parameters within the modelled population, nor immigration, both of which could reduce the magnitude of any population change.

5.5.2.6 In addition, the in-combination collision risk estimates calculated under both the Applicant's and NatureScot's approaches are considered to be over-estimates due to the following factors:

- The use of flight speeds that do not provide a robust representation of the behaviour of kittiwake in the modelling conducted for projects considered in-combination. For kittiwake an approximate 27% reduction would be expected if more robust flight speeds are used (Ørsted, 2018). For gannet, an approximate 7% reduction would be expected if more robust flight speeds are used (see Volume 3, Annex 11.2 Offshore Ornithology Collision Risk Modelling Report of the EIA Report for more information).

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- Collision risk estimates for projects considered in-combination are calculated using the assessed turbine scenario. The assessed turbine scenario often does not represent the final design for a project with these as-built turbine scenarios often having a much lower associated collision risk. This can lead to a significant over-estimation of in-combination effects.

Table 5.47: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to collision risk in the operations and maintenance phase of Morven North in-combination with other plans and projects

Project phase	MDS	Justification
Operation and maintenance	<p>There are no collision risk impacts associated with the MHPGC Project and MBAGC Project and therefore only scenarios 3 and 4 are relevant to the in-combination assessment of collision risk.</p> <p>Scenario 3 MDS as described for Morven North (Table 5.21), assessed in-combination with Morven South.</p> <p>Scenario 4 MDS as described for Morven North (Table 5.21), assessed in-combination with Morven South, and the following other offshore wind farm projects and plans:</p> <p>Tier 1</p> <ul style="list-style-type: none"> • Aberdeen; • Aspen; • Beatrice; • Berwick Bank; • Blyth Demo; • Buchan; • Caledonia; • Cenos; • Dogger Bank A + B; • Dogger Bank C + Sofia; • Dogger Bank South; • Dudgeon; • East Anglia One; • East Anglia One North; • East Anglia Three; 	<p>There is potential for an in-combination effect from operations and maintenance activities and so a quantitative in-combination assessment is required.</p>

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • East Anglia Two; • Five Estuaries ; • Galloper; • Green Volt; • Gunfleet Sands 3; • Hornsea Four; • Hornsea Project One; • Hornsea Project Three; • Hornsea Project Two; • Hywind; • Inch Cape; • Kentish Flats; • Kentish Flats Extension; • Kincardine; • Lincs; • Moray East; • Moray West; • Muir Mhor; • Neart na Gaoithe; • Norfolk Boreas; • Norfolk Vanguard; • North Falls; • Ossian; • Outer Dowsing; • Pentland; • Race Bank; • Rampion; 	

Project phase	MDS	Justification
	<ul style="list-style-type: none">• Rampion 2;• Salamander;• SeaGreen (Alpha & Bravo);• Sheringham Shoal and Dudgeon Extensions;• Thanet;• Triton Knoll;• West of Orkney;• Westermost Rough.	

- 5.5.2.7 Morven North, together with other offshore wind farms in the North Sea, may contribute to in-combination collision risk, in the event the operations phases of different projects overlap. Seabirds are highly mobile, therefore they can encounter different offshore wind farms, and be at risk of collisions, across large areas. The MDS presented in Table 5.47 incorporates both Morven North and Morven South in addition to those offshore wind farms considered in-combination that may impact offshore ornithology receptors.
- 5.5.2.8 The SPAs and associated qualifying features considered in relation to in-combination collision risk impacts are identified above (see paragraph 5.5.2.1). The predicted impact from Morven North alone for all of these features surpassed the 0.2 birds/annum recommended by NatureScot (pre-application consultation undertaken in January 2025; Table 2.1) as a threshold for when an in-combination assessment is required.
- 5.5.2.9 Data used within the assessment of in-combination collision risk is based on published information produced by the respective project developers. As such, the input parameters (e.g. avoidance rates) and the collision risk model used (e.g. deterministic) may vary from those used in the collision risk modelling undertaken for Morven North which is based on the most up to date understanding of collision risk. Where practicable collision risk estimates derived for previous projects have been corrected to account for changes in certain parameters (e.g. avoidance rate).
- 5.5.2.10 Breeding season apportioning values are comprised of three factors, a colony proportion, an immature proportion and a sabbatical proportion. Where practicable the colony proportion applicable to an SPA for each project has been obtained from project-specific documentation. However, for some projects, especially older projects, apportioning was not undertaken. For these projects, the apportioning values presented in MacArthur Green (2024) have been used. When calculating in-combination values following NatureScot's approach, immature proportions use those values recommended by NatureScot as part of pre-application consultation for Morven North have been applied to all projects. For the Applicant's approach, immature proportions have been obtained from project-specific literature where these are available. For projects where they are not available the immature proportions recommended by NatureScot have been applied. For sabbatical proportions, the values recommended by NatureScot have been used in both NatureScot's and the Applicant's approach.
- 5.5.2.11 In non-breeding seasons, apportioning values have been calculated using population data from Furness (2015). Unapportioned collision risk estimates for all species at all projects are presented in Volume 2, Chapter 11: Offshore Ornithology of the EIA Report.
- 5.5.2.12 In all tables in this section individual project totals and in-combination totals are rounded to one decimal point. All underlying calculations use non-rounded numbers and therefore totals may not match totals derived from constituent rounded numbers.

Operation and maintenance phase

Kittiwake

- 5.5.2.13 Collision risk estimates for kittiwake apportioned to each of the SPAs identified in paragraph 5.5.2.1 are presented on a seasonal basis in the following SPA-specific sections. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance.
- 5.5.2.14 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Buchan Ness to Collieston Coast SPA

- 5.5.2.15 The predicted impact on kittiwake at the Buchan Ness to Collieston Coast SPA from the Morven Programme (Scenario 3) is presented in Table 5.48 for NatureScot's approach and Table 5.49 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.16 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.17 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Buchan Ness to Collieston Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.18 The predicted in-combination impact on kittiwake at the Buchan Ness to Collieston Coast SPA is presented in Table 5.48 for NatureScot's approach and Table 5.49 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Buchan Ness to Collieston Coast SPA is 27 (Applicant's approach) to 71 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.19 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.878 to 0.952 (i.e. the population after 35 years would be 4.8% to 12.2% smaller than the CPS with a 50th percentile value of 38.7 to 45.7 (Table 5.50)). In terms of the population size, this means that the median of the impacted population fell within the 39th to 46th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.996 to 0.999 which translates to a growth rate 0.1 to 0.4% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.2.20 The population of kittiwake at the Buchan Ness to Collieston Coast SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Buchan Ness to Collieston Coast SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased slightly since Seabirds Count (BTO *et al.*, 2025).
- 5.5.2.21 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.
- 5.5.2.22 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is

applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.2.23 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.2.24 Impacts on kittiwake that undermine the conservation objectives of the Buchan Ness to Collieston Coast SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.25 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.48: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from collision risk impacts (NatureScot’s approach).

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.15	0.53	0.90	0.02	0.02	1.4	0.0	0.1	1.5
Morven South	0.12	0.53	0.90	0.02	0.02	0.4	0.0	0.0	0.4
Total annual mortality (birds/annum)									1.9
Change in baseline mortality (percentage point change)									0.009
Tier 1 (Scenario 4)									
Aberdeen	0.56	0.53	0.90	0.02	0.02	2.7	0.0	0.0	2.8
Aspen	0.27	0.53	0.90	0.02	0.02	0.9	0.0	0.1	1.0
Beatrice	0.00	0.53	0.90	0.02	0.02	0.0	0.2	0.5	0.6
Berwick Bank	0.01	0.53	0.90	0.02	0.02	2.3	2.1	2.9	7.3
Blyth Demo	0.18	0.53	0.90	0.02	0.02	0.1	0.0	0.0	0.2
Buchan	0.18	0.53	0.90	0.02	0.02	0.3	0.0	0.1	0.4
Caledonia North	0.06	0.53	0.90	0.02	0.02	0.6	0.1	0.0	0.7
Caledonia South	0.08	0.53	0.90	0.02	0.02	1.8	0.1	0.1	1.9
Cenos	0.16	0.53	0.90	0.02	0.02	0.6	0.1	0.0	0.7
Dogger Bank A + B				0.02	0.02		1.4	5.5	6.9
Dogger Bank South				0.02	0.02		1.5	2.4	3.9
Dogger Bank C + Sofia				0.02	0.02		1.0	4.0	5.0
Dudgeon Extension				0.02	0.02		0.1	0.1	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.02	0.02		2.1	0.8	2.8
East Anglia One North				0.02	0.02		0.1	0.3	0.4
East Anglia Three				0.02	0.02		0.9	0.6	1.5
East Anglia Two				0.02	0.02		0.1	0.2	0.3
Five Estuaries				0.02	0.02		0.1	0.3	0.4
Galloper				0.02	0.02		0.3	0.5	0.8
Green Volt	0.25	0.53	0.90	0.02	0.02	0.7	0.1	0.1	0.8
Hornsea Project One				0.02	0.02		0.1	0.1	0.2
Hornsea Project Two				0.02	0.02		0.1	0.1	0.2
Hornsea Project Three				0.02	0.02		0.5	0.5	1.0
Hornsea Four				0.02	0.02		0.2	0.2	0.3
Humber Gateway				0.02	0.02		0.0	0.0	0.1
Inch Cape	0.00	0.53	0.90	0.02	0.02	0.0	0.3	0.1	0.4
Kentish Flats Extension				0.02	0.02		0.0	0.0	0.0
Kincardine	0.11	0.53	0.90	0.02	0.02	0.8	0.1	0.0	0.9
Lincs				0.02	0.02		0.0	0.0	0.0
Moray East	0.00	0.53	0.90	0.02	0.02	0.0	0.0	0.1	0.2
Moray West	0.00	0.53	0.90	0.02	0.02	0.0	0.3	0.1	0.4
Muir Mhor	0.31	0.53	0.90	0.02	0.02	9.8	0.0	0.2	10.0
Neart na Gaoithe	0.03	0.53	0.90	0.02	0.02	0.1	0.2	0.0	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.02	0.02		0.4	0.2	0.7
Norfolk Vanguard				0.02	0.02		0.2	0.5	0.7
North Falls				0.02	0.02		0.1	0.3	0.3
Ossian	0.14	0.53	0.90	0.02	0.02	1.9	0.1	0.2	2.2
Outer Dowsing				0.02	0.02		0.1	0.3	0.4
Pentland	0.00	0.53	0.90	0.02	0.02	0.0	0.0	0.0	0.0
Race Bank				0.02	0.02		0.2	0.1	0.3
Salamander	0.50	0.53	0.90	0.02	0.02	2.2	0.0	0.0	2.2
SeaGreen (Alpha & Bravo)	0.07	0.53	0.90	0.02	0.02	2.9	1.9	1.3	6.1
Sheringham Shoal Extension				0.02	0.02		0.0	0.0	0.0
Teesside				0.02	0.02		0.2	0.2	0.3
Thanet				0.02	0.02		0.0	0.0	0.0
Triton Knoll				0.02	0.02		1.3	1.2	2.4
West of Orkney	0.01	0.53	0.90	0.02	0.02	0.1	0.3	0.5	0.9
Westermost Rough				0.02	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									71.1
Change in baseline mortality (percentage point change)									0.315

Table 5.49: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.15	0.87	0.90	0.02	0.02	0.5	0.0	0.0	0.5
Morven South	0.12	0.78	0.90	0.02	0.02	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.7
Change in baseline mortality (percentage point change)									0.003
Tier 1 (Scenario 4)									
Aberdeen	0.56	0.53	0.90	0.02	0.02	1.1	0.0	0.0	1.1
Aspen	0.27	0.53	0.90	0.02	0.02	0.3	0.0	0.0	0.3
Beatrice	0.00	0.53	0.90	0.02	0.02	0.0	0.1	0.2	0.2
Berwick Bank	0.01	0.92	0.90	0.02	0.02	1.2	0.6	0.9	2.7
Blyth Demo	0.18	0.53	0.90	0.02	0.02	0.0	0.0	0.0	0.1
Buchan	0.18	0.82	0.90	0.02	0.02	0.1	0.0	0.0	0.2
Caledonia North	0.06	0.53	0.90	0.02	0.02	0.2	0.0	0.0	0.2
Caledonia South	0.08	0.53	0.90	0.02	0.02	0.5	0.0	0.0	0.6
Cenos	0.16	0.87	0.90	0.02	0.02	0.3	0.0	0.0	0.3
Dogger Bank A + B					0.02		0.5	2.2	2.7
Dogger Bank South					0.02		0.4	0.7	1.1
Dogger Bank C + Sofia					0.02		0.4	1.5	1.9
Dudgeon Extension					0.02		0.0	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One					0.02		0.8	0.3	1.1
East Anglia One North					0.02		0.0	0.1	0.2
East Anglia Three					0.02		0.3	0.2	0.6
East Anglia Two					0.02		0.0	0.1	0.1
Five Estuaries					0.02		0.0	0.1	0.1
Galloper					0.02		0.1	0.2	0.3
Green Volt	0.25	0.53	0.90	0.02	0.02	0.2	0.0	0.0	0.2
Hornsea Project One				0.02	0.02		0.0	0.0	0.1
Hornsea Project Two				0.02	0.02		0.0	0.0	0.1
Hornsea Project Three				0.02	0.02		0.2	0.2	0.4
Hornsea Four				0.02	0.02		0.0	0.1	0.1
Humber Gateway				0.02	0.02		0.0	0.0	0.0
Inch Cape	0.00	0.53	0.90	0.02	0.02	0.0	0.1	0.0	0.2
Kentish Flats Extension				0.02	0.02		0.0	0.0	0.0
Kincardine	0.11	0.95	0.90	0.02	0.02	0.5	0.0	0.0	0.6
Lincs				0.02	0.02		0.0	0.0	0.0
Moray East	0.00	0.92	0.90	0.02	0.02	0.0	0.0	0.1	0.1
Moray West	0.00	0.97	0.90	0.02	0.02	0.0	0.1	0.0	0.2
Muir Mhor	0.31	0.53	0.90	0.02	0.02	2.9	0.0	0.1	3.0
Neart na Gaoithe	0.03	0.82	0.90	0.02	0.02	0.0	0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.02	0.02		0.2	0.1	0.3
Norfolk Vanguard				0.02	0.02		0.1	0.2	0.3
North Falls				0.02	0.02		0.0	0.1	0.1
Ossian	0.14	0.84	0.90	0.02	0.02	0.9	0.0	0.0	1.0
Outer Dowsing				0.02	0.02		0.0	0.1	0.1
Pentland	0.00	0.53	0.90	0.02	0.02	0.0	0.0	0.0	0.0
Race Bank				0.02	0.02		0.1	0.0	0.1
Salamander	0.50	0.69	0.90	0.02	0.02	0.8	0.0	0.0	0.8
SeaGreen (Alpha & Bravo)	0.07	0.94	0.90	0.02	0.02	2.0	0.7	0.5	3.2
Sheringham Shoal Extension				0.02	0.02		0.0	0.0	0.0
Teesside				0.02	0.02		0.1	0.1	0.1
Thanet				0.02	0.02		0.0	0.0	0.0
Triton Knoll				0.02	0.02		0.5	0.5	0.9
West of Orkney	0.01	0.53	0.90	0.02	0.02	0.0	0.1	0.2	0.3
Westermost Rough				0.02	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									26.8
Change in baseline mortality (percentage point change)									0.119

Table 5.50: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	25,588	1.003	9.16	-	-	-
NatureScot	71.1	0.315	22,403	0.999	-4.25	0.996	0.878	38.7
Applicant	26.8	0.119	24,357	1.001	4.16	0.999	0.952	45.7

East Caithness Cliffs Special Protection Area

- 5.5.2.26 The predicted impact on kittiwake at the East Caithness Cliffs SPA from the Morven Programme (Scenario 3) is presented in Table 5.51 for NatureScot's approach and Table 5.52 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.27 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.28 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the East Caithness Cliffs SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.29 The predicted in-combination impact on kittiwake at the East Caithness Cliffs SPA is presented in Table 5.51 for NatureScot's approach and Table 5.52 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the East Caithness Cliffs SPA is 88 (Applicant's approach) to 217 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.30 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.832 to 0.928; (i.e. the population after 35 years, would be 7.2 to 16.8% smaller than the CPS with a 50th percentile value of 33.8 to 43.2 (Table 5.53)). In terms of the population size, this means that the median of the impacted population fell within the 34th to 43rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.995 to 0.998 which translates to a growth rate 0.2 to 0.5% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination totals is only 0.3 to 0.4 % for the Applicant and NatureScot approaches respectively.
- 5.5.2.31 The population of kittiwake at the East Caithness Cliffs SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the East Caithness Cliffs SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.32 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.

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- 5.5.2.33 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.2.34 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact.
- 5.5.2.35 Impacts on kittiwake that undermine the conservation objectives of the East Caithness Cliffs SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.36 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.51: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.05	0.53	0.90	0.06	0.08	0.5	0.1	0.2	0.8
Morven South	0.05	0.53	0.90	0.06	0.08	0.2	0.1	0.2	0.4
Total annual mortality (birds/annum)									1.2
Change in baseline mortality (percentage point change)									0.003
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.06	0.08	0.0	0.1	0.0	0.2
Aspen	0.11	0.53	0.90	0.06	0.08	0.4	0.1	0.2	0.6
Beatrice	0.93	0.53	0.90	0.06	0.08	32.5	0.5	1.5	34.5
Berwick Bank	0.00	0.53	0.90	0.06	0.08	0.2	6.8	9.5	16.4
Blyth Demo		0.53	0.90	0.06	0.08		0.1	0.1	0.2
Buchan	0.25	0.53	0.90	0.06	0.08	0.4	0.1	0.3	0.8
Caledonia North	0.54	0.53	0.90	0.06	0.08	5.2	0.3	0.1	5.7
Caledonia South	0.40	0.53	0.90	0.06	0.08	8.3	0.2	0.3	8.7
Cenos	0.13	0.53	0.90	0.06	0.08	0.5	0.2	0.2	0.8
Dogger Bank A + B				0.06	0.08		4.4	17.8	22.2
Dogger Bank South				0.06	0.08		4.7	7.8	12.5
Dogger Bank C + Sofia				0.06	0.08		3.3	12.8	16.1
Dudgeon Extension				0.06	0.08		0.2	0.2	0.4

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.06	0.08		6.6	2.5	9.1
East Anglia One North				0.06	0.08		0.3	0.9	1.3
East Anglia Three				0.06	0.08		2.8	1.9	4.7
East Anglia Two				0.06	0.08		0.3	0.8	1.0
Five Estuaries				0.06	0.08		0.5	1.0	1.4
Galloper				0.06	0.08		1.1	1.6	2.7
Green Volt	0.17	0.53	0.90	0.06	0.08	0.4	0.3	0.2	1.0
Hornsea Project One				0.06	0.08		0.3	0.2	0.5
Hornsea Project Two				0.06	0.08		0.3	0.2	0.5
Hornsea Project Three				0.06	0.08		1.6	1.7	3.2
Hornsea Four				0.06	0.08		0.5	0.6	1.1
Humber Gateway				0.06	0.08		0.1	0.1	0.2
Inch Cape	0.00	0.53	0.90	0.06	0.08	0.0	1.1	0.3	1.4
Kentish Flats Extension				0.06	0.08		0.0	0.0	0.1
Kincardine	0.00	0.53	0.90	0.06	0.08	0.0	0.4	0.1	0.5
Lincs				0.06	0.08		0.0	0.0	0.1
Moray East	0.75	0.53	0.90	0.06	0.08	5.5	0.0	0.5	5.9
Moray West	0.87	0.53	0.90	0.06	0.08	22.8	1.0	0.4	24.2
Muir Mhor	0.09	0.53	0.90	0.06	0.08	2.7	0.1	0.6	3.4
Neart na Gaoithe	0.00	0.53	0.90	0.06	0.08	0.0	0.8	0.1	0.9

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.06	0.08		1.3	0.8	2.1
Norfolk Vanguard				0.06	0.08		0.7	1.6	2.3
North Falls				0.06	0.08		0.2	0.9	1.1
Ossian	0.07	0.53	0.90	0.06	0.08	0.9	0.3	0.5	1.7
Outer Dowsing				0.06	0.08		0.2	1.1	1.3
Pentland	0.08	0.53	0.90	0.06	0.08	0.2	0.0	0.0	0.2
Race Bank				0.06	0.08		0.7	0.3	1.0
Salamander	0.07	0.53	0.90	0.06	0.08	0.3	0.0	0.0	0.3
SeaGreen (Alpha & Bravo)	0.00	0.53	0.90	0.06	0.08	0.0	6.2	4.2	10.3
Sheringham Shoal Extension				0.06	0.08		0.0	0.0	0.1
Teesside				0.06	0.08		0.5	0.5	1.0
Thanet				0.06	0.08		0.0	0.0	0.0
Triton Knoll				0.06	0.08		4.1	3.7	7.8
West of Orkney	0.21	0.53	0.90	0.06	0.08	1.8	0.9	1.7	4.4
Westermost Rough				0.06	0.08		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									217.2
Change in baseline mortality (percentage point change)									0.444

Table 5.52: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.05	0.87	0.90	0.06	0.08	0.2	0.0	0.0	0.2
Morven South	0.05	0.78	0.90	0.06	0.08	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.4
Change in baseline mortality (percentage point change)									0.001
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.06	0.08	0.0	0.1	0.0	0.1
Aspen	0.11	0.53	0.90	0.06	0.08	0.1	0.0	0.1	0.2
Beatrice	0.93	0.53	0.90	0.06	0.08	12.7	0.2	0.6	13.5
Berwick Bank	0.00	0.92	0.90	0.06	0.08	0.1	2.0	2.8	4.9
Blyth Demo				0.06	0.08		0.0	0.0	0.1
Buchan	0.25	0.82	0.90	0.06	0.08	0.2	0.0	0.1	0.3
Caledonia North	0.54	0.53	0.90	0.06	0.08	1.5	0.1	0.0	1.7
Caledonia South	0.40	0.53	0.90	0.06	0.08	2.4	0.0	0.1	2.6
Cenos	0.13	0.87	0.90	0.06	0.08	0.2	0.1	0.0	0.3
Dogger Bank A + B				0.06	0.08		1.7	6.9	8.6
Dogger Bank South				0.06	0.08		1.4	2.3	3.7
Dogger Bank C + Sofia				0.06	0.08		1.3	5.0	6.3
Dudgeon Extension				0.06	0.08		0.1	0.1	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.06	0.08		2.6	1.0	3.5
East Anglia One North				0.06	0.08		0.1	0.4	0.5
East Anglia Three				0.06	0.08		1.1	0.7	1.8
East Anglia Two				0.06	0.08		0.1	0.3	0.4
Five Estuaries				0.06	0.08		0.1	0.3	0.4
Galloper				0.06	0.08		0.4	0.6	1.0
Green Volt	0.17	0.53	0.90	0.06	0.08	0.1	0.1	0.1	0.3
Hornsea Project One				0.06	0.08		0.1	0.1	0.2
Hornsea Project Two				0.06	0.08		0.1	0.1	0.2
Hornsea Project Three				0.06	0.08		0.6	0.6	1.3
Hornsea Four				0.06	0.08		0.2	0.2	0.3
Humber Gateway				0.06	0.08		0.0	0.0	0.1
Inch Cape	0.00	0.53	0.90	0.06	0.08	0.0	0.4	0.1	0.6
Kentish Flats Extension				0.06	0.08		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.06	0.08	0.0	0.1	0.1	0.2
Lincs				0.06	0.08		0.0	0.0	0.0
Moray East	0.75	0.92	0.90	0.06	0.08	3.7	0.0	0.2	3.8
Moray West	0.87	0.97	0.90	0.06	0.08	16.3	0.4	0.1	16.8
Muir Mhor	0.09	0.53	0.90	0.06	0.08	0.8	0.0	0.2	1.0
Neart na Gaoithe	0.00	0.82	0.90	0.06	0.08	0.0	0.3	0.0	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.06	0.08		0.5	0.3	0.8
Norfolk Vanguard				0.06	0.08		0.3	0.6	0.9
North Falls				0.06	0.08		0.1	0.3	0.3
Ossian	0.07	0.84	0.90	0.06	0.08	0.4	0.1	0.1	0.7
Outer Dowsing				0.06	0.08		0.1	0.3	0.4
Pentland	0.08	0.53	0.90	0.06	0.08	0.1	0.0	0.0	0.1
Race Bank				0.06	0.08		0.3	0.1	0.4
Salamander	0.07	0.69	0.90	0.06	0.08	0.1	0.0	0.0	0.1
SeaGreen (Alpha & Bravo)	0.00	0.94	0.90	0.06	0.08	0.0	2.4	1.6	4.0
Sheringham Shoal Extension				0.06	0.08		0.0	0.0	0.0
Teesside				0.06	0.08		0.2	0.2	0.4
Thanet				0.06	0.08		0.0	0.0	0.0
Triton Knoll				0.06	0.08		1.6	1.5	3.0
West of Orkney	0.21	0.53	0.90	0.06	0.08	0.5	0.3	0.5	1.3
Westermost Rough				0.06	0.08		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									88.1
Change in baseline mortality (percentage point change)									0.180

Table 5.53: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	55,109	1.002	8.26	-	-	-
NatureScot	217.2	0.444	45,779	0.997	-9.74	0.995	0.832	33.8
Applicant	88.1	0.180	50,971	1.000	0.54	0.998	0.928	43.2

Farne Islands Special Protection Area

- 5.5.2.37 The predicted impact on kittiwake at the Farne Islands SPA from the Morven Programme (Scenario 3) is presented in Table 5.54 for NatureScot's approach and Table 5.55 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.38 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.39 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Farne Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.40 The predicted in-combination impact on kittiwake at the Farne Islands SPA is presented in Table 5.54 for NatureScot's approach and Table 5.55 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Farne Islands SPA is 11 (Applicant's approach) to 25 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.41 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.886 to 0.951; (i.e. the population after 35 years, would be 4.9 to 11.54% smaller than the CPS with a 50th percentile value of 39.9 to 45.4 (Table 5.56)). In terms of the population size, this means that the median of the impacted population fell within the 40th to 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 1.3 to 1.5% for the Applicant and NatureScot approaches respectively.
- 5.5.2.42 The population of kittiwake at the Farne Islands SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Farne Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.43 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.
- 5.5.2.44 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. The contribution of Morven North to the in-combination

impact, particularly under NatureScot's recommended parameter scenario is not considered to represent a material increase in the existing in-combination impact.

- 5.5.2.45 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 it is considered that impacts on kittiwake that undermine the conservation objectives of the Farne Islands SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.46 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.54: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands Special Protection Area resulting from collision risk impacts (NatureScot's approach).

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.04	0.53	0.90	0.00	0.01	0.3	0.0	0.0	0.4
Morven South	0.04	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.5
Change in baseline mortality (percentage point change)									0.006
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.2
Berwick Bank	0.05	0.53	0.90	0.00	0.01	8.6	0.6	0.8	10.0
Blyth Demo	0.24	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Buchan	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia North	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Cenos	0.03	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Dogger Bank A + B	0.01	0.53	0.90	0.00	0.01	1.0	0.4	1.5	2.9
Dogger Bank South	0.02	0.53	0.90	0.00	0.01	1.2	0.4	0.7	2.2
Dogger Bank C + Sofia	0.02	0.53	0.90	0.00	0.01	0.6	0.3	1.1	2.0
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.00	0.01		0.6	0.2	0.8
East Anglia One North				0.00	0.01		0.0	0.1	0.1
East Anglia Three				0.00	0.01		0.2	0.2	0.4
East Anglia Two				0.00	0.01		0.0	0.1	0.1
Five Estuaries				0.00	0.01		0.0	0.1	0.1
Galloper				0.00	0.01		0.1	0.1	0.2
Green Volt	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Hornsea Project One	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project Two	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.1	0.1	0.3
Hornsea Four	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.1
Humber Gateway	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Inch Cape	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.0	0.1
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Lincs				0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.0	0.1
Muir Mhor	0.01	0.53	0.90	0.00	0.01	0.4	0.0	0.1	0.5
Neart na Gaoithe	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.00	0.01		0.1	0.1	0.2
Norfolk Vanguard				0.00	0.01		0.1	0.1	0.2
North Falls				0.00	0.01		0.0	0.1	0.1
Ossian	0.05	0.53	0.90	0.00	0.01	0.6	0.0	0.0	0.7
Outer Dowsing				0.00	0.01		0.0	0.1	0.1
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.1	0.0	0.1
Salamander	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.53	0.90	0.00	0.01	0.0	0.5	0.4	0.9
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.03	0.53	0.90	0.00	0.01	0.6	0.0	0.0	0.6
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll	0.01	0.53	0.90	0.00	0.01	0.1	0.3	0.3	0.8
West of Orkney				0.00	0.01		0.1	0.1	0.2
Westermost Rough	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									25.4
Change in baseline mortality (percentage point change)									0.289

Table 5.55: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands SPA resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.04	0.87	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Morven South	0.04	0.78	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum)									0.2
Change in baseline mortality (percentage point change)									0.002
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.1
Berwick Bank	0.05	0.92	0.90	0.00	0.01	4.4	0.2	0.2	4.8
Blyth Demo	0.24	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Buchan	0.00	0.82	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia North	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Cenos	0.03	0.87	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Dogger Bank A + B	0.01	0.53	0.90	0.00	0.01	0.4	0.1	0.6	1.1
Dogger Bank South	0.02	0.53	0.90	0.00	0.01	0.3	0.1	0.2	0.7
Dogger Bank C + Sofia	0.02	0.53	0.90	0.00	0.01	0.3	0.1	0.4	0.8
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0
East Anglia One				0.00	0.01		0.2	0.1	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One North				0.00	0.01		0.0	0.0	0.0
East Anglia Three				0.00	0.01		0.1	0.1	0.2
East Anglia Two				0.00	0.01		0.0	0.0	0.0
Five Estuaries				0.00	0.01		0.0	0.0	0.0
Galloper				0.00	0.01		0.0	0.1	0.1
Green Volt	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project One	0.00	0.74	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project Two	0.00	0.86	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.1	0.1	0.1
Hornsea Four	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Humber Gateway	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Inch Cape	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Lincs		0.53	0.90	0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.92	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.97	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Muir Mhor	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Neart na Gaoithe	0.00	0.82	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Norfolk Boreas				0.00	0.01		0.0	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Vanguard				0.00	0.01		0.0	0.1	0.1
North Falls				0.00	0.01		0.0	0.0	0.0
Ossian	0.05	0.84	0.90	0.00	0.01	0.3	0.0	0.0	0.3
Outer Dowsing				0.00	0.01		0.0	0.0	0.0
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.0	0.0	0.0
Salamander	0.01	0.69	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.94	0.90	0.00	0.01	0.0	0.2	0.1	0.3
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.03	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.3
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll	0.01	0.53	0.90	0.00	0.01	0.0	0.1	0.1	0.3
West of Orkney				0.00	0.01		0.0	0.0	0.1
Westermost Rough	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									10.5
Change in baseline mortality (percentage point change)									0.120

Table 5.56: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Farne Islands SPA after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Baseline	-	-	9,997	1.003	9.07	-	-	-
NatureScot	25.4	0.289	8,847	0.999	-3.32	0.997	0.886	39.9
Applicant	10.5	0.120	9,476	1.001	3.90	0.999	0.951	45.4

Flamborough and Filey Coast Special Protection Area

- 5.5.2.47 The predicted impact on kittiwake at the Flamborough and Filey Coast SPA from the Morven Programme (Scenario 3) is presented in Table 5.57 for NatureScot's approach and Table 5.58 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.48 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Flamborough and Filey Coast SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.49 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Flamborough and Filey Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.50 The predicted in-combination impact on kittiwake at the Flamborough and Filey Coast SPA is presented in Table 5.57 for NatureScot's approach and Table 5.58 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Flamborough and Filey Coast SPA is 112 (Applicant's approach) to 300 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.51 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.883 to 0.955; (i.e. the population after 35 years, would be 4.5 to 11.7% smaller than the CPS with a 50th percentile value of 39.3 to 45.9 (Table 5.59)). In terms of the population size, this means that the median of the impacted population fell within the 39th to 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 0.3 to 0.3% for the Applicant and NatureScot approaches respectively.
- 5.5.2.52 The population of kittiwake at the Flamborough and Filey Coast SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Flamborough and Filey Coast SPA slightly increased (by 7%) between the Seabird 2000 and Seabirds Count national censuses.
- 5.5.2.53 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.
- 5.5.2.54 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is

applicable to Berwick Bank, Dogger Bank South, East Anglia One North, East Anglia Two, Five Estuaries, Hornsea Three, Hornsea Four, Norfolk Boreas, Norfolk Vanguard, North Falls, Ossian, Outer Dowsing, Rampion 2, Sheringham Shoal Extension and Dudgeon Extension. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.2.55 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is not considered to represent a material increase in the existing in-combination impact.
- 5.5.2.56 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account it is considered that impacts on kittiwake that undermine the conservation objectives of the at the Flamborough and Filey Coast SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.57 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Flamborough and Filey Coast SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.57: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.08	0.53	0.90	0.05	0.07	0.8	0.1	0.2	1.1
Morven South	0.13	0.53	0.90	0.05	0.07	0.4	0.1	0.1	0.7
Total annual mortality (birds/annum)									1.8
Change in baseline mortality (percentage point change)									0.002
Tier 1 (Scenario 4)									
Aberdeen				0.05	0.07		0.1	0.0	0.2
Aspen	0.00	0.53	0.90	0.05	0.07		0.1	0.2	0.2
Beatrice				0.05	0.07		0.5	1.4	1.9
Berwick Bank	0.00	0.53	0.90	0.05	0.07	0.2	6.3	8.8	15.3
Blyth Demo	0.54	0.53	0.90	0.05	0.07	0.4	0.1	0.1	0.5
Buchan				0.05	0.07		0.1	0.2	0.3
Caledonia North				0.05	0.07		0.3	0.1	0.4
Caledonia South				0.05	0.07		0.2	0.3	0.4
Cenos				0.05	0.07		0.2	0.1	0.3
Dogger Bank A + B	0.12	0.53	0.90	0.05	0.07	11.4	4.1	16.6	32.0
Dogger Bank South	0.97	0.53	0.90	0.05	0.07	56.8	4.4	7.3	68.5
Dogger Bank C + Sofia	0.14	0.53	0.90	0.05	0.07	6.0	3.0	11.9	20.9
Dudgeon Extension	1.00	0.53	0.90	0.05	0.07	2.0	0.2	0.2	2.4

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One	0.17	0.53	0.90	0.05	0.07	0.1	6.2	2.3	8.5
East Anglia One North	0.17	0.53	0.90	0.05	0.07	1.5	0.3	0.9	2.7
East Anglia Three	0.17	0.53	0.90	0.05	0.07	0.4	2.6	1.8	4.8
East Anglia Two	0.17	0.53	0.90	0.05	0.07	1.2	0.2	0.7	2.2
Five Estuaries	0.00	0.53	0.90	0.05	0.07	0.0	0.4	0.9	1.3
Galloper	0.00	0.53	0.90	0.05	0.07	0.0	1.0	1.5	2.5
Green Volt				0.05	0.07		0.3	0.2	0.5
Hornsea Project One	0.83	0.53	0.90	0.05	0.07	2.6	0.3	0.2	3.1
Hornsea Project Two	0.83	0.53	0.90	0.05	0.07	4.5	0.3	0.2	5.0
Hornsea Project Three	0.93	0.53	0.90	0.05	0.07	16.9	1.5	1.5	19.9
Hornsea Four	1.00	0.53	0.90	0.05	0.07	20.7	0.5	0.6	21.8
Humber Gateway	0.99	0.53	0.90	0.05	0.07	0.9	0.1	0.1	1.1
Inch Cape	0.00	0.53	0.90	0.05	0.07	0.0	1.0	0.3	1.3
Kentish Flats Extension				0.05	0.07		0.0	0.0	0.1
Kincardine	0.00	0.53	0.90	0.05	0.07	0.0	0.3	0.1	0.5
Lincs	0.99	0.53	0.90	0.05	0.07	0.3	0.0	0.0	0.4
Moray East				0.05	0.07		0.0	0.4	0.5
Moray West				0.05	0.07		0.9	0.4	1.3
Muir Mhor				0.05	0.07		0.0	0.6	0.6
Neart na Gaoithe	0.00	0.53	0.90	0.05	0.07	0.0	0.7	0.1	0.8

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas	0.86	0.53	0.90	0.05	0.07	3.0	1.2	0.7	5.0
Norfolk Vanguard	0.86	0.53	0.90	0.05	0.07	3.2	0.6	1.5	5.4
North Falls	0.00	0.53	0.90	0.05	0.07	0.0	0.2	0.8	1.0
Ossian	0.12	0.53	0.90	0.05	0.07	1.7	0.3	0.5	2.4
Outer Dowsing	0.55	0.53	0.90	0.05	0.07	4.3	0.2	1.0	5.5
Pentland				0.05	0.07		0.0	0.0	0.0
Race Bank	0.99	0.53	0.90	0.05	0.07	3.0	0.6	0.3	3.9
Salamander				0.05	0.07		0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.53	0.90	0.05	0.07	0.0	5.7	3.9	9.6
Sheringham Shoal Extension	1.00	0.53	0.90	0.05	0.07	0.2	0.0	0.0	0.2
Teesside	0.93	0.53	0.90	0.05	0.07	18.4	0.5	0.5	19.4
Thanet				0.05	0.07		0.0	0.0	0.0
Triton Knoll	0.99	0.53	0.90	0.05	0.07	13.5	3.8	3.5	20.7
West of Orkney				0.05	0.07		0.9	1.6	2.4
Westermost Rough	0.00	0.53	0.90	0.05	0.07	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									299.6
Change in baseline mortality (percentage point change)									0.291

Table 5.58: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.08	0.87	0.90	0.05	0.07	0.3	0.0	0.0	0.4
Morven South	0.13	0.78	0.90	0.05	0.07	0.1	0.0	0.0	0.2
Total annual mortality (birds/annum)									0.6
Change in baseline mortality (percentage point change)									0.001
Tier 1 (Scenario 4)									
Aberdeen				0.05	0.07		0.1	0.0	0.1
Aspen	0.00	0.53	0.90	0.05	0.07		0.0	0.1	0.1
Beatrice				0.05	0.07		0.2	0.6	0.7
Berwick Bank	0.00	0.92	0.90	0.05	0.07	0.1	1.9	2.6	4.6
Blyth Demo	0.54	0.53	0.90	0.05	0.07	0.1	0.0	0.0	0.2
Buchan				0.05	0.07		0.0	0.1	0.1
Caledonia North				0.05	0.07		0.1	0.0	0.1
Caledonia South				0.05	0.07		0.0	0.1	0.1
Cenos				0.05	0.07		0.0	0.0	0.1
Dogger Bank A + B	0.12	0.53	0.90	0.05	0.07	4.4	1.6	6.5	12.5
Dogger Bank South	0.97	0.53	0.90	0.05	0.07	16.8	1.3	2.2	20.3
Dogger Bank C + Sofia	0.14	0.53	0.90	0.05	0.07	2.3	1.2	4.6	8.2
Dudgeon Extension	1.00	0.53	0.90	0.05	0.07	0.8	0.1	0.1	1.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One	0.17	0.53	0.90	0.05	0.07	0.0	2.4	0.9	3.3
East Anglia One North	0.17	0.53	0.90	0.05	0.07	0.6	0.1	0.3	1.0
East Anglia Three	0.17	0.53	0.90	0.05	0.07	0.2	1.0	0.7	1.9
East Anglia Two	0.17	0.53	0.90	0.05	0.07	0.5	0.1	0.3	0.9
Five Estuaries	0.00	0.53	0.90	0.05	0.07	0.0	0.1	0.3	0.4
Galloper	0.00	0.53	0.90	0.05	0.07	0.0	0.4	0.6	1.0
Green Volt				0.05	0.07		0.1	0.1	0.2
Hornsea Project One	0.83	0.74	0.90	0.05	0.07	1.4	0.1	0.1	1.6
Hornsea Project Two	0.83	0.86	0.90	0.05	0.07	2.8	0.1	0.1	3.0
Hornsea Project Three	0.93	0.88	0.90	0.05	0.07	10.9	0.6	0.6	12.0
Hornsea Four	1.00	0.53	0.90	0.05	0.07	6.1	0.1	0.2	6.4
Humber Gateway	0.99	0.53	0.90	0.05	0.07	0.3	0.0	0.0	0.4
Inch Cape	0.00	0.53	0.90	0.05	0.07	0.0	0.4	0.1	0.5
Kentish Flats Extension				0.05	0.07		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.05	0.07	0.0	0.1	0.0	0.2
Lincs	0.99	0.53	0.90	0.05	0.07	0.1	0.0	0.0	0.2
Moray East				0.05	0.07		0.0	0.2	0.2
Moray West				0.05	0.07		0.4	0.1	0.5
Muir Mhor				0.05	0.07		0.0	0.2	0.2
Neart na Gaoithe	0.00	0.82	0.90	0.05	0.07	0.0	0.3	0.0	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas	0.86	0.53	0.90	0.05	0.07	1.2	0.5	0.3	2.0
Norfolk Vanguard	0.86	0.53	0.90	0.05	0.07	1.3	0.2	0.6	2.1
North Falls	0.00	0.59	0.90	0.05	0.07	0.0	0.1	0.2	0.3
Ossian	0.12	0.84	0.90	0.05	0.07	0.8	0.1	0.1	1.0
Outer Dowsing	0.55	0.77	0.90	0.05	0.07	1.9	0.0	0.3	2.2
Pentland				0.05	0.07		0.0	0.0	0.0
Race Bank	0.99	0.53	0.90	0.05	0.07	1.2	0.2	0.1	1.5
Salamander				0.05	0.07		0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.94	0.90	0.05	0.07	0.0	2.2	1.5	3.7
Sheringham Shoal Extension	1.00	0.53	0.90	0.05	0.07	0.1	0.0	0.0	0.1
Teesside	0.93	0.53	0.90	0.05	0.07	7.2	0.2	0.2	7.6
Thanet				0.05	0.07		0.0	0.0	0.0
Triton Knoll	0.99	0.53	0.90	0.05	0.07	5.3	1.5	1.4	8.1
West of Orkney				0.05	0.07		0.3	0.5	0.7
Westermost Rough	0.00	0.53	0.90	0.05	0.07	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									111.9
Change in baseline mortality (percentage point change)									0.109

Table 5.59: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	117,660	1.002	8.97	-	-	-
NatureScot	299.6	0.291	103,862	0.999	-3.68	0.997	0.883	39.3
Applicant	111.9	0.109	112,341	1.001	3.99	0.999	0.955	45.9

Forth Islands Special Protection Area

- 5.5.2.58 The predicted impact on kittiwake at the Forth Islands SPA from the Morven Programme (Scenario 3) is presented in Table 5.60 for NatureScot's approach and Table 5.61 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.59 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Forth Islands SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.60 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.61 The predicted in-combination impact on kittiwake at the Forth Islands SPA is presented in Table 5.60 for NatureScot's approach and Table 5.61 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Forth Islands SPA is 14 (Applicant's approach) to 30 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.62 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.871 to 0.941; (i.e. the population after 35 years, would be 5.9 to 12.9 % smaller than the CPS with a 50th percentile value of 38.0 to 44.7 (Table 5.62)). In terms of the population size, this means that the median of the impacted population fell within the 38th to 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.996 to 0.998 which translates to a growth rate 0.2 to 0.4% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 1.2 to 1.5% for the Applicant and NatureScot approaches respectively.
- 5.5.2.63 The population of kittiwake at the Forth Islands SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Forth Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.64 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.

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- 5.5.2.65 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.2.66 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact.
- 5.5.2.67 Impacts on kittiwake that undermine the conservation objectives of the at the Forth Islands SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.68 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Forth Islands SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.60: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from collision risk impacts (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.04	0.53	0.90	0.00	0.01	0.4	0.0	0.0	0.4
Morven South	0.05	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Total annual mortality (birds/annum)									0.6
Change in baseline mortality (percentage point change)									0.007
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.05	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.2
Berwick Bank	0.06	0.53	0.90	0.00	0.01	10.9	0.5	0.7	12.1
Blyth Demo	0.04	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Buchan	0.02	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Caledonia North	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Caledonia South	0.01	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.3
Cenos	0.06	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.3
Dogger Bank A + B	0.00	0.53	0.90	0.00	0.01	0.0	0.3	1.4	1.7
Dogger Bank South	0.00	0.53	0.90	0.00	0.01	0.0	0.4	0.6	1.0

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Dogger Bank C + Sofia				0.00	0.01		0.2	1.0	1.2
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0
East Anglia One				0.00	0.01		0.5	0.2	0.7
East Anglia One North				0.00	0.01		0.0	0.1	0.1
East Anglia Three				0.00	0.01		0.2	0.1	0.4
East Anglia Two				0.00	0.01		0.0	0.1	0.1
Five Estuaries				0.00	0.01		0.0	0.1	0.1
Galloper				0.00	0.01		0.1	0.1	0.2
Green Volt	0.02	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Hornsea Project One				0.00	0.01		0.0	0.0	0.0
Hornsea Project Two				0.00	0.01		0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.1	0.1	0.2
Hornsea Four				0.00	0.01		0.0	0.0	0.1
Humber Gateway				0.00	0.01		0.0	0.0	0.0
Inch Cape	0.21	0.53	0.90	0.00	0.01	2.7	0.1	0.0	2.9

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Lincs				0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.0	0.1
Muir Mhor	0.03	0.53	0.90	0.00	0.01	0.9	0.0	0.0	0.9
Neart na Gaoithe	0.47	0.53	0.90	0.00	0.01	1.1	0.1	0.0	1.2
Norfolk Boreas				0.00	0.01		0.1	0.1	0.2
Norfolk Vanguard				0.00	0.01		0.1	0.1	0.2
North Falls				0.00	0.01		0.0	0.1	0.1
Ossian	0.04	0.53	0.90	0.00	0.01	0.6	0.0	0.0	0.6
Outer Dowsing				0.00	0.01		0.0	0.1	0.1
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.1	0.0	0.1
Salamander	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.05	0.53	0.90	0.00	0.01	1.9	0.5	0.3	2.7
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.01	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.3

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll				0.00	0.01		0.3	0.3	0.6
West of Orkney				0.00	0.01		0.1	0.1	0.2
Westermost Rough				0.00	0.01		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									30.1
Change in baseline mortality (percentage point change)									0.331

Table 5.61: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.04	0.87	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Morven South	0.05	0.78	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.2
Change in baseline mortality (percentage point change)									0.001
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.05	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Berwick Bank	0.06	0.92	0.90	0.00	0.01	5.6	0.2	0.2	5.9
Blyth Demo	0.04	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Buchan	0.02	0.82	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia North	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia South	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Cenos	0.06	0.87	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Dogger Bank A + B	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.5	0.7
Dogger Bank South	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.2	0.3
Dogger Bank C + Sofia				0.00	0.01		0.1	0.4	0.5

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0
East Anglia One				0.00	0.01		0.2	0.1	0.3
East Anglia One North				0.00	0.01		0.0	0.0	0.0
East Anglia Three				0.00	0.01		0.1	0.1	0.1
East Anglia Two				0.00	0.01		0.0	0.0	0.0
Five Estuaries				0.00	0.01		0.0	0.0	0.0
Galloper				0.00	0.01		0.0	0.0	0.1
Green Volt	0.02	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project One				0.00	0.01		0.0	0.0	0.0
Hornsea Project Two				0.00	0.01		0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.0	0.0	0.1
Hornsea Four				0.00	0.01		0.0	0.0	0.0
Humber Gateway				0.00	0.01		0.0	0.0	0.0
Inch Cape	0.21	0.53	0.90	0.00	0.01	1.1	0.0	0.0	1.1
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.00	0.01	0.0	0.0	0.0	0.0

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Lincs				0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.92	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.97	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Muir Mhor	0.03	0.53	0.90	0.00	0.01	0.3	0.0	0.0	0.3
Neart na Gaoithe	0.47	0.82	0.90	0.00	0.01	0.7	0.0	0.0	0.7
Norfolk Boreas				0.00	0.01		0.0	0.0	0.1
Norfolk Vanguard				0.00	0.01		0.0	0.0	0.1
North Falls				0.00	0.01		0.0	0.0	0.0
Ossian	0.04	0.84	0.90	0.00	0.01	0.3	0.0	0.0	0.3
Outer Dowsing				0.00	0.01		0.0	0.0	0.0
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.0	0.0	0.0
Salamander	0.01	0.69	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.05	0.94	0.90	0.00	0.01	1.3	0.2	0.1	1.6
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll				0.00	0.01		0.1	0.1	0.2
West of Orkney				0.00	0.01		0.0	0.0	0.1

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Westermost Rough				0.00	0.01		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									13.5
Change in baseline mortality (percentage point change)									0.148

Table 5.62: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	10,318	1.003	9.47	-	-	-
NatureScot	30.1	0.331	8,954	0.999	-4.40	0.996	0.871	38.0
Applicant	13.5	0.151	9,678	1.001	3.20	0.998	0.941	44.7

Fowlsheugh Special Protection Area

- 5.5.2.69 The predicted impact on kittiwake at the Fowlsheugh SPA from the Morven Programme (Scenario 3) is presented in Table 5.63 for NatureScot's approach and Table 5.64 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.70 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Fowlsheugh SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.71 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Fowlsheugh SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.72 The predicted in-combination impact on kittiwake at the Fowlsheugh SPA is presented in Table 5.63 for NatureScot's approach and Table 5.64 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Fowlsheugh SPA is 49 (Applicant's approach) to 105 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.73 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.857 to 0.931; (i.e. the population after 35 years, would be 6.9 to 14.3% smaller than the CPS with a 50th percentile value of 36.2 to 43.7 (Table 5.65)). In terms of the population size, this means that the median of the impacted population fell within the 36th to 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.996 to 0.998 which translates to a growth rate 0.2 to 0.4% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.2.74 The population of kittiwake at the Fowlsheugh SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Fowlsheugh SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.75 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.
- 5.5.2.76 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is

applicable to Berwick Bank, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.2.77 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.2.78 Impacts on kittiwake that undermine the conservation objectives of the at the Fowlsheugh SPA will not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.79 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Fowlsheugh SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.63: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.30	0.53	0.90	0.01	0.02	2.9	0.0	0.1	2.9
Morven South	0.23	0.53	0.90	0.01	0.02	0.7	0.0	0.0	0.8
Total annual mortality (birds/annum)									3.7
Change in baseline mortality (percentage point change)									0.013
Tier 1 (Scenario 4)									
Aberdeen	0.18	0.53	0.90	0.01	0.02	0.9	0.0	0.0	0.9
Aspen	0.24	0.53	0.90	0.01	0.02	0.8	0.0	0.0	0.9
Beatrice	0.00	0.53	0.90	0.01	0.02	0.0	0.1	0.4	0.5
Berwick Bank	0.17	0.53	0.90	0.01	0.02	32.8	1.6	2.2	36.5
Blyth Demo	0.05	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.1
Buchan	0.11	0.53	0.90	0.01	0.02	0.2	0.0	0.1	0.3
Caledonia North	0.05	0.53	0.90	0.01	0.02	0.4	0.1	0.0	0.5
Caledonia South	0.06	0.53	0.90	0.01	0.02	1.2	0.0	0.1	1.3
Cenos	0.23	0.53	0.90	0.01	0.02	0.9	0.0	0.0	1.0
Dogger Bank A + B				0.01	0.02		1.0	4.1	5.1
Dogger Bank South				0.01	0.02		1.1	1.8	2.9
Dogger Bank C + Sofia				0.01	0.02		0.8	3.0	3.7

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Dudgeon Extension				0.01	0.02		0.0	0.1	0.1
East Anglia One				0.01	0.02		1.5	0.6	2.1
East Anglia One North				0.01	0.02		0.1	0.2	0.3
East Anglia Three				0.01	0.02		0.7	0.4	1.1
East Anglia Two				0.01	0.02		0.1	0.2	0.2
Five Estuaries				0.01	0.02		0.1	0.2	0.3
Galloper				0.01	0.02		0.3	0.4	0.6
Green Volt	0.15	0.53	0.90	0.01	0.02	0.4	0.1	0.1	0.5
Hornsea Project One				0.01	0.02		0.1	0.1	0.1
Hornsea Project Two				0.01	0.02		0.1	0.1	0.1
Hornsea Project Three				0.01	0.02		0.4	0.4	0.7
Hornsea Four				0.01	0.02		0.1	0.1	0.3
Humber Gateway				0.01	0.02		0.0	0.0	0.0
Inch Cape	0.29	0.53	0.90	0.01	0.02	3.8	0.3	0.1	4.1
Kentish Flats Extension				0.01	0.02		0.0	0.0	0.0
Kincardine	0.29	0.53	0.90	0.01	0.02	2.0	0.1	0.0	2.1

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Lincs				0.01	0.02		0.0	0.0	0.0
Moray East	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.1	0.1
Moray West	0.00	0.53	0.90	0.01	0.02	0.0	0.2	0.1	0.3
Muir Mhor	0.23	0.53	0.90	0.01	0.02	7.1	0.0	0.1	7.3
Neart na Gaoithe	0.08	0.53	0.90	0.01	0.02	0.2	0.2	0.0	0.4
Norfolk Boreas				0.01	0.02		0.3	0.2	0.5
Norfolk Vanguard				0.01	0.02		0.2	0.4	0.5
North Falls				0.01	0.02		0.0	0.2	0.2
Ossian	0.21	0.53	0.90	0.01	0.02	2.9	0.1	0.1	3.0
Outer Dowsing				0.01	0.02		0.0	0.2	0.3
Pentland	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Race Bank				0.01	0.02		0.2	0.1	0.2
Salamander	0.10	0.53	0.90	0.01	0.02	0.4	0.0	0.0	0.4
SeaGreen (Alpha & Bravo)	0.39	0.53	0.90	0.01	0.02	15.5	1.4	1.0	17.9
Sheringham Shoal Extension				0.01	0.02		0.0	0.0	0.0
Teesside	0.02	0.53	0.90	0.01	0.02	0.3	0.1	0.1	0.5
Thanet				0.01	0.02		0.0	0.0	0.0
Triton Knoll				0.01	0.02		0.9	0.9	1.8
West of Orkney	0.01	0.53	0.90	0.01	0.02	0.1	0.2	0.4	0.7

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Westermost Rough				0.01	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									104.6
Change in baseline mortality (percentage point change)									0.372

Table 5.64: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.30	0.87	0.90	0.01	0.02	1.1	0.0	0.0	1.1
Morven South	0.23	0.78	0.90	0.01	0.02	0.3	0.0	0.0	0.3
Total annual mortality (birds/annum)									1.3
Change in baseline mortality (percentage point change)									0.003
Tier 1 (Scenario 4)									
Aberdeen	0.18	0.53	0.90	0.01	0.02	0.3	0.0	0.0	0.3
Aspen	0.24	0.53	0.90	0.01	0.02	0.2	0.0	0.0	0.3
Beatrice	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.1	0.2
Berwick Bank	0.17	0.92	0.90	0.01	0.02	16.8	0.5	0.6	17.9
Blyth Demo	0.05	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Buchan	0.11	0.82	0.90	0.01	0.02	0.1	0.0	0.0	0.1
Caledonia North	0.05	0.53	0.90	0.01	0.02	0.1	0.0	0.0	0.2
Caledonia South	0.06	0.53	0.90	0.01	0.02	0.4	0.0	0.0	0.4
Cenos	0.23	0.87	0.90	0.01	0.02	0.4	0.0	0.0	0.5
Dogger Bank A + B				0.01	0.02		0.4	1.6	2.0
Dogger Bank South				0.01	0.02		0.3	0.5	0.9
Dogger Bank C + Sofia				0.01	0.02		0.3	1.2	1.4

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Dudgeon Extension				0.01	0.02		0.0	0.0	0.0
East Anglia One				0.01	0.02		0.6	0.2	0.8
East Anglia One North				0.01	0.02	0.3	0.0	0.0	0.3
East Anglia Three				0.01	0.02	0.2	0.0	0.0	0.3
East Anglia Two				0.01	0.02	0.0	0.0	0.1	0.2
Five Estuaries				0.01	0.02	16.8	0.5	0.6	17.9
Galloper				0.01	0.02	0.0	0.0	0.0	0.0
Green Volt	0.15	0.53	0.90	0.01	0.02	0.1	0.0	0.0	0.1
Hornsea Project One				0.01	0.02	0.1	0.0	0.0	0.2
Hornsea Project Two				0.01	0.02	0.4	0.0	0.0	0.4
Hornsea Project Three				0.01	0.02	0.4	0.0	0.0	0.5
Hornsea Four				0.01	0.02		0.4	1.6	2.0
Humber Gateway				0.01	0.02		0.3	0.5	0.9
Inch Cape	0.29	0.53	0.90	0.01	0.02		0.3	1.2	1.4
Kentish Flats Extension				0.01	0.02		0.0	0.0	0.0
Kincardine	0.29	0.95	0.90	0.01	0.02		0.6	0.2	0.8

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Lincs		0.53	0.90	0.01	0.02		0.0	0.1	0.1
Moray East	0.00	0.92	0.90	0.01	0.02		0.3	0.2	0.4
Moray West	0.00	0.97	0.90	0.01	0.02		0.0	0.1	0.1
Muir Mhor	0.23	0.53	0.90	0.01	0.02	2.1	0.0	0.0	2.1
Neart na Gaoithe	0.08	0.82	0.90	0.01	0.02	0.1	0.1	0.0	0.2
Norfolk Boreas				0.01	0.02		0.1	0.1	0.2
Norfolk Vanguard				0.01	0.02		0.1	0.1	0.2
North Falls				0.01	0.02		0.0	0.1	0.1
Ossian	0.21	0.84	0.90	0.01	0.02	1.3	0.0	0.0	1.4
Outer Dowsing				0.01	0.02		0.0	0.1	0.1
Pentland	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Race Bank				0.01	0.02		0.1	0.0	0.1
Salamander	0.10	0.69	0.90	0.01	0.02	0.2	0.0	0.0	0.2
SeaGreen (Alpha & Bravo)	0.39	0.94	0.90	0.01	0.02	10.7	0.6	0.4	11.7
Sheringham Shoal Extension				0.01	0.02		0.0	0.0	0.0
Teesside	0.02	0.53	0.90	0.01	0.02	0.1	0.0	0.0	0.2
Thanet				0.01	0.02		0.0	0.0	0.0
Triton Knoll				0.01	0.02		0.4	0.3	0.7
West of Orkney	0.01	0.53	0.90	0.01	0.02	0.0	0.1	0.1	0.2

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Westermost Rough				0.01	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									48.5
Change in baseline mortality (percentage point change)									0.173

Table 5.65: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	31,491	1.002	8.23	-	-	-
NatureScot	104.6	0.372	26,958	0.998	-7.15	0.996	0.857	36.2
Applicant	48.5	0.173	29,391	1.000	0.60	0.998	0.931	43.7

St Abb's Head to Fast Castle Special Protection Area

- 5.5.2.80 The predicted impact on kittiwake at the St Abb's Head to Fast Castle SPA from the Morven Programme (Scenario 3) is presented in Table 5.66 for NatureScot's approach and Table 5.67 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.81 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.82 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the St Abb's Head to Fast Castle SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.83 The predicted in-combination impact on kittiwake at the St Abb's Head to Fast Castle SPA is presented in Table 5.66 for NatureScot's approach and Table 5.67 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the St Abb's Head to Fast Castle SPA is 58 (Applicant's approach) to 117 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.84 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.622 to 0.792; (i.e. the population after 35 years, would be 20.8 to 37.8% smaller than the CPS with a 50th percentile value of 14.7 to 30.6 (Table 5.68)). In terms of the population size, this means that the median of the impacted population fell within the 15th to 31st percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that majority of the impact range applied as part of the impacted scenario is within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.987 to 0.993 which translates to a growth rate 0.7 to 1.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 0.3 to 0.4% for the Applicant and NatureScot approaches respectively.
- 5.5.2.85 The population of kittiwake at the St Abb's Head to Fast Castle SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the St Abb's Head to Fast Castle SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has stayed stable since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.86 When considered against the current status of the kittiwake population at the SPA, the CGR associated with both the Applicant's and NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.

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- 5.5.2.87 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEIOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.2.88 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to recover. The population of kittiwake at the SPA has decreased between the two most recent national censuses but has shown signs of recovery since however, it remains below the designated population. The in-combination impact is considered to be an over-estimate due to various factors discussed in paragraph 5.5.4.6 and 5.5.2.5. Whilst taking account of these factors improves the PVA metrics it is considered that this may not be to a level at which an adverse effect can confidently be ruled out.
- 5.5.2.89 The predicted in-combination collision risk impact for kittiwake at the St Abb's Head to Fast Castle SPA has the potential to undermine the conservation objectives for the SPA. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.90 Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for an AEIOI on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.66: Predicted in-combination annual mortality rate of kittiwake at the St Abb's Head to Fast Castle Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.05	0.53	0.90	0.00	0.01	0.5	0.0	0.0	0.5
Morven South	0.07	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.3
Total annual mortality (birds/annum)									0.8
Change in baseline mortality (percentage point change)									0.008
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.04	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.2
Berwick Bank	0.52	0.53	0.90	0.00	0.01	99.5	0.6	0.8	100.9
Blyth Demo	0.09	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Buchan	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Caledonia North	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Caledonia South	0.01	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.2
Cenos	0.05	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Dogger Bank A + B	0.00	0.53	0.90	0.00	0.01	0.0	0.4	1.5	1.9
Dogger Bank South	0.02	0.53	0.90	0.00	0.01	1.2	0.4	0.7	2.3
Dogger Bank C + Sofia	0.00	0.53	0.90	0.00	0.01	0.0	0.3	1.1	1.4
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.00	0.01		0.6	0.2	0.8
East Anglia One North				0.00	0.01		0.0	0.1	0.1
East Anglia Three				0.00	0.01		0.2	0.2	0.4
East Anglia Two				0.00	0.01		0.0	0.1	0.1
Five Estuaries				0.00	0.01		0.0	0.1	0.1
Galloper				0.00	0.01		0.1	0.1	0.2
Green Volt	0.02	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Hornsea Project One				0.00	0.01		0.0	0.0	0.0
Hornsea Project Two				0.00	0.01		0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.1	0.1	0.3
Hornsea Four	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.1
Humber Gateway	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Inch Cape	0.06	0.53	0.90	0.00	0.01	0.7	0.1	0.0	0.9
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Lincs		0.53	0.90	0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.0	0.1
Muir Mhor	0.02	0.53	0.90	0.00	0.01	0.6	0.0	0.1	0.7
Neart na Gaoithe	0.10	0.53	0.90	0.00	0.01	0.2	0.1	0.0	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.00	0.01		0.1	0.1	0.2
Norfolk Vanguard				0.00	0.01		0.1	0.1	0.2
North Falls				0.00	0.01		0.0	0.1	0.1
Ossian	0.06	0.53	0.90	0.00	0.01	0.8	0.0	0.0	0.9
Outer Dowsing				0.00	0.01		0.0	0.1	0.1
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.1	0.0	0.1
Salamander	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.02	0.53	0.90	0.00	0.01	1.0	0.5	0.4	1.9
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.02	0.53	0.90	0.00	0.01	0.4	0.0	0.0	0.4
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll				0.00	0.01		0.3	0.3	0.7
West of Orkney				0.00	0.01		0.1	0.1	0.2
Westermost Rough	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									117.2
Change in baseline mortality (percentage point change)									1.138

Table 5.67: Predicted in-combination annual mortality rate of kittiwake at the St Abb's Head to Fast Castle Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.05	0.87	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Morven South	0.07	0.78	0.90	0.0	0.01	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.3
Change in baseline mortality (percentage point change)									0.003
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Aspen	0.04	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Beatrice	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.1	0.1
Berwick Bank	0.52	0.92	0.90	0.00	0.01	51.0	0.2	0.2	51.4
Blyth Demo	0.09	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Buchan	0.01	0.82	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia North	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Caledonia South	0.01	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.1
Cenos	0.05	0.87	0.90	0.00	0.01	0.1	0.0	0.0	0.1
Dogger Bank A + B	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.6	0.7
Dogger Bank South	0.02	0.53	0.90	0.00	0.01	0.4	0.1	0.2	0.7
Dogger Bank C + Sofia	0.00	0.53	0.90	0.00	0.01	0.0	0.1	0.4	0.5
Dudgeon Extension				0.00	0.01		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.00	0.01		0.2	0.1	0.3
East Anglia One North				0.00	0.01		0.0	0.0	0.0
East Anglia Three				0.00	0.01		0.1	0.1	0.2
East Anglia Two				0.00	0.01		0.0	0.0	0.0
Five Estuaries				0.00	0.01		0.0	0.0	0.0
Galloper				0.00	0.01		0.0	0.1	0.1
Green Volt	0.02	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Hornsea Project One				0.00	0.01		0.0	0.0	0.0
Hornsea Project Two				0.00	0.01		0.0	0.0	0.0
Hornsea Project Three				0.00	0.01		0.1	0.1	0.1
Hornsea Four	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Humber Gateway	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Inch Cape	0.06	0.53	0.90	0.00	0.01	0.3	0.0	0.0	0.3
Kentish Flats Extension				0.00	0.01		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Lincs				0.00	0.01		0.0	0.0	0.0
Moray East	0.00	0.92	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Moray West	0.00	0.97	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Muir Mhor	0.02	0.53	0.90	0.00	0.01	0.2	0.0	0.0	0.2
Neart na Gaoithe	0.10	0.82	0.90	0.00	0.01	0.1	0.0	0.0	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.00	0.01		0.0	0.0	0.1
Norfolk Vanguard				0.00	0.01		0.0	0.1	0.1
North Falls				0.00	0.01		0.0	0.0	0.0
Ossian	0.06	0.84	0.90	0.00	0.01	0.4	0.0	0.0	0.4
Outer Dowsing				0.00	0.01		0.0	0.0	0.0
Pentland				0.00	0.01		0.0	0.0	0.0
Race Bank				0.00	0.01		0.0	0.0	0.0
Salamander	0.01	0.69	0.90	0.00	0.01	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.02	0.94	0.90	0.00	0.01	0.7	0.2	0.1	1.0
Sheringham Shoal Extension				0.00	0.01		0.0	0.0	0.0
Teesside	0.02	0.53	0.90	0.00	0.01	0.1	0.0	0.0	0.2
Thanet				0.00	0.01		0.0	0.0	0.0
Triton Knoll				0.00	0.01		0.1	0.1	0.3
West of Orkney				0.00	0.01		0.0	0.0	0.1
Westermost Rough	0.00	0.53	0.90	0.00	0.01	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									57.8
Change in baseline mortality (percentage point change)									0.561

Table 5.68: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the St Abb's Head to Fast Castle Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	11,660	1.003	9.61	-	-	-
NatureScot	117.2	1.138	7,236	0.989	-31.90	0.987	0.622	14.7
Applicant	57.8	0.561	9,285	0.996	-12.90	0.993	0.792	30.6

Troup, Pennan and Lion's Heads Special Protection Area

- 5.5.2.91 The predicted impact on kittiwake at the Troup, Pennan and Lion's Heads SPA from the Morven Programme (Scenario 3) is presented in Table 5.69 for NatureScot's approach and Table 5.70 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.92 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.93 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Troup, Pennan and Lion's Heads SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.94 The predicted in-combination impact on kittiwake at the Troup, Pennan and Lion's Heads SPA is presented in Table 5.69 for NatureScot's approach and Table 5.70 for the Applicant's approach. The total in-combination impact apportioned to the kittiwake population at the Troup, Pennan and Lion's Heads SPA is 27 (Applicant's approach) to 72 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.95 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.869 to 0.950; (i.e. the population after 35 years, would be 5.0 to 13.1% smaller than the CPS with a 50th percentile value of 37.8 to 45.2 (Table 5.71)). In terms of the population size, this means that the median of the impacted population fell within the 38th to 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.996 to 0.999 which translates to a growth rate 0.1 to 0.4% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 0.8 to 0.9% for the Applicant and NatureScot approaches respectively.
- 5.5.2.96 The population of kittiwake at Troup, Pennan and Lion's Heads SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Troup, Pennan and Lion's Heads SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has continued to decrease since Seabirds Count (BTO *et al*, 2025).
- 5.5.2.97 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.

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- 5.5.2.98 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEIOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.2.99 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.2.100 Impacts on kittiwake that undermine the conservation objectives of the at the Troup, Pennan and Lion's Heads SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.101 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.69: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from collision risk impacts (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.06	0.53	0.90	0.02	0.03	0.5	0.0	0.1	0.6
Morven South	0.05	0.53	0.90	0.02	0.03	0.2	0.0	0.1	0.3
Total annual mortality (birds/annum)									0.8
Change in baseline mortality (percentage point change)									0.004
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.02	0.03	0.0	0.1	0.0	0.1
Aspen	0.06	0.53	0.90	0.02	0.03	0.2	0.0	0.1	0.3
Beatrice	0.03	0.53	0.90	0.02	0.03	1.0	0.2	0.6	1.8
Berwick Bank	0.01	0.53	0.90	0.02	0.03	1.0	2.5	3.5	6.9
Blyth Demo	0.01	0.53	0.90	0.02	0.03	0.0	0.0	0.0	0.1
Buchan	0.21	0.53	0.90	0.02	0.03	0.4	0.0	0.1	0.5
Caledonia North	0.16	0.53	0.90	0.02	0.03	1.5	0.1	0.1	1.7
Caledonia South	0.29	0.53	0.90	0.02	0.03	6.0	0.1	0.1	6.2
Cenos	0.12	0.53	0.90	0.02	0.03	0.5	0.1	0.1	0.6
Dogger Bank A + B				0.02	0.03		1.6	6.6	8.2
Dogger Bank South				0.02	0.03		1.7	2.9	4.6

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Dogger Bank C + Sofia				0.02	0.03		1.2	4.7	5.9
Dudgeon Extension				0.02	0.03		0.1	0.1	0.2
East Anglia One				0.02	0.03		2.4	0.9	3.4
East Anglia One North				0.02	0.03		0.1	0.3	0.5
East Anglia Three				0.02	0.03		1.0	0.7	1.7
East Anglia Two				0.02	0.03		0.1	0.3	0.4
Five Estuaries				0.02	0.03		0.2	0.4	0.5
Galloper				0.02	0.03		0.4	0.6	1.0
Green Volt	0.19	0.53	0.90	0.02	0.03	0.5	0.1	0.1	0.7
Hornsea Project One				0.02	0.03		0.1	0.1	0.2
Hornsea Project Two				0.02	0.03		0.1	0.1	0.2
Hornsea Project Three				0.02	0.03		0.6	0.6	1.2
Hornsea Four				0.02	0.03		0.2	0.2	0.4
Humber Gateway				0.02	0.03		0.0	0.0	0.1
Inch Cape	0.00	0.53	0.90	0.02	0.03	0.0	0.4	0.1	0.5

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Kentish Flats Extension				0.02	0.03		0.0	0.0	0.0
Kincardine	0.02	0.53	0.90	0.02	0.03	0.1	0.1	0.0	0.3
Lincs		0.53	0.90	0.02	0.03		0.0	0.0	0.0
Moray East	0.25	0.53	0.90	0.02	0.03	1.8	0.0	0.2	2.0
Moray West	0.07	0.53	0.90	0.02	0.03	1.8	0.4	0.1	2.3
Muir Mhor	0.15	0.53	0.90	0.02	0.03	4.8	0.0	0.2	5.1
Neart na Gaoithe	0.00	0.53	0.90	0.02	0.03	0.0	0.3	0.0	0.3
Norfolk Boreas				0.02	0.03		0.5	0.3	0.8
Norfolk Vanguard				0.02	0.03		0.2	0.6	0.8
North Falls				0.02	0.03		0.1	0.3	0.4
Ossian	0.07	0.53	0.90	0.02	0.03	0.9	0.1	0.2	1.2
Outer Dowsing				0.02	0.03		0.1	0.4	0.5
Pentland	0.00	0.53	0.90	0.02	0.03	0.0	0.0	0.0	0.0
Race Bank				0.02	0.03		0.3	0.1	0.4
Salamander	0.16	0.53	0.90	0.02	0.03	0.7	0.0	0.0	0.7
SeaGreen (Alpha & Bravo)	0.00	0.53	0.90	0.02	0.03	0.0	2.3	1.5	3.8
Sheringham Shoal Extension				0.02	0.03		0.0	0.0	0.0
Teesside				0.02	0.03		0.2	0.2	0.4

Project	Seasonal apportioning values				Apportioned collision risk estimates			Annual	
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding		Pre-breeding
	Colony	Immature	Sabbatical						
Thanet				0.02	0.03		0.0	0.0	0.0
Triton Knoll				0.02	0.03		1.5	1.4	2.9
West of Orkney	0.01	0.53	0.90	0.02	0.03	0.1	0.3	0.6	1.1
Westermost Rough				0.02	0.03		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									71.7
Change in baseline mortality (percentage point change)									0.338

Table 5.70: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from collision risk impacts (Applicant’s approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.06	0.87	0.90	0.02	0.03	0.2	0.0	0.0	0.2
Morven South	0.05	0.78	0.90	0.02	0.03	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									0.3
Change in baseline mortality (percentage point change)									0.001
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.02	0.03	0.0	0.0	0.0	0.0
Aspen	0.06	0.53	0.90	0.02	0.03	0.1	0.0	0.0	0.1
Beatrice	0.03	0.53	0.90	0.02	0.03	0.4	0.1	0.2	0.7
Berwick Bank	0.01	0.92	0.90	0.02	0.03	0.5	0.7	1.0	2.3
Blyth Demo	0.01	0.53	0.90	0.02	0.03	0.0	0.0	0.0	0.0
Buchan	0.21	0.82	0.90	0.02	0.03	0.2	0.0	0.0	0.2
Caledonia North	0.16	0.53	0.90	0.02	0.03	0.5	0.0	0.0	0.5
Caledonia South	0.29	0.53	0.90	0.02	0.03	1.8	0.0	0.0	1.8
Cenos	0.12	0.87	0.90	0.02	0.03	0.2	0.0	0.0	0.3
Dogger Bank A + B				0.02	0.03		0.6	2.6	3.2
Dogger Bank South				0.02	0.03		0.5	0.9	1.4
Dogger Bank C + Sofia				0.02	0.03		0.5	1.8	2.3
Dudgeon Extension				0.02	0.03		0.0	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One				0.02	0.03		1.0	0.4	1.3
East Anglia One North				0.02	0.03		0.0	0.1	0.2
East Anglia Three				0.02	0.03		0.4	0.3	0.7
East Anglia Two				0.02	0.03		0.0	0.1	0.1
Five Estuaries				0.02	0.03		0.1	0.1	0.2
Galloper				0.02	0.03		0.2	0.2	0.4
Green Volt	0.19	0.53	0.90	0.02	0.03	0.1	0.0	0.0	0.2
Hornsea Project One				0.02	0.03		0.0	0.0	0.1
Hornsea Project Two				0.02	0.03		0.0	0.0	0.1
Hornsea Project Three				0.02	0.03		0.2	0.2	0.5
Hornsea Four				0.02	0.03		0.1	0.1	0.1
Humber Gateway				0.02	0.03		0.0	0.0	0.0
Inch Cape	0.00	0.53	0.90	0.02	0.03	0.0	0.2	0.0	0.2
Kentish Flats Extension				0.02	0.03		0.0	0.0	0.0
Kincardine	0.02	0.95	0.90	0.02	0.03	0.1	0.1	0.0	0.2
Lincs				0.02	0.03		0.0	0.0	0.0
Moray East	0.25	0.92	0.90	0.02	0.03	1.2	0.0	0.1	1.3
Moray West	0.07	0.97	0.90	0.02	0.03	1.3	0.1	0.1	1.5
Muir Mhor	0.15	0.53	0.90	0.02	0.03	1.4	0.0	0.1	1.5
Neart na Gaoithe	0.00	0.82	0.90	0.02	0.03	0.0	0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas				0.02	0.03		0.2	0.1	0.3
Norfolk Vanguard				0.02	0.03		0.1	0.2	0.3
North Falls				0.02	0.03		0.0	0.1	0.1
Ossian	0.07	0.84	0.90	0.02	0.03	0.4	0.0	0.1	0.5
Outer Dowsing				0.02	0.03		0.0	0.1	0.1
Pentland	0.00	0.53	0.90	0.02	0.03	0.0	0.0	0.0	0.0
Race Bank				0.02	0.03		0.1	0.0	0.1
Salamander	0.16	0.69	0.90	0.02	0.03	0.3	0.0	0.0	0.3
SeaGreen (Alpha & Bravo)	0.00	0.94	0.90	0.02	0.03	0.0	0.9	0.6	1.5
Sheringham Shoal Extension				0.02	0.03		0.0	0.0	0.0
Teesside				0.02	0.03		0.1	0.1	0.1
Thanet				0.02	0.03		0.0	0.0	0.0
Triton Knoll				0.02	0.03		0.6	0.5	1.1
West of Orkney	0.01	0.53	0.90	0.02	0.03	0.0	0.1	0.2	0.3
Westermost Rough				0.02	0.03		0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									26.7
Change in baseline mortality (percentage point change)									0.126

Table 5.71: Summary of population viability analysis results for in-combination collision impacts on the kittiwake feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	24,166	1.002	8.75	-	-	-
NatureScot	71.7	0.338	21,008	0.999	-5.22	0.996	0.869	37.8
Applicant	26.7	0.126	22,903	1.001	3.69	0.999	0.950	45.2

Gannet

- 5.5.2.102 Collision risk estimates for gannet apportioned to the Forth Islands SPA are presented on a seasonal basis in Table 5.72. The annual apportioned impact predicted for the Forth Islands SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance.
- 5.5.2.103 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Forth Islands Special Protection Area

- 5.5.2.104 The predicted impact on gannet at the Forth Islands SPA from the Morven Programme (Scenario 3) is presented in Table 5.72 for NatureScot's approach and Table 5.73 for the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total collision risk impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.2.105 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Forth Islands SPA in relation to collision risk associated with the Morven Programme (Scenario 3).
- 5.5.2.106 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of gannet from the Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.2.107 The predicted in-combination impact on gannet at the Forth Islands SPA is presented in Table 5.72 for NatureScot's approach and Table 5.73 for the Applicant's approach. The total in-combination impact apportioned to the gannet population at the Forth Islands SPA is 180 (Applicant's approach) to 321 (NatureScot's approach) birds. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.2.108 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's and the Applicant's advocated parameters indicates a median CPS of 0.916 to 0.952; (i.e. the population after 35 years, would be 4.8 to 8.4% smaller than the CPS with a 50th percentile value of 36.9 to 42.7 (Table 5.74)). In terms of the population size, this means that the median of the impacted population fell within the 37th to 43rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the cumulative total is only 1.2 to 1.4% for the Applicant and NatureScot approaches respectively.

- 5.5.2.109 The population of gannet at the Forth Islands SPA is currently above the population at designation (Table 5.8). The population of gannet at the Forth Islands SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, primarily due to HPAI (BTO *et al*, 2025; Burton *et al*, 2025).
- 5.5.2.110 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.2.5. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.2.6.
- 5.5.2.111 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.2.112 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is not considered to represent a material increase in the existing in-combination impact.
- 5.5.2.113 When the factors discussed in paragraphs 5.5.2.5 and 5.5.2.6 and the compensation required at other projects are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Forth Islands SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.2.114 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Forth Islands SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Table 5.72: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from collision risk impacts (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Morven Programme (Scenario 3)									
Morven North	0.87	0.55	0.90	0.24	0.31	4.2	0.2	0.1	4.4
Morven South	0.87	0.55	0.90	0.24	0.31	5.5	0.0	0.1	5.6
Total annual mortality (birds/annum)									10.0
Change in baseline mortality (percentage point change)									0.007
Tier 1 (Scenario 4)									
Aberdeen	0.81	0.55	0.90	0.24	0.31	1.5	0.2	0.0	1.7
Aspen	0.63	0.55	0.90	0.24	0.31	4.8	0.2	0.3	5.4
Beatrice	0.38	0.55	0.90	0.24	0.31	8.1	1.2	0.7	10.0
Berwick Bank	0.97	0.55	0.90	0.24	0.31	52.8	0.9	0.2	53.9
Blyth Demo	0.72	0.55	0.90	0.24	0.31	1.1	0.1	0.2	1.4
Buchan	0.35	0.55	0.90	0.24	0.31	0.5	0.1	0.0	0.6
Caledonia North	0.39	0.55	0.90	0.24	0.31	0.9	0.1	0.0	1.0
Caledonia South	0.38	0.55	0.90	0.24	0.31	2.0	0.1	0.0	2.1
Cenos	0.80	0.55	0.90	0.24	0.31	6.8	0.2	0.1	7.1
Dogger Bank A + B	0.59	0.55	0.90	0.24	0.31	1.6	0.3	0.2	2.1
Dogger Bank South	0.00	0.55	0.90	0.24	0.31	0.0	3.1	0.6	3.7

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Dogger Bank C + Sofia	0.66	0.55	0.90	0.24	0.31	4.9	0.4	0.5	5.8
Dudgeon	0.00	0.55	0.90	0.24	0.31	0.0	1.5	0.7	2.2
Dudgeon Extension	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.0	0.1
East Anglia One	0.00	0.55	0.90	0.24	0.31		6.5	0.4	6.9
East Anglia One North	0.00	0.55	0.90	0.24	0.31		0.6	0.1	0.7
East Anglia Three	0.00	0.55	0.90	0.24	0.31		1.6	0.6	2.2
East Anglia Two	0.00	0.55	0.90	0.24	0.31		1.3	0.3	1.6
Five Estuaries	0.00	0.55	0.90	0.24	0.31		0.6	0.1	0.7
Galloper	0.00	0.55	0.90	0.24	0.31		1.2	0.7	1.9
Green Volt	0.56	0.55	0.90	0.24	0.31	2.7	0.0	0.1	2.8
Hornsea Project One	0.00	0.55	0.90	0.24	0.31	0.0	0.3	0.3	0.5
Hornsea Project Two	0.00	0.55	0.90	0.24	0.31	0.0	0.6	0.3	0.9
Hornsea Project Three	0.00	0.55	0.90	0.24	0.31	0.0	0.2	0.3	0.6
Hornsea Four	0.00	0.55	0.90	0.24	0.31	0.0	0.2	0.1	0.4

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Humber Gateway	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.2	0.4
Inch Cape	1.00	0.55	0.90	0.24	0.31	36.6	0.3	0.3	37.2
Kentish Flats Extension	0.00	0.55	0.90	0.24	0.31		0.0	0.0	0.0
Kincardine	0.38	0.55	0.90	0.24	0.31	2.6	0.0	0.0	2.7
Lincs	0.00	0.55	0.90	0.24	0.31	0.0	0.0	0.1	0.1
Moray East	0.00	0.55	0.90	0.24	0.31	0.0	0.3	0.1	0.4
Moray West	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.0	0.1
Muir Mhor	0.62	0.55	0.90	0.24	0.31	2.6	0.3	0.0	2.9
Neart na Gaoithe	1.00	0.55	0.90	0.24	0.31	31.0	0.5	0.6	32.1
Norfolk Boreas	0.00	0.55	0.90	0.24	0.31	0.0	0.6	0.3	0.9
Norfolk Vanguard	0.00	0.55	0.90	0.24	0.31	0.0	0.9	0.4	1.3
North Falls	0.00	0.55	0.90	0.24	0.31		0.2	0.2	0.4
Ossian	0.80	0.55	0.90	0.24	0.31	11.3	0.3	0.0	11.6
Outer Dowsing	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.0	0.1
Race Bank	0.00	0.55	0.90	0.24	0.31	0.0	0.3	0.3	0.6
Rampion	0.00	0.55	0.90	0.24	0.31		0.5	0.1	0.6
Rampion 2	0.00	0.55	0.90	0.24	0.31		0.2	0.2	0.4
Salamander	0.46	0.55	0.90	0.24	0.31	1.2	0.1	0.0	1.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
SeaGreen (Alpha & Bravo)	0.99	0.55	0.90	0.24	0.31	93.6	1.2	1.6	96.3
Sheringham Shoal Extension	0.00	0.55	0.90	0.24	0.31	0.0	0.0	0.0	0.0
Teesside	0.36	0.55	0.90	0.24	0.31	0.8	0.0	0.0	0.8
Thanet	1.00	0.55	0.90	0.24	0.31		0.0	0.0	0.0
Triton Knoll	0.00	0.55	0.90	0.24	0.31	0.0	2.6	1.7	4.2
Westermost Rough	0.05	0.55	0.90	0.24	0.31	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									320.5
Change in baseline mortality (percentage point change)									0.213

Table 5.73: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from collision risk impacts (Applicant's approach).

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven Programme (Scenario 3)									
Morven North	0.87	0.96	0.90	0.24	0.31	2.0	0.2	0.1	2.3
Morven South	0.87	0.95	0.90	0.24	0.31	2.5	0.0	0.1	2.6
Total annual mortality (birds/annum)									4.9
Change in baseline mortality (percentage point change)									0.003
Tier 1 (Scenario 4)									
Aberdeen	0.81	0.55	0.90	0.24	0.31	0.4	0.2	0.0	0.7
Aspen	0.63	0.55	0.90	0.24	0.31	4.8	0.2	0.3	5.4
Beatrice	0.38	0.55	0.90	0.24	0.31	2.4	1.2	0.7	4.3
Berwick Bank	0.97	0.99	0.90	0.24	0.31	28.4	0.9	0.2	29.5
Blyth Demo	0.72	0.55	0.90	0.24	0.31	0.3	0.1	0.2	0.6
Buchan	0.35	0.91	0.90	0.24	0.31	0.2	0.1	0.0	0.3
Caledonia North	0.39	0.55	0.90	0.24	0.31	0.9	0.1	0.0	1.0
Caledonia South	0.38	0.55	0.90	0.24	0.31	2.0	0.1	0.0	2.1
Cenos	0.80	0.98	0.90	0.24	0.31	3.6	0.2	0.1	3.9
Dogger Bank A + B	0.59	0.55	0.90	0.24	0.31	0.5	0.3	0.2	1.0
Dogger Bank South	0.00	0.55	0.90	0.24	0.31	0.0	3.1	0.6	3.7
Dogger Bank C + Sofia	0.66	0.55	0.90	0.24	0.31	1.5	0.4	0.5	2.3
Dudgeon Extension	0.00	0.55	0.90	0.24	0.31	0.0	1.5	0.7	2.2
East Anglia One	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia One North	0.00	0.55	0.90	0.24	0.31		6.5	0.4	6.9
East Anglia Three	0.00	0.55	0.90	0.24	0.31		0.6	0.1	0.7
East Anglia Two	0.00	0.55	0.90	0.24	0.31		1.6	0.6	2.2
Five Estuaries	0.00	0.55	0.90	0.24	0.31		1.3	0.3	1.6
Galloper	0.00	0.55	0.90	0.24	0.31		0.6	0.1	0.7
Green Volt	0.00	0.55	0.90	0.24	0.31		1.2	0.7	1.9
Hornsea Project One	0.56	0.55	0.90	0.24	0.31	0.8	0.0	0.1	1.0
Hornsea Project Two	0.00	0.62	0.90	0.24	0.31	0.0	0.3	0.3	0.5
Hornsea Project Three	0.00	0.72	0.90	0.24	0.31	0.0	0.6	0.3	0.9
Hornsea Four	0.00	0.73	0.90	0.24	0.31	0.0	0.2	0.3	0.6
Humber Gateway	0.00	0.55	0.90	0.24	0.31	0.0	0.2	0.1	0.4
Inch Cape	0.00	0.55	0.90	0.24	0.31	0.0	0.1	0.2	0.4
Kentish Flats Extension	1.00	0.55	0.90	0.24	0.31	11.0	0.3	0.3	11.6
Kincardine	0.00	0.55	0.90	0.24	0.31		0.0	0.0	0.0
Lincs	0.38	0.79	0.90	0.24	0.31	1.1	0.0	0.0	1.2
Moray East	0.00	0.55	0.90	0.24	0.31	0.0	0.0	0.1	0.1
Moray West	0.00	0.55	0.90	0.24	0.31	0.0	0.3	0.1	0.4
Muir Mhor	0.62	0.55	0.90	0.24	0.31	0.8	0.3	0.0	1.1
Neart na Gaoithe	1.00	0.98	0.90	0.24	0.31	16.4	0.5	0.6	17.5
Norfolk Boreas	0.00	0.55	0.90	0.24	0.31	0.0	0.6	0.3	0.9

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Vanguard	0.00	0.55	0.90	0.24	0.31	0.0	0.9	0.4	1.3
North Falls	0.00	0.69	0.90	0.24	0.31		0.2	0.2	0.4
Ossian	0.80	0.98	0.90	0.24	0.31	6.0	0.3	0.0	6.3
Outer Dowsing	0.00	0.90	0.90	0.24	0.31	0.0	0.1	0.0	0.1
Pentland	0.00	0.55	0.90	0.24	0.31	0.0	0.3	0.3	0.6
Race Bank	0.00	0.55	0.90	0.24	0.31		0.5	0.1	0.6
Salamander	0.00	0.55	0.90	0.24	0.31		0.2	0.2	0.4
SeaGreen (Alpha & Bravo)	0.46	0.94	0.90	0.24	0.31	0.6	0.1	0.0	0.7
Sheringham Shoal Extension	0.99	0.97	0.90	0.24	0.31	49.5	1.2	1.6	52.2
Teesside	0.00	0.55	0.90	0.24	0.31	0.0	0.0	0.0	0.0
Thanet	0.36	0.55	0.90	0.24	0.31	0.8	0.0	0.0	0.8
Triton Knoll	1.00	0.55	0.90	0.24	0.31		0.0	0.0	0.0
West of Orkney	0.00	0.55	0.90	0.24	0.31	0.0	2.6	1.7	4.2
Westermost Rough	0.05	0.55	0.90	0.24	0.31	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum) (all projects including Morven North and Morven South)									180.2
Change in baseline mortality (percentage point change)									0.120

Table 5.74: Summary of population viability analysis results for in-combination collision impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	304,843	1.012	53.73	-	-	-
NatureScot	320.5	0.213	279,346	1.010	40.76	0.998	0.916	36.9
Applicant	180.2	0.120	290,395	1.011	46.32	0.999	0.952	42.7

Outer Firth of Forth and St Andrew's Bay Complex SPA

- 5.5.2.115 Of those SPAs for which in-combination collision risk impacts have been assessed, the Outer Firth of Forth and St Andrew's Bay Complex SPA supports kittiwake from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA and gannet from the Forth Islands SPA.
- 5.5.2.116 Conclusions of no AEIOI have been reached for all of the SPAs for which in-combination collision risk impacts have been considered for kittiwake and gannet from SPAs from which birds are supported by the Outer Firth of Forth and St Andrew's Bay Complex SPA with the exception of kittiwake at the St Abb's Head to Fast Castle SPA.
- 5.5.2.117 As the Outer Firth of Forth and St Andrew's Bay Complex SPA supports kittiwake from this SPA an AEIOI is also concluded for the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to in-combination collision risk impacts on kittiwake.
- 5.5.2.118 It is therefore concluded that there is the potential for an AEIOI on the kittiwake population of the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to collision risk impacts associated with Morven North in-combination with other plans and projects.

Northumberland Marine SPA

- 5.5.2.119 Of those SPAs for which in-combination collision risk impacts have been assessed, the Northumberland Marine SPA is designated to support kittiwake from the Farne Islands SPA.
- 5.5.2.120 A conclusion of no AEIOI have been reached for the kittiwake feature of the Farne Islands SPA. The conclusion reached for the kittiwake qualifying feature of this SPA is considered applicable to the kittiwake qualifying feature of the Northumberland Marine SPA. Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI on the kittiwake population of the Northumberland Marine SPA in relation to collision impacts associated with Morven North in-combination with other plans and projects.

Conclusion

- 5.5.2.121 Potential effects from in-combination collision risk impacts on the relevant conservation objectives of each SPA (as presented in Table 5.9) are discussed in Appendix A. Impacts that undermine the conservation objectives will not occur as a result of in-combination collision risk impacts for the following SPAs and relevant offshore ornithological qualifying features:
- Kittiwake at the Buchan Ness to Collieston Coast SPA;
 - Kittiwake at the East Caithness Cliffs SPA;
 - Kittiwake at the Farne Islands SPA;
 - Kittiwake at the Flamborough and Filey Coast SPA;
 - Kittiwake at the Forth Islands SPA;
 - Kittiwake at the Fowlsheugh SPA;
 - Kittiwake at the Northumberland Marine SPA
 - Kittiwake at the Troup, Pennan and Lion's Heads SPA;
 - Gannet at the Forth Islands SPA.
- 5.5.2.122 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI of any of these SPAs in relation to in-combination collision risk impacts associated with Morven North in-combination with other plans and projects. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.

5.5.2.123 Impacts that undermine the conservation objectives are considered likely to occur as a result of in-combination collision risk impacts on the kittiwake and breeding seabird assemblage qualifying features of the St Abb's Head to Fast Castle SPA. This is also considered applicable to kittiwake as a qualifying feature of the Outer Firth of Forth and St Andrew's Bay Complex SPA as this SPA supports kittiwake from the St Abb's Head to Fast Castle SPA.

5.5.2.124 Therefore, it can be concluded beyond reasonable scientific doubt that there will be an AEI on kittiwake and breeding seabird assemblage features of the St Abb's Head to Fast Castle SPA and Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to in-combination collision risk impacts associated with Morven North in-combination with other plans and projects.

5.5.3 Displacement

5.5.3.1 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operations and maintenance phase, the potential for LSE² could not be ruled out for potential in-combination displacement impacts. The impact predicted for Morven North alone exceeded the 0.2 birds/annum impact threshold as recommended by NatureScot for the following sites and relevant offshore ornithological features and therefore they are progressed to in-combination assessments:

- Kittiwake at the Buchan Ness to Collieston Coast SPA;
- Kittiwake at the East Caithness Cliffs SPA;
- Kittiwake at the Farne Islands SPA;
- Kittiwake at the Flamborough and Filey Coast SPA;
- Kittiwake at the Forth Islands SPA;
- Kittiwake at the Fowlsheugh SPA;
- Kittiwake at the St Abb's Head to Fast Castle SPA;
- Kittiwake at the Troup, Pennan and Lion's Heads SPA;
- Guillemot at the Buchan Ness to Collieston Coast SPA;
- Guillemot at the Fowlsheugh SPA;
- Guillemot at the Forth Islands SPA;
- Guillemot at the St Abb's Head to Fast Castle SPA;
- Guillemot at the Troup, Pennan and Lion's Heads SPA;
- Razorbill at the East Caithness Cliffs SPA;
- Razorbill at the Flamborough and Filey Coast SPA;
- Razorbill at the Forth Islands SPA;
- Razorbill at the Fowlsheugh SPA;
- Razorbill at the St Abb's Head to Fast Castle SPA;
- Razorbill at the Troup, Pennan and Lion's Heads SPA;
- Puffin at the Coquet Island SPA;
- Puffin at the Farne Islands SPA;
- Puffin at the Forth Islands SPA;
- Puffin at the Foula SPA;
- Puffin at the Hermaness, Saxa Vord and Valla Field SPA.
- Gannet at the Forth Islands SPA;
- Gannet at the Flamborough and Filey Coast SPA;
- Gannet at the Noss SPA;
- Gannet at the Hermaness, Saxa Vord and Valla Field SPA.

5.5.3.2 The predicted impact for all other SPA and qualifying features combinations included in Table 5.29 and Table 5.30 is considered to be undetectable against the existing baseline mortality of each population and therefore Morven North will make no measurable contribution to any existing in-combination impact.

5.5.3.3 Following pre-application advice from NatureScot (July 2025), fulmar is not progressed to the in-combination stage for any SPA.

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- 5.5.3.4 In addition, a number of SPAs that support the breeding populations of features from SPAs included in the list above are also included in the in-combination assessment. This is applicable to the Outer Firth of Forth and St Andrew's Bay Complex SPA which supports kittiwake from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA, guillemot from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA and the Buchan Ness to Collieston Coast SPA, razorbill at the Forth Islands SPA, puffin at the Forth Islands SPA and gannet from the Forth Islands SPA. Consideration is also given to the Northumberland Marine SPA which supports kittiwake from the Farne Islands SPA and puffin from Coquet Island SPA and the Farne Islands SPA.
- 5.5.3.5 The MDS considered for this in-combination assessment is shown in Table 5.75.
- 5.5.3.6 Throughout the following assessment sections it is important to take account of the following uncertainties associated with the PVA modelling used to inform the assessment:
- Over-estimation of in-combination impacts. The PVA modelling does not account for changes in the predicted in-combination total due to the decommissioning of projects considered in-combination. Over the lifetime of Morven North the in-combination impact will reduce significantly when licences for current projects expire and decommissioning occurs. The PVA metrics are therefore highly precautionary.
 - No consideration has been made for density dependent compensation of demographic parameters within the modelled population, nor immigration, both of which could reduce the magnitude of any population change.

Table 5.75: Maximum Design Scenario considered for the assessment of potential impacts to offshore ornithological features due to displacement in the operations and maintenance phase of Morven North in-combination with other plans and projects

Project phase	MDS	Justification
Operation and maintenance	<p>There are no collision risk impacts associated with the MHPGC Project and MBAGC Project and therefore only scenarios 3 and 4 are relevant to the in-combination assessment of displacement.</p> <p>Scenario 3 MDS as described for Morven North (Table 5.28), assessed in-combination with Morven South.</p> <p>Scenario 4 MDS as described for Morven North (Table 5.28), assessed in-combination with Morven South, and the following other projects and plans:</p> <p>Tier 1</p> <ul style="list-style-type: none"> • Aberdeen • Aspen • Beatrice • Berwick Bank • Blyth Demo • Buchan • Caledonia • Cenos • Dogger Bank A + B • Dogger Bank C + Sofia • Dogger Bank South • Dudgeon • East Anglia One • East Anglia One North • East Anglia Three 	<p>There is potential for an in-combination effect from operations and maintenance activities and so a quantitative in-combination assessment is required.</p>

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • East Anglia Two • Five Estuaries • Galloper • Green Volt • Gunfleet Sands 3 • Hornsea Four • Hornsea Project One • Hornsea Project Three • Hornsea Project Two • Hywind • Inch Cape • Kentish Flats • Kentish Flats Extension • Kincardine • Lincs • Moray East • Moray West • Muir Mhor • Neart na Gaoithe • Norfolk Boreas • Norfolk Vanguard • North Falls • Ossian • Outer Dowsing • Pentland • Race Bank • Rampion 	

Project phase	MDS	Justification
	<ul style="list-style-type: none">• Rampion 2• Salamander• SeaGreen (Alpha & Bravo)• Sheringham Shoal and Dudgeon Extensions• Thanet• Triton Knoll• West of Orkney• Westermost Rough	

- 5.5.3.7 There is potential for in-combination displacement as a result of operational activities associated with Morven North in-combination with other developments. During the operations and maintenance phase, the presence of offshore wind turbines has the potential to directly disturb and displace seabirds that would normally reside within and around the area of sea where offshore wind farms are located. Displacement may contribute to individual birds experiencing fitness consequences, which at an extreme level could lead to the mortality of individuals. In-combination displacement therefore has the potential to lead to effects on a wider scale.
- 5.5.3.8 The SPAs and associated qualifying features considered in relation to in-combination collision risk impacts are identified above. The predicted impact from Morven North alone for all of these features surpassed the 0.2 birds/annum recommended by NatureScot (pre-application consultation undertaken in January 2025; Table 2.1) as a threshold for when an in-combination assessment is required.
- 5.5.3.9 The projects of relevance to the in-combination assessment of displacement are identified in Table 5.75. There are no displacement impacts associated with the MHPGC Project or MBAGC Project. Whilst there may be disturbance effects associated with the MHPGC Project or MBAGC Project such impacts will be short-term in nature and highly unlikely to be detectable and will not contribute to any existing in-combination impact. The whole project assessments associated with Scenario 1 and 2 are therefore not required and consideration of the MHPGC Project or MBAGC Project as part of Scenario 3 is also not required. Scenario 3 will therefore incorporate Morven North and Morven South only.
- 5.5.3.10 Data used within the assessment of in-combination displacement is based on published information produced by the respective project developers. The assessments undertaken for these projects were conducted based on the recommended approach at the time of application. Whilst the current guidance for displacement assessment requires the use of mean-peak population estimates, this has not always been the case. In order to ensure a consistent approach, where mean-peak population estimates are unavailable, either because a project's assessment was undertaken prior to the use of mean-peak population estimates or because such data are not presented in project-specific documentation, mean-peak population estimates have been calculated using data for the project in question. In some cases this requires the use of data from project areas other than the now recommended project plus 2km buffer. In these cases data has been corrected based on the difference between the project area used and the project area plus a 2km buffer. The basis of this approach has been used within the assessments for multiple offshore wind farms in UK waters since its first application for the Dogger Bank Creyke Beck and Dogger Bank Teesside projects.
- 5.5.3.11 Breeding season apportioning values are comprised of three factors, a colony proportion, an immature proportion and a sabbatical proportion. Where practicable the colony proportion applicable to an SPA for each project has been obtained from project-specific documentation. However, for some projects, especially older projects, apportioning was not undertaken. For these projects, the apportioning values presented in MacArthur Green (2024) have been used. When calculating in-combination values following NatureScot's approach, immature proportions use those values recommended by NatureScot as part of pre-application consultation for Morven North have been applied to all projects. For the Applicant's approach, immature proportions have been obtained from project-specific literature where these are available. For projects where they are not available the immature proportions recommended by NatureScot have been applied. For sabbatical proportions, the values recommended by NatureScot have been used in both NatureScot's and the Applicant's approach.
- 5.5.3.12 In non-breeding seasons, apportioning values have been calculated using population data from Furness (2015) with the exception of guillemot, For guillemot, project specific values have been used for all seasons. Unapportioned population estimates for all species at all projects are presented in Volume 2, Chapter 11: Offshore Ornithology of the EIA Report.

- 5.5.3.13 The Morven Programme (Scenario 3) assessment has been conducted assuming that the impacts from Morven North and Morven South are simply additive. This is, however, an oversimplification. The displacement analysis incorporates mean-peak population estimates from the relevant array area plus a 2km buffer. As the Morven North and Morven South boundaries are adjacent to one another the application of a 2km buffer results in an overlap between the areas incorporated into the displacement analyses for both projects. No attempt has been made to quantify the extent of the over-estimate in the assessments presented in the following sections and therefore the assessments for the Morven Programme (Scenario 3), and therefore the in-combination assessment, incorporate a degree of over-estimation for all species.
- 5.5.3.14 In all tables in this section individual project population estimates and total population estimates are rounded to whole numbers. All underlying calculations use non-rounded numbers and therefore totals may not match totals derived from constituent whole numbers.

Operation and maintenance phase

Kittiwake

- 5.5.3.15 Mean-peak population estimates for kittiwake apportioned to each of the SPAs identified in paragraph 5.5.3.1 are presented on a seasonal basis in the following SPA-specific sections. Impacts predicted for each SPA using the displacement and mortality rates advocated by NatureScot and the Applicant are also provided. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance
- 5.5.3.16 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Buchan Ness to Collieston Coast Special Protection Area

- 5.5.3.17 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.76 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.3.18 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.76: Predicted annual mortality of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	0.5 to 1.6	0.0 to 0.1	0.0 to 0.0	0.6 to 1.7
Morven South	0.1 to 0.2	0.0 to 0.0	0.0 to 0.0	0.1 to 0.3
Total annual mortality (birds/annum)				0.6 to 1.9

Project	Breeding	Post-breeding	Pre-breeding	Annual
Change in baseline mortality (percentage point change)				0.003 to 0.009
Applicant's approach				
Morven North	0.9	0.0	0.0	0.9
Morven South	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)				1.0
Change in baseline mortality (percentage point change)				0.004

- 5.5.3.19 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Buchan Ness to Collieston Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.3.20 Table 5.77 (NatureScot's apportioning approach) and Table 5.78 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.21 The predicted in-combination impact on kittiwake at the Buchan Ness to Collieston Coast SPA is presented in Table 5.77 (NatureScot's apportioning approach) and Table 5.78 (Applicant's approach). The total in-combination impact apportioned to the kittiwake population at the Buchan Ness to Collieston Coast SPA is 16 to 49 birds/annum when applying NatureScot's approach and 19 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.22 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.914 to 0.971; (i.e. the population after 35 years would be 3.0 to 8.6% smaller than the CPS with a 50th percentile value of 42.4 to 47.1 (Table 5.79)). In terms of the population size, this means that the median of the impacted population fell within the 42nd to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.23 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.965 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.5% smaller than the counterfactual population size). The 50th percentile value is 46.6, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.24 The population of kittiwake at the Buchan Ness to Collieston Coast SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Buchan Ness to

Collieston Coast SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased slightly since Seabirds Count (BTO *et al*, 2025).

- 5.5.3.25 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.26 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects could therefore be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.27 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.3.28 Impacts on kittiwake that undermine the conservation objectives of the at the Buchan Ness to Collieston Coast SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.29 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.77: Mean-peak population estimates for kittiwake at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.27	0.53	0.90	0.02	0.02	17	1	2
Beatrice	0.00	0.53	0.90	0.02	0.02	0	13	17
Berwick Bank	0.01	0.53	0.90	0.02	0.02	121	203	330
Blyth Demo	0.18	0.53	0.90	0.02	0.02	4	8	0
Buchan	0.18	0.53	0.90	0.02	0.02	16	2	8
Caledonia North	0.06	0.53	0.90	0.02	0.02	20	6	2
Caledonia South	0.08	0.53	0.90	0.02	0.02	62	8	1
Cenos	0.16	0.53	0.90	0.02	0.02	16	1	1
Dogger Bank A				0.02	0.02		28	166
Dogger Bank B				0.02	0.02		35	205
Dogger Bank South				0.02	0.02		95	66
Dogger Bank C				0.02	0.02		17	116
Sofia				0.02	0.02		23	160
Dudgeon				0.02	0.02		0	2
Dudgeon Extension				0.02	0.02		26	3
East Anglia One				0.02	0.02		14	7

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				0.02	0.02		4	5
East Anglia Three				0.02	0.02		27	17
East Anglia Two				0.02	0.02		4	8
Five Estuaries				0.02	0.02		4	14
Galloper				0.02	0.02		7	17
Green Volt	0.25	0.53	0.90	0.02	0.02	22	3	2
Hornsea Project One				0.02	0.02		388	29
Hornsea Project Two				0.02	0.02		26	51
Hornsea Project Three				0.02	0.02		44	52
Hornsea Four				0.02	0.02		21	11
Humber Gateway				0.02	0.02		0	1
Inch Cape	0.00	0.53	0.90	0.02	0.02	0	39	20
Kincardine	0.11	0.53	0.90	0.02	0.02	35	12	1
Lincs				0.02	0.02		1	0
Moray East	0.00	0.53	0.90	0.02	0.02	0	2	3
Moray West	0.00	0.53	0.90	0.02	0.02	0	27	26
Morven North	0.15	0.53	0.90	0.02	0.02	173	7	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.12	0.53	0.90	0.02	0.02	22	5	3
Muir Mhor	0.31	0.53	0.90	0.02	0.02	484	1	18
Neart na Gaoithe	0.03	0.53	0.90	0.02	0.02	32	37	3
Norfolk Boreas				0.02	0.02		47	25
Norfolk Vanguard				0.02	0.02		16	39
North Falls				0.02	0.02		8	20
Ossian	0.14	0.53	0.90	0.02	0.02	214	10	14
Outer Dowsing				0.02	0.02		18	27
Pentland	0.00	0.53	0.90	0.02	0.02	0	2	1
Race Bank				0.02	0.02		2	1
Salamander	0.50	0.53	0.90	0.02	0.02	892	2	3
SeaGreen Bravo	0.07	0.53	0.90	0.02	0.02	143	24	23
SeaGreen Alpha	0.07	0.53	0.90	0.02	0.02	248	58	27
Sheringham Shoal Extension				0.02	0.02		3	2
Teesside				0.02	0.02		0	0
Thanet				0.02	0.02		1	0
Triton Knoll				0.02	0.02		5	7
West of Orkney	0.01	0.53	0.90	0.02	0.02	7	14	29
Total population estimates (all projects including Morven North and Morven South)						2,526	1,347	1,589

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			8	4	5	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			23	12	14	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			16			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			49			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.073			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.218			

Table 5.78: Mean-peak population estimates for kittiwake at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.27	0.53	0.90	0.02	0.02	17	1	2
Beatrice	0.00	0.53	0.90	0.02	0.02	0	13	17
Berwick Bank	0.01	0.92	0.90	0.02	0.02	211	203	330
Blyth Demo	0.18	0.53	0.90	0.02	0.02	4	8	0
Buchan	0.18	0.82	0.90	0.02	0.02	24	2	8
Caledonia North	0.06	0.53	0.90	0.02	0.02	20	6	2
Caledonia South	0.08	0.53	0.90	0.02	0.02	62	8	1
Cenos	0.16	0.87	0.90	0.02	0.02	26	1	1
Dogger Bank A				0.02	0.02		28	166
Dogger Bank B				0.02	0.02		35	205
Dogger Bank South				0.02	0.02		95	66
Dogger Bank C				0.02	0.02		17	116
Sofia				0.02	0.02		23	160
Dudgeon				0.02	0.02		0	2
Dudgeon Extension				0.02	0.02		26	3
East Anglia One				0.02	0.02		14	7
East Anglia One North				0.02	0.02		4	5
East Anglia Three				0.02	0.02		27	17

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.02	0.02		4	8
Five Estuaries				0.02	0.02		4	14
Galloper				0.02	0.02		7	17
Green Volt	0.25	0.53	0.90	0.02	0.02	22	3	2
Hornsea Project One				0.02	0.02		388	29
Hornsea Project Two				0.02	0.02		26	51
Hornsea Project Three				0.02	0.02		44	52
Hornsea Four				0.02	0.02		21	11
Humber Gateway				0.02	0.02		0	1
Inch Cape	0.00	0.53	0.90	0.02	0.02	0	39	20
Kincardine	0.11	0.95	0.90	0.02	0.02	63	12	1
Lincs				0.02	0.02		1	0
Moray East	0.00	0.92	0.90	0.02	0.02	0	2	3
Moray West	0.00	0.97	0.90	0.02	0.02	0	27	26
Morven North	0.15	0.87	0.90	0.02	0.02	284	7	3
Morven South	0.12	0.78	0.90	0.02	0.02	32	5	3
Muir Mhor	0.31	0.53	0.90	0.02	0.02	484	1	18
Near na Gaoithe	0.03	0.82	0.90	0.02	0.02	49	37	3
Norfolk Boreas				0.02	0.02		47	25

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Vanguard				0.02	0.02		16	39
North Falls				0.02	0.02		8	20
Ossian	0.14	0.84	0.90	0.02	0.02	339	10	14
Outer Dowsing				0.02	0.02		18	27
Pentland	0.00	0.53	0.90	0.02	0.02	0	2	1
Race Bank				0.02	0.02		2	1
Salamander	0.50	0.69	0.90	0.02	0.02	1160	2	3
SeaGreen Bravo	0.07	0.94	0.90	0.02	0.02	253	24	23
SeaGreen Alpha	0.07	0.94	0.90	0.02	0.02	439	58	27
Sheringham Shoal Extension				0.02	0.02		3	2
Teesside				0.02	0.02		0	0
Thanet				0.02	0.02		1	0
Triton Knoll				0.02	0.02		5	7
West of Orkney	0.01	0.53	0.90	0.02	0.02	7	14	29
Total population estimates (all projects including Morven North and Morven South)						3,495	1,347	1,589
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				10	4	5
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				19		
Change in baseline mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.085		

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
(percentage point change)								

Table 5.79: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Baseline	-	-	25,588	1.003	9.16	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	16.4	0.073	24,806	1.002	6.03	0.999	0.971	47.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	49.2	0.218	23,424	1.000	-0.30	0.997	0.914	42.4
Applicant	19.3	0.085	24,701	1.002	5.52	0.999	0.965	46.6

East Caithness Cliffs Special Protection Area

5.5.3.30 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.80 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.31 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.80: Predicted annual mortality of kittiwake at the East Caithness Cliffs Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	0.2 to 0.5	0.1 to 0.2	0.0 to 0.1	0.3 to 0.8
Morven South	0.0 to 0.1	0.0 to 0.1	0.0 to 0.1	0.1 to 0.3
Total annual mortality (birds/annum)				0.4 to 1.1
Change in baseline mortality (percentage point change)				0.001 to 0.002
Applicant’s approach				
Morven North	0.3	0.1	0.0	0.4
Morven South	0.0	0.0	0.0	0.1
Total annual mortality (birds/annum)				0.5
Change in baseline mortality (percentage point change)				0.001

5.5.3.32 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the East Caithness Cliffs SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.33 Table 5.81 (NatureScot’s apportioning approach) and Table 5.78 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.34 The predicted in-combination impact on kittiwake at the East Caithness Cliffs SPA is presented in Table 5.81 (NatureScot’s apportioning approach) and Table 5.78 (Applicant’s approach). The total in-combination impact apportioned to the kittiwake population at the East Caithness Cliffs SPA is 55 to 166 birds/annum when applying NatureScot’s approach and 65 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.35 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.869 to 0.954; (i.e. the population after 35 years, would be 4.6 to 13.2% smaller than the CPS with a 50th percentile value of 37.7 to 45.6 (Table 5.83)). In terms of the population size, this means that the median of the impacted population fell within the 38th to 46nd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.996 to 0.999 which translates to a growth rate 0.1 to 0.4% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 0.5 to 0.6% for the upper NatureScot and Applicant approaches respectively.
- 5.5.3.36 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.947 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 5.4% smaller than the counterfactual population size). The 50th percentile value is 44.9, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.37 The population of kittiwake at the East Caithness Cliffs SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the East Caithness Cliffs SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.38 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.39 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.40 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact.
- 5.5.3.41 Impacts on kittiwake that undermine the conservation objectives of the at the East Caithness Cliffs SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.

5.5.3.42 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.81: Mean-peak population estimates for kittiwake at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.11	0.53	0.90	0.14	0.04	7	6	4
Beatrice	0.93	0.53	0.90	0.14	0.04	407	102	30
Berwick Bank	0.00	0.53	0.90	0.14	0.04	10	1595	581
Blyth Demo				0.14	0.04		61	0
Buchan	0.25	0.53	0.90	0.14	0.04	22	15	15
Caledonia North	0.54	0.53	0.90	0.14	0.04	185	46	3
Caledonia South	0.40	0.53	0.90	0.14	0.04	291	61	2
Cenos	0.13	0.53	0.90	0.14	0.04	13	7	2
Dogger Bank A				0.14	0.04		218	293
Dogger Bank B				0.14	0.04		274	361
Dogger Bank South				0.14	0.04		743	116
Dogger Bank C				0.14	0.04		132	205
Sofia				0.14	0.04		179	282
Dudgeon				0.14	0.04		3	3
Dudgeon Extension				0.14	0.04		207	6
East Anglia One				0.14	0.04		109	12
East Anglia One North				0.14	0.04		29	8

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				0.14	0.04		214	30
East Anglia Two				0.14	0.04		32	14
Five Estuaries				0.14	0.04		31	24
Galloper				0.14	0.04		56	29
Green Volt	0.17	0.53	0.90	0.14	0.04	15	21	4
Hornsea Project One				0.14	0.04		3053	50
Hornsea Project Two				0.14	0.04		207	90
Hornsea Project Three				0.14	0.04		344	92
Hornsea Four				0.14	0.04		167	20
Humber Gateway				0.14	0.04		2	1
Inch Cape	0.00	0.53	0.90	0.14	0.04	0	305	35
Kincardine	0.00	0.53	0.90	0.14	0.04	0	91	2
Lincs				0.14	0.04		5	1
Moray East	0.75	0.53	0.90	0.14	0.04	705	19	6
Moray West	0.87	0.53	0.90	0.14	0.04	2875	210	45
Morven North	0.05	0.53	0.90	0.14	0.04	57	58	6
Morven South	0.05	0.53	0.90	0.14	0.04	10	40	5
Muir Mhor	0.09	0.53	0.90	0.14	0.04	133	8	32
Neart na Gaoithe	0.00	0.53	0.90	0.14	0.04	0	287	6

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				0.14	0.04		367	45
Norfolk Vanguard				0.14	0.04		126	69
North Falls				0.14	0.04		67	36
Ossian	0.07	0.53	0.90	0.14	0.04	101	81	25
Outer Dowsing				0.14	0.04		142	48
Pentland	0.08	0.53	0.90	0.14	0.04	21	17	2
Race Bank				0.14	0.04		12	2
Salamander	0.07	0.53	0.90	0.14	0.04	127	16	5
SeaGreen Bravo	0.00	0.53	0.90	0.14	0.04	0	191	40
SeaGreen Alpha	0.00	0.53	0.90	0.14	0.04	0	454	47
Sheringham Shoal Extension				0.14	0.04		21	3
Teesside				0.14	0.04		1	1
Thanet				0.14	0.04		5	0
Triton Knoll				0.14	0.04		41	12
West of Orkney	0.21	0.53	0.90	0.14	0.04	112	114	51
Total population estimates (all projects including Morven North and Morven South)						5,091	10,592	2,798
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				15	32	8
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				46	96	25

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			55			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			166			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.113			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.340			

Table 5.82: Mean-peak population estimates for kittiwake at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.11	0.53	0.90	0.14	0.04	7	6	4
Beatrice	0.93	0.53	0.90	0.14	0.04	407	102	30
Berwick Bank	0.00	0.92	0.90	0.14	0.04	18	1595	581
Blyth Demo				0.14	0.04		61	0
Buchan	0.25	0.82	0.90	0.14	0.04	34	15	15
Caledonia North	0.54	0.53	0.90	0.14	0.04	185	46	3
Caledonia South	0.40	0.53	0.90	0.14	0.04	291	61	2
Cenos	0.13	0.87	0.90	0.14	0.04	21	7	2
Dogger Bank A				0.14	0.04		218	293
Dogger Bank B				0.14	0.04		274	361
Dogger Bank South				0.14	0.04		743	116
Dogger Bank C				0.14	0.04		132	205
Sofia				0.14	0.04		179	282
Dudgeon				0.14	0.04		3	3
Dudgeon Extension				0.14	0.04		207	6
East Anglia One				0.14	0.04		109	12
East Anglia One North				0.14	0.04		29	8
East Anglia Three				0.14	0.04		214	30

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.14	0.04		32	14
Five Estuaries				0.14	0.04		31	24
Galloper				0.14	0.04		56	29
Green Volt	0.17	0.53	0.90	0.14	0.04	15	21	4
Hornsea Project One				0.14	0.04		3053	50
Hornsea Project Two				0.14	0.04		207	90
Hornsea Project Three				0.14	0.04		344	92
Hornsea Four				0.14	0.04		167	20
Humber Gateway				0.14	0.04		2	1
Inch Cape	0.00	0.53	0.90	0.14	0.04	0	305	35
Kincardine	0.00	0.95	0.90	0.14	0.04	0	91	2
Lincs				0.14	0.04		5	1
Moray East	0.75	0.92	0.90	0.14	0.04	1212	19	6
Moray West	0.87	0.97	0.90	0.14	0.04	5264	210	45
Morven North	0.05	0.87	0.90	0.14	0.04	94	58	6
Morven South	0.05	0.78	0.90	0.14	0.04	14	40	5
Muir Mhor	0.09	0.53	0.90	0.14	0.04	133	8	32
Neart na Gaoithe	0.00	0.82	0.90	0.14	0.04	0	287	6
Norfolk Boreas				0.14	0.04		367	45
Norfolk Vanguard				0.14	0.04		126	69

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls				0.14	0.04		67	36
Ossian	0.07	0.84	0.90	0.14	0.04	160	81	25
Outer Dowsing				0.14	0.04		142	48
Pentland	0.08	0.53	0.90	0.14	0.04	21	17	2
Race Bank				0.14	0.04		12	2
Salamander	0.07	0.69	0.90	0.14	0.04	165	16	5
SeaGreen Bravo	0.00	0.94	0.90	0.14	0.04	0	191	40
SeaGreen Alpha	0.00	0.94	0.90	0.14	0.04	0	454	47
Sheringham Shoal Extension				0.14	0.04		21	3
Teesside				0.14	0.04		1	1
Thanet				0.14	0.04		5	0
Triton Knoll				0.14	0.04		41	12
West of Orkney	0.21	0.53	0.90	0.14	0.04	112	114	51
Total population estimates (all projects including Morven North and Morven South)						8,153	10,592	2,798
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				24	32	8
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				65		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.132		

Table 5.83: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	55,109	1.002	8.26	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	55.4	0.113	52,429	1.001	3.19	0.999	0.954	45.6
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	166.3	0.340	47,778	0.998	-6.01	0.996	0.869	37.7
Applicant	64.6	0.132	52,028	1.001	2.55	0.998	0.947	44.9

Farne Islands Special Protection Area

5.5.3.43 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.84 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.44 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.84: Predicted annual mortality of kittiwake at the Farne Islands SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	0.1 to 0.4	0.0 to 0.0	0.0 to 0.0	0.1 to 0.4
Morven South	0.0 to 0.1	0.0 to 0.0	0.0 to 0.0	0.0 to 0.1
Total annual mortality (birds/annum)				0.2 to 0.5
Change in baseline mortality (percentage point change)				0.002 to 0.006
Applicant’s approach				
Morven North	0.2	0.0	0.0	0.2
Morven South	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum)				0.3
Change in baseline mortality (percentage point change)				0.003

5.5.3.45 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Farne Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.46 Table 5.85 (NatureScot’s apportioning approach) and Table 5.86 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.47 The predicted in-combination impact on kittiwake at the Farne Islands SPA is presented in Table 5.85 (NatureScot’s apportioning approach) and Table 5.86 (Applicant’s approach). The total in-combination impact apportioned to the kittiwake population at the Farne Islands SPA is 6 to 17 birds/annum when applying NatureScot’s approach and 7 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.48 The population of kittiwake at the Farne Islands SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Farne Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.49 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.920 to 0.972; (i.e. the population after 35 years would be 2.8 to 8.0% smaller than the CPS with a 50th percentile value of 42.7 to 47.3 (Table 5.87)). In terms of the population size, this means that the median of the impacted population fell within the 43rd to 48th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.50 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.967 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.3% smaller than the counterfactual population size). The 50th percentile value is 46.7, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.51 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.52 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. In addition consideration should be given to other factors discussed in paragraph 5.5.3.6 in relation to over-estimation of impacts and the uncertainties associated with PVA modelling. It is also important to note that the Farne Islands SPA falls under the remit of Natural England with Natural England not requiring consideration of displacement impacts for kittiwake
- 5.5.3.53 When the factors discussed in paragraph 5.5.3.6 are taken into account it is considered that impacts on kittiwake that undermine the conservation objectives of the Farne Islands SPA will therefore not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.54 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.85: Mean-peak population estimates for kittiwake at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.01	0.53	0.90	0.01	<0.01	1	1	0
Beatrice	0.00	0.53	0.90	0.01	<0.01	0	9	3
Berwick Bank	0.05	0.53	0.90	0.01	<0.01	456	136	50
Blyth Demo	0.24	0.53	0.90	0.01	<0.01	5	5	0
Buchan	0.00	0.53	0.90	0.01	<0.01	0	1	1
Caledonia North	0.00	0.53	0.90	0.01	<0.01	0	4	0
Caledonia South	0.00	0.53	0.90	0.01	<0.01	0	5	0
Cenos	0.03	0.53	0.90	0.01	<0.01	3	1	0
Dogger Bank A	0.01	0.53	0.90	0.01	<0.01	18	19	25
Dogger Bank B	0.01	0.53	0.90	0.01	<0.01	23	23	31
Dogger Bank South	0.02	0.53	0.90	0.01	<0.01	99	63	10
Dogger Bank C	0.02	0.53	0.90	0.01	<0.01	12	11	17
Sofia	0.02	0.53	0.90	0.01	<0.01	19	15	24
Dudgeon				0.01	<0.01		0	0
Dudgeon Extension				0.01	<0.01		18	0
East Anglia One				0.01	<0.01		9	1
East Anglia One North				0.01	<0.01		2	1

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				0.01	<0.01		18	3
East Anglia Two				0.01	<0.01		3	1
Five Estuaries				0.01	<0.01		3	2
Galloper				0.01	<0.01		5	2
Green Volt	0.01	0.53	0.90	0.01	<0.01	1	2	0
Hornsea Project One	0.00	0.53	0.90	0.01	<0.01	0	260	4
Hornsea Project Two	0.00	0.53	0.90	0.01	<0.01	0	18	8
Hornsea Project Three				0.01	<0.01		29	8
Hornsea Four	0.00	0.53	0.90	0.01	<0.01	0	14	2
Humber Gateway	0.00	0.53	0.90	0.01	<0.01	0	0	0
Inch Cape	0.00	0.53	0.90	0.01	<0.01	0	26	3
Kincardine	0.00	0.53	0.90	0.01	<0.01	0	8	0
Lincs				0.01	<0.01		0	0
Moray East	0.00	0.53	0.90	0.01	<0.01	0	2	0
Moray West	0.00	0.53	0.90	0.01	<0.01	0	18	4
Morven North	0.04	0.53	0.90	0.01	<0.01	43	5	0
Morven South	0.04	0.53	0.90	0.01	<0.01	7	3	0
Muir Mhor	0.01	0.53	0.90	0.01	<0.01	20	1	3
Neart na Gaoithe	0.00	0.53	0.90	0.01	<0.01	0	24	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				0.01	<0.01		31	4
Norfolk Vanguard				0.01	<0.01		11	6
North Falls				0.01	<0.01		6	3
Ossian	0.05	0.53	0.90	0.01	<0.01	71	7	2
Outer Dowsing				0.01	<0.01		12	4
Pentland				0.01	<0.01		1	0
Race Bank				0.01	<0.01		1	0
Salamander	0.01	0.53	0.90	0.01	<0.01	12	1	0
SeaGreen Bravo	0.00	0.53	0.90	0.01	<0.01	0	16	3
SeaGreen Alpha	0.00	0.53	0.90	0.01	<0.01	0	39	4
Sheringham Shoal Extension				0.01	<0.01		2	0
Teesside	0.03	0.53	0.90	0.01	<0.01	3	0	0
Thanet				0.01	<0.01		0	0
Triton Knoll	0.01	0.53	0.90	0.01	<0.01	1	4	1
West of Orkney				0.01	<0.01		10	4
Total population estimates (all projects including Morven North and Morven South)						795	903	238
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				2	3	1
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				7	8	2

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			6			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			17			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.066			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.198			

Table 5.86: Mean-peak population estimates for kittiwake at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.01	0.53	0.90	0.01	<0.01	1	1	0
Beatrice	0.00	0.53	0.90	0.01	<0.01	0	9	3
Berwick Bank	0.05	0.92	0.90	0.01	<0.01	790	136	50
Blyth Demo	0.24	0.53	0.90	0.01	<0.01	5	5	0
Buchan	0.00	0.82	0.90	0.01	<0.01	0	1	1
Caledonia North	0.00	0.53	0.90	0.01	<0.01	0	4	0
Caledonia South	0.00	0.53	0.90	0.01	<0.01	0	5	0
Cenos	0.03	0.87	0.90	0.01	<0.01	5	1	0
Dogger Bank A	0.01	0.53	0.90	0.01	<0.01	18	19	25
Dogger Bank B	0.01	0.53	0.90	0.01	<0.01	23	23	31
Dogger Bank South	0.02	0.53	0.90	0.01	<0.01	99	63	10
Dogger Bank C	0.02	0.53	0.90	0.01	<0.01	12	11	17
Sofia	0.02	0.53	0.90	0.01	<0.01	19	15	24
Dudgeon				0.01	<0.01		0	0
Dudgeon Extension				0.01	<0.01		18	0
East Anglia One				0.01	<0.01		9	1
East Anglia One North				0.01	<0.01		2	1
East Anglia Three				0.01	<0.01		18	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.01	<0.01		3	1
Five Estuaries				0.01	<0.01		3	2
Galloper				0.01	<0.01		5	2
Green Volt	0.01	0.53	0.90	0.01	<0.01	1	2	0
Hornsea Project One	0.00	0.74	0.90	0.01	<0.01	0	260	4
Hornsea Project Two	0.00	0.86	0.90	0.01	<0.01	0	18	8
Hornsea Project Three				0.01	<0.01		29	8
Hornsea Four	0.00	0.53	0.90	0.01	<0.01	0	14	2
Humber Gateway	0.00	0.53	0.90	0.01	<0.01	0	0	0
Inch Cape	0.00	0.53	0.90	0.01	<0.01	0	26	3
Kincardine	0.00	0.95	0.90	0.01	<0.01	0	8	0
Lincs				0.01	<0.01		0	0
Moray East	0.00	0.92	0.90	0.01	<0.01	0	2	0
Moray West	0.00	0.97	0.90	0.01	<0.01	0	18	4
Morven North	0.04	0.87	0.90	0.01	<0.01	70	5	0
Morven South	0.04	0.78	0.90	0.01	<0.01	10	3	0
Muir Mhor	0.01	0.53	0.90	0.01	<0.01	20	1	3
Neart na Gaoithe	0.00	0.82	0.90	0.01	<0.01	0	24	0
Norfolk Boreas				0.01	<0.01		31	4
Norfolk Vanguard				0.01	<0.01		11	6
North Falls				0.01	<0.01		6	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Ossian	0.05	0.84	0.90	0.01	<0.01	113	7	2
Outer Dowsing				0.01	<0.01		12	4
Pentland				0.01	<0.01		1	0
Race Bank				0.01	<0.01		1	0
Salamander	0.01	0.69	0.90	0.01	<0.01	16	1	0
SeaGreen Bravo	0.00	0.94	0.90	0.01	<0.01	0	16	3
SeaGreen Alpha	0.00	0.94	0.90	0.01	<0.01	0	39	4
Sheringham Shoal Extension				0.01	<0.01		2	0
Teesside	0.03	0.53	0.90	0.01	<0.01	3	0	0
Thanet				0.01	<0.01		0	0
Triton Knoll	0.01	0.53	0.90	0.01	<0.01	1	4	1
West of Orkney				0.01	<0.01		10	4
Total population estimates (all projects including Morven North and Morven South)						1,207	903	238
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				4	3	1
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				7		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.080		

Table 5.87: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Farne Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	9,997	1.003	9.07	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	5.8	0.066	9,697	1.002	6.37	0.999	0.972	47.3
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	17.4	0.198	9,150	1.000	0.51	0.998	0.920	42.7
Applicant	7.0	0.080	9,616	1.002	5.76	0.999	0.967	46.7

Flamborough and Filey Coast Special Protection Area

- 5.5.3.55 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.88 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.3.56 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.88: Predicted annual mortality of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	0.3 to 0.9	0.1 to 0.2	0.0 to 0.1	0.4 to 1.2
Morven South	0.1 to 0.2	0.0 to 0.1	0.0 to 0.1	0.1 to 0.4
Total annual mortality (birds/annum)				0.5 to 1.5
Change in baseline mortality (percentage point change)				<0.001 to 0.001
Applicant’s approach				
Morven North	0.5	0.1	0.0	0.6
Morven South	0.1	0.0	0.0	0.2
Total annual mortality (birds/annum)				0.8
Change in baseline mortality (percentage point change)				0.001

- 5.5.3.57 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Flamborough and Filey Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPs as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.3.58 Table 5.89 (NatureScot’s apportioning approach) and Table 5.90 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.59 The predicted in-combination impact on kittiwake at the Flamborough and Filey Coast SPA is presented in Table 5.89 (NatureScot’s apportioning approach) and Table 5.90 (Applicant’s approach). The total in-combination impact apportioned to the kittiwake population at the Flamborough and Filey Coast SPA is 81 to 244 birds/annum when applying NatureScot’s approach and 96 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.60 The population of kittiwake at the Flamborough and Filey Coast SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Flamborough and Filey Coast SPA slightly increased (by 7%) between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.61 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.904 to 0.967; (i.e. the population after 35 years, would be 3.3 to 9.6% smaller than the CPS with a 50th percentile value of 41.4 to 47.1 (Table 5.91)). In terms of the population size, this means that the median of the impacted population fell within the 41st to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 0.4 to 0.5% for the upper NatureScot and Applicant approaches respectively and is considered to represent an immaterial contribution to the existing in-combination impact.
- 5.5.3.62 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.961 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.9% smaller than the counterfactual population size). The 50th percentile value is 46.6, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.63 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.64 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Dogger Bank South, East Anglia One North, East Anglia Two, Five Estuaries, Hornsea Three, Hornsea Four, Norfolk Boreas, Norfolk Vanguard, North Falls, Ossian, Outer Dowsing, Rampion 2, Sheringham Shoal Extension and Dudgeon Extension. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.65 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is not considered to represent a material increase in the existing in-combination impact. In addition consideration should be given to other factors discussed in paragraph 5.5.3.6 in relation to over-estimation of impacts, the uncertainties associated with PVA modelling and the compensation required at other projects. It is also important to note that the Flamborough and Filey Coast SPA falls under the remit of Natural England with Natural England not requiring consideration of displacement impacts for kittiwake.

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- 5.5.3.66 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account it is considered that impacts on kittiwake that undermine the conservation objectives of the at the Flamborough and Filey Coast SPA will therefore not occur as a result of in-combination collision risk impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.67 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.89: Mean-peak population estimates for kittiwake at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen				0.05	0.07		2	6
Beatrice				0.05	0.07		39	51
Berwick Bank	0.00	0.53	0.90	0.05	0.07	10	609	990
Blyth Demo	0.54	0.53	0.90	0.05	0.07	11	23	0
Buchan				0.05	0.07		6	25
Caledonia North				0.05	0.07		17	5
Caledonia South				0.05	0.07		23	4
Cenos				0.05	0.07		3	3
Dogger Bank A	0.12	0.53	0.90	0.05	0.07	200	83	499
Dogger Bank B	0.12	0.53	0.90	0.05	0.07	254	104	614
Dogger Bank South	0.97	0.53	0.90	0.05	0.07	4819	284	198
Dogger Bank C	0.14	0.53	0.90	0.05	0.07	116	50	349
Sofia	0.14	0.53	0.90	0.05	0.07	180	68	481
Dudgeon	1.00	0.53	0.90	0.05	0.07	17	1	6
Dudgeon Extension				0.05	0.07	0	79	10

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One	0.17	1.00	1.00	0.05	0.07	31	41	20
East Anglia One North	0.17	1.00	1.00	0.05	0.07	73	11	14
East Anglia Three	0.17	1.00	1.00	0.05	0.07	20	82	51
East Anglia Two	0.17	1.00	1.00	0.05	0.07	80	12	25
Five Estuaries	0.00	0.53	0.90	0.05	0.07	0	12	41
Galloper	0.00	0.53	0.90	0.05	0.07	0	21	50
Green Volt	0.00			0.05	0.07		8	6
Hornsea Project One	0.83	0.53	0.90	0.05	0.07	3478	1165	86
Hornsea Project Two	0.83	0.53	0.90	0.05	0.07	1154	79	153
Hornsea Project Three	0.93	0.53	0.90	0.05	0.07	2858	131	157
Hornsea Four	1.00	0.53	0.90	0.05	0.07	2626	64	33
Humber Gateway	0.99	0.53	0.90	0.05	0.07	59	1	2
Inch Cape	0.00	0.53	0.90	0.05	0.07	0	116	60
Kincardine	0.00	0.53	0.90	0.05	0.07	0	35	4
Lincs	0.99	0.53	0.90	0.05	0.07	8	2	1

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Moray East				0.05	0.07		7	9
Moray West				0.05	0.07		80	77
Morven North	0.08	0.53	0.90	0.05	0.07	100	22	10
Morven South	0.13	0.53	0.90	0.05	0.07	25	15	8
Muir Mhor				0.05	0.07		3	54
Neart na Gaoithe	0.00	0.53	0.90	0.05	0.07	0	110	10
Norfolk Boreas	0.86	0.53	0.90	0.05	0.07	237	140	76
Norfolk Vanguard	0.86	0.53	0.90	0.05	0.07	118	48	118
North Falls	0.00	0.53	0.90	0.05	0.07	0	25	61
Ossian	0.12	0.53	0.90	0.05	0.07	187	31	42
Outer Dowsing	0.55	0.53	0.90	0.05	0.07	1319	54	82
Pentland				0.05	0.07		6	3
Race Bank	0.99	0.53	0.90	0.05	0.07	59	5	3
Salamander				0.05	0.07		6	8
SeaGreen Bravo	0.00	0.53	0.90	0.05	0.07	0	73	68
SeaGreen Alpha	0.00	0.53	0.90	0.05	0.07	0	173	80

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Sheringham Shoal Extension	1.00	0.53	0.90	0.05	0.07	91	8	5
Teesside	0.93	0.53	0.90	0.05	0.07	88	0	1
Thanet				0.05	0.07		2	1
Triton Knoll	0.99	0.53	0.90	0.05	0.07	135	16	21
West of Orkney				0.05	0.07		43	87
Total population estimates (all projects including Morven North and Morven South)						18,352	4,041	4,767
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				55	12	14
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				165	36	43
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				81		
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				244		
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.079		
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				0.237		

Table 5.90: Mean-peak population estimates for kittiwake at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen				0.05	0.07		2	6
Beatrice				0.05	0.07		39	51
Berwick Bank	0.00	0.92	0.90	0.05	0.07	18	609	990
Blyth Demo	0.54	0.53	0.90	0.05	0.07	11	23	0
Buchan				0.05	0.07		6	25
Caledonia North				0.05	0.07		17	5
Caledonia South				0.05	0.07		23	4
Cenos				0.05	0.07		3	3
Dogger Bank A	0.12	0.53	0.90	0.05	0.07	200	83	499
Dogger Bank B	0.12	0.53	0.90	0.05	0.07	254	104	614
Dogger Bank South	0.97	0.53	0.90	0.05	0.07	4819	284	198
Dogger Bank C	0.14	0.53	0.90	0.05	0.07	116	50	349
Sofia	0.14	0.53	0.90	0.05	0.07	180	68	481
Dudgeon	1.00	0.53	0.90	0.05	0.07	17	1	6
Dudgeon Extension				0.05	0.07	0	79	10
East Anglia One	0.17	1.00	1.00	0.05	0.07	31	41	20
East Anglia One North	0.17	1.00	1.00	0.05	0.07	73	11	14
East Anglia Three	0.17	1.00	1.00	0.05	0.07	20	82	51

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two	0.17	1.00	1.00	0.05	0.07	80	12	25
Five Estuaries	0.00	0.53	0.90	0.05	0.07	0	12	41
Galloper	0.00	0.53	0.90	0.05	0.07	0	21	50
Green Volt	0.00			0.05	0.07		8	6
Hornsea Project One	0.83	0.74	0.90	0.05	0.07	4866	1165	86
Hornsea Project Two	0.83	0.86	0.90	0.05	0.07	1866	79	153
Hornsea Project Three	0.93	0.88	0.90	0.05	0.07	4721	131	157
Hornsea Four	1.00	0.53	0.90	0.05	0.07	2626	64	33
Humber Gateway	0.99	0.53	0.90	0.05	0.07	59	1	2
Inch Cape	0.00	0.53	0.90	0.05	0.07	0	116	60
Kincardine	0.00	0.95	0.90	0.05	0.07	0	35	4
Lincs	0.99	0.53	0.90	0.05	0.07	8	2	1
Moray East				0.05	0.07		7	9
Moray West				0.05	0.07		80	77
Morven North	0.08	0.87	0.90	0.05	0.07	164	22	10
Morven South	0.13	0.78	0.90	0.05	0.07	37	15	8
Muir Mhor				0.05	0.07		3	54
Neart na Gaoithe	0.00	0.82	0.90	0.05	0.07	0	110	10
Norfolk Boreas	0.86	0.53	0.90	0.05	0.07	237	140	76
Norfolk Vanguard	0.86	0.53	0.90	0.05	0.07	118	48	118

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls	0.00	0.59	0.90	0.05	0.07	0	25	61
Ossian	0.12	0.84	0.90	0.05	0.07	296	31	42
Outer Dowsing	0.55	0.77	0.90	0.05	0.07	1903	54	82
Pentland				0.05	0.07		6	3
Race Bank	0.99	0.53	0.90	0.05	0.07	59	5	3
Salamander				0.05	0.07		6	8
SeaGreen Bravo	0.00	0.94	0.90	0.05	0.07	0	73	68
SeaGreen Alpha	0.00	0.94	0.90	0.05	0.07	0	173	80
Sheringham Shoal Extension	1.00	0.53	0.90	0.05	0.07	91	8	5
Teesside	0.93	0.53	0.90	0.05	0.07	88	0	1
Thanet				0.05	0.07		2	1
Triton Knoll	0.99	0.53	0.90	0.05	0.07	135	16	21
West of Orkney				0.05	0.07		43	87
Total population estimates (all projects including Morven North and Morven South)						23,093	4,041	4,767
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				69	12	14
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				96		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.093		

Table 5.91: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	117,660	1.002	8.97	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	81.5	0.079	113,843	1.002	5.36	0.999	0.967	47.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	244.4	0.237	106,297	1.000	-1.62	0.997	0.904	41.4
Applicant	95.7	0.093	113,219	1.001	4.78	0.999	0.961	46.6

Fowlsheugh Special Protection Area

5.5.3.68 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.92 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.69 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Fowlsheugh SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.92: Predicted annual mortality of kittiwake at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	1.1 to 3.2	0.0 to 0.0	0.0 to 0.0	1.1 to 3.3
Morven South	0.1 to 0.4	0.0 to 0.0	0.0 to 0.0	0.1 to 0.4
Total annual mortality (birds/annum)				1.2 to 3.7
Change in baseline mortality (percentage point change)				0.004 to 0.013
Applicant’s approach				
Morven North	1.8	0.0	0.0	1.8
Morven South	0.2	0.0	0.0	0.2
Total annual mortality (birds/annum)				2.0
Change in baseline mortality (percentage point change)				0.004

5.5.3.70 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Fowlsheugh SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.71 Table 5.93 (NatureScot’s apportioning approach) and Table 5.94 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.72 The predicted in-combination impact on kittiwake at the Fowlsheugh SPA is presented in Table 5.93 (NatureScot’s apportioning approach) and Table 5.94 (Applicant’s approach). The total in-combination impact apportioned to the kittiwake population at the Fowlsheugh SPA is 24 to 73 birds/annum when applying NatureScot’s approach and 35 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.73 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.897 to 0.964; (i.e. the population after 35 years, would be 3.6 to 10.3% smaller than the CPS with a 50th percentile value of 40.6 to 46.7 (Table 5.95)). In terms of the population size, this means that the median of the impacted population fell within the 41st to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.74 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.949 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 5.1% smaller than the counterfactual population size). The 50th percentile value is 45.7, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.75 The population of kittiwake at the Fowlsheugh SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Fowlsheugh SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.76 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.77 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEIOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.78 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.3.79 Impacts on kittiwake that undermine the conservation objectives of the at the Fowlsheugh SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.80 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI on the kittiwake population of the Fowlsheugh SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.93: Mean-peak population estimates for kittiwake at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.24	0.53	0.90	0.01	0.02	15	1	2
Beatrice	0.00	0.53	0.90	0.01	0.02	0	10	13
Berwick Bank	0.17	0.53	0.90	0.01	0.02	1741	151	246
Blyth Demo	0.05	0.53	0.90	0.01	0.02	1	6	0
Buchan	0.11	0.53	0.90	0.01	0.02	10	1	6
Caledonia North	0.05	0.53	0.90	0.01	0.02	16	4	1
Caledonia South	0.06	0.53	0.90	0.01	0.02	42	6	1
Cenos	0.23	0.53	0.90	0.01	0.02	23	1	1
Dogger Bank A				0.01	0.02		21	124
Dogger Bank B				0.01	0.02		26	152
Dogger Bank South				0.01	0.02		70	49
Dogger Bank C				0.01	0.02		13	87
Sofia				0.01	0.02		17	119
Dudgeon				0.01	0.02		0	1
Dudgeon Extension				0.01	0.02		20	2
East Anglia One				0.01	0.02		10	5
East Anglia One North				0.01	0.02		3	4

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				0.01	0.02		20	13
East Anglia Two				0.01	0.02		3	6
Five Estuaries				0.01	0.02		3	10
Galloper				0.01	0.02		5	12
Green Volt	0.15	0.53	0.90	0.01	0.02	13	2	1
Hornsea Project One				0.01	0.02		289	21
Hornsea Project Two				0.01	0.02		20	38
Hornsea Project Three				0.01	0.02		33	39
Hornsea Four				0.01	0.02		16	8
Humber Gateway				0.01	0.02		0	0
Inch Cape	0.29	0.53	0.90	0.01	0.02	531	29	15
Kincardine	0.29	0.53	0.90	0.01	0.02	93	9	1
Lincs				0.01	0.02		0	0
Moray East	0.00	0.53	0.90	0.01	0.02	0	2	2
Moray West	0.00	0.53	0.90	0.01	0.02	0	20	19
Morven North	0.30	0.53	0.90	0.01	0.02	357	6	2
Morven South	0.23	0.53	0.90	0.01	0.02	44	4	2
Muir Mhor	0.23	0.53	0.90	0.01	0.02	352	1	13
Neart na Gaoithe	0.08	0.53	0.90	0.01	0.02	81	27	2

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				0.01	0.02		35	19
Norfolk Vanguard				0.01	0.02		12	29
North Falls				0.01	0.02		6	15
Ossian	0.21	0.53	0.90	0.01	0.02	318	8	10
Outer Dowsing				0.01	0.02		13	20
Pentland	0.00	0.53	0.90	0.01	0.02	0	2	1
Race Bank				0.01	0.02		1	1
Salamander	0.10	0.53	0.90	0.01	0.02	183	1	2
SeaGreen Bravo	0.39	0.53	0.90	0.01	0.02	774	18	17
SeaGreen Alpha	0.39	0.53	0.90	0.01	0.02	1342	43	20
Sheringham Shoal Extension				0.01	0.02		2	1
Teesside	0.02	0.53	0.90	0.01	0.02	1	0	0
Thanet				0.01	0.02		0	0
Triton Knoll				0.01	0.02		4	5
West of Orkney	0.01	0.53	0.90	0.01	0.02	6	11	22
Total population estimates (all projects including Morven North and Morven South)						5,942	1,003	1,183
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				18	3	4
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				53	9	11

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			24			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			73			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.087			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.261			

Table 5.94: Mean-peak population estimates for kittiwake at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.24	0.53	0.90	0.01	0.02	15	1	2
Beatrice	0.00	0.53	0.90	0.01	0.02	0	10	13
Berwick Bank	0.17	0.92	0.90	0.01	0.02	3019	151	246
Blyth Demo	0.05	0.53	0.90	0.01	0.02	1	6	0
Buchan	0.11	0.82	0.90	0.01	0.02	15	1	6
Caledonia North	0.05	0.53	0.90	0.01	0.02	16	4	1
Caledonia South	0.06	0.53	0.90	0.01	0.02	42	6	1
Cenos	0.23	0.87	0.90	0.01	0.02	37	1	1
Dogger Bank A				0.01	0.02		21	124
Dogger Bank B				0.01	0.02		26	152
Dogger Bank South				0.01	0.02		70	49
Dogger Bank C				0.01	0.02		13	87
Sofia				0.01	0.02		17	119
Dudgeon				0.01	0.02		0	1
Dudgeon Extension				0.01	0.02		20	2
East Anglia One				0.01	0.02		10	5
East Anglia One North				0.01	0.02		3	4
East Anglia Three				0.01	0.02		20	13

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.01	0.02		3	6
Five Estuaries				0.01	0.02		3	10
Galloper				0.01	0.02		5	12
Green Volt	0.15	0.53	0.90	0.01	0.02	13	2	1
Hornsea Project One		0.74		0.01	0.02		289	21
Hornsea Project Two		0.86		0.01	0.02		20	38
Hornsea Project Three		0.88		0.01	0.02		33	39
Hornsea Four				0.01	0.02		16	8
Humber Gateway				0.01	0.02		0	0
Inch Cape	0.29	0.53	0.90	0.01	0.02	531	29	15
Kincardine	0.29	0.95	0.90	0.01	0.02	166	9	1
Lincs				0.01	0.02		0	0
Moray East	0.00	0.92	0.90	0.01	0.02	0	2	2
Moray West	0.00	0.97	0.90	0.01	0.02	0	20	19
Morven North	0.30	0.87	0.90	0.01	0.02	585	6	2
Morven South	0.23	0.78	0.90	0.01	0.02	65	4	2
Muir Mhor	0.23	0.53	0.90	0.01	0.02	352	1	13
Neart na Gaoithe	0.08	0.82	0.90	0.01	0.02	125	27	2
Norfolk Boreas				0.01	0.02		35	19
Norfolk Vanguard				0.01	0.02		12	29

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls		0.59		0.01	0.02		6	15
Ossian	0.21	0.84	0.90	0.01	0.02	505	8	10
Outer Dowsing		0.77		0.01	0.02		13	20
Pentland	0.00	0.53	0.90	0.01	0.02	0	2	1
Race Bank				0.01	0.02		1	1
Salamander	0.10	0.69	0.90	0.01	0.02	238	1	2
SeaGreen Bravo	0.39	0.94	0.90	0.01	0.02	1369	18	17
SeaGreen Alpha	0.39	0.94	0.90	0.01	0.02	2375	43	20
Sheringham Shoal Extension				0.01	0.02		2	1
Teesside	0.02	0.53	0.90	0.01	0.02	1	0	0
Thanet				0.01	0.02		0	0
Triton Knoll				0.01	0.02		4	5
West of Orkney	0.01	0.53	0.90	0.01	0.02	6	11	22
Total population estimates (all projects including Morven North and Morven South)						9,477	1,003	1,183
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				28	3	4
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				35		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.125		

Table 5.95: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Fowlsheugh SPA after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Baseline	-	-	31,491	1.002	8.23	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	24.4	0.087	30,375	1.001	4.49	0.999	0.964	46.7
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	73.2	0.261	28,390	0.999	-2.94	0.997	0.897	40.6
Applicant	35.0	0.125	29,982	1.001	2.92	0.999	0.949	45.7

Forth Islands Special Protection Area

- 5.5.3.81 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.96 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.3.82 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Forth Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.96: Predicted annual mortality of kittiwake at the Forth Islands SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	0.2 to 0.5	0.0 to 0.0	0.0 to 0.0	0.2 to 0.5
Morven South	0.0 to 0.1	0.0 to 0.0	0.0 to 0.0	0.0 to 0.1
Total annual mortality (birds/annum)				0.2 to 0.6
Change in baseline mortality (percentage point change)				0.002 to 0.007
Applicant’s approach				
Morven North	0.3	0.0	0.0	0.3
Morven South	0.0	0.0	0.0	0.0
Total annual mortality (birds/annum)				0.3
Change in baseline mortality (percentage point change)				0.001

- 5.5.3.83 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.3.84 Table 5.97 (NatureScot’s apportioning approach) and Table 5.98 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.85 The predicted in-combination impact on kittiwake at the Forth Islands SPA is presented in Table 5.97 (NatureScot’s apportioning approach) and Table 5.98 (Applicant’s approach). The total in-combination impact apportioned to the kittiwake population at the Forth Islands SPA is 8 to 24 birds/annum when applying NatureScot’s approach and 11 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.86 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.896 to 0.965; (i.e. the population after 35 years, would be 3.5 to 10.4% smaller than the CPS with a 50th percentile value of 40.4 to 47.1 (Table 5.99)). In terms of the population size, this means that the median of the impacted population fell within the 40th to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.87 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.951 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 4.9% smaller than the counterfactual population size). The 50th percentile value is 45.4, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.88 The population of kittiwake at the Forth Islands SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Forth Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.89 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.90 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.91 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.3.92 Impacts on kittiwake that undermine the conservation objectives of the at the Forth Islands SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.93 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Forth Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.97: Mean-peak population estimates for kittiwake at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.05	0.53	0.90	<0.01	0.01	3	0	1
Beatrice	0.00	0.53	0.90	<0.01	0.01	0	3	4
Berwick Bank	0.06	0.53	0.90	<0.01	0.01	577	50	82
Blyth Demo	0.04	0.53	0.90	<0.01	0.01	1	2	0
Buchan	0.02	0.53	0.90	<0.01	0.01	2	0	2
Caledonia North	0.01	0.53	0.90	<0.01	0.01	3	1	0
Caledonia South	0.01	0.53	0.90	<0.01	0.01	8	2	0
Cenos	0.06	0.53	0.90	<0.01	0.01	6	0	0
Dogger Bank A	0.00	0.53	0.90	<0.01	0.01	0	7	41
Dogger Bank B	0.00	0.53	0.90	<0.01	0.01	0	9	51
Dogger Bank South	0.00	0.53	0.90	<0.01	0.01	0	23	16
Dogger Bank C				<0.01	0.01		4	29
Sofia				<0.01	0.01		6	40
Dudgeon				<0.01	0.01		0	0
Dudgeon Extension				<0.01	0.01		7	1
East Anglia One				<0.01	0.01		3	2

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				<0.01	0.01		1	1
East Anglia Three				<0.01	0.01		7	4
East Anglia Two				<0.01	0.01		1	2
Five Estuaries				<0.01	0.01		1	3
Galloper				<0.01	0.01		2	4
Green Volt	0.02	0.53	0.90	<0.01	0.01	2	1	0
Hornsea Project One				<0.01	0.01		96	7
Hornsea Project Two				<0.01	0.01		6	13
Hornsea Project Three				<0.01	0.01		11	13
Hornsea Four				<0.01	0.01		5	3
Humber Gateway				<0.01	0.01		0	0
Inch Cape	0.21	0.53	0.90	<0.01	0.01	389	10	5
Kincardine	0.00	0.53	0.90	<0.01	0.01	0	3	0
Lincs				<0.01	0.01		0	0
Moray East	0.00	0.53	0.90	<0.01	0.01	0	1	1
Moray West	0.00	0.53	0.90	<0.01	0.01	0	7	6
Morven North	0.04	0.53	0.90	<0.01	0.01	52	2	1

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.05	0.53	0.90	<0.01	0.01	10	1	1
Muir Mhor	0.03	0.53	0.90	<0.01	0.01	43	0	4
Near na Gaoithe	0.47	0.53	0.90	<0.01	0.01	491	9	1
Norfolk Boreas				<0.01	0.01		12	6
Norfolk Vanguard				<0.01	0.01		4	10
North Falls				<0.01	0.01		2	5
Ossian	0.04	0.53	0.90	<0.01	0.01	64	3	3
Outer Dowsing				<0.01	0.01		4	7
Pentland				<0.01	0.01		1	0
Race Bank				<0.01	0.01		0	0
Salamander	0.01	0.53	0.90	<0.01	0.01	19	0	1
SeaGreen Bravo	0.05	0.53	0.90	<0.01	0.01	94	6	6
SeaGreen Alpha	0.05	0.53	0.90	<0.01	0.01	163	14	7
Sheringham Shoal Extension				<0.01	0.01		1	0
Teesside	0.01	0.53	0.90	<0.01	0.01	1	0	0
Thanet				<0.01	0.01		0	0
Triton Knoll				<0.01	0.01		1	2
West of Orkney				<0.01	0.01		4	7
Total population estimates (all projects including Morven North and Morven South)						1,927	333	393

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			6	1	1	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			17	3	4	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			8			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			24			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.088			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.263			

Table 5.98: Mean-peak population estimates for kittiwake at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.05	0.53	0.90	<0.01	0.01	3	0	1
Beatrice	0.00	0.53	0.90	<0.01	0.01	0	3	4
Berwick Bank	0.06	0.92	0.90	<0.01	0.01	1000	50	82
Blyth Demo	0.04	0.53	0.90	<0.01	0.01	1	2	0
Buchan	0.02	0.82	0.90	<0.01	0.01	3	0	2
Caledonia North	0.01	0.53	0.90	<0.01	0.01	3	1	0
Caledonia South	0.01	0.53	0.90	<0.01	0.01	8	2	0
Cenos	0.06	0.87	0.90	<0.01	0.01	10	0	0
Dogger Bank A	0.00	0.53	0.90	<0.01	0.01	0	7	41
Dogger Bank B	0.00	0.53	0.90	<0.01	0.01	0	9	51
Dogger Bank South	0.00	0.53	0.90	<0.01	0.01	0	23	16
Dogger Bank C				<0.01	0.01		4	29
Sofia				<0.01	0.01		6	40
Dudgeon				<0.01	0.01		0	0
Dudgeon Extension				<0.01	0.01		7	1
East Anglia One				<0.01	0.01		3	2
East Anglia One North				<0.01	0.01		1	1
East Anglia Three				<0.01	0.01		7	4

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				<0.01	0.01		1	2
Five Estuaries				<0.01	0.01		1	3
Galloper				<0.01	0.01		2	4
Green Volt	0.02	0.53	0.90	<0.01	0.01	2	1	0
Hornsea Project One				<0.01	0.01		96	7
Hornsea Project Two				<0.01	0.01		6	13
Hornsea Project Three				<0.01	0.01		11	13
Hornsea Four				<0.01	0.01		5	3
Humber Gateway				<0.01	0.01		0	0
Inch Cape	0.21	0.53	0.90	<0.01	0.01	389	10	5
Kincardine	0.00	0.95	0.90	<0.01	0.01	0	3	0
Lincs				<0.01	0.01		0	0
Moray East	0.00	0.92	0.90	<0.01	0.01	0	1	1
Moray West	0.00	0.97	0.90	<0.01	0.01	0	7	6
Morven North	0.04	0.87	0.90	<0.01	0.01	85	2	1
Morven South	0.05	0.78	0.90	<0.01	0.01	15	1	1
Muir Mhor	0.03	0.53	0.90	<0.01	0.01	43	0	4
Neart na Gaoithe	0.47	0.82	0.90	<0.01	0.01	760	9	1
Norfolk Boreas				<0.01	0.01		12	6
Norfolk Vanguard				<0.01	0.01		4	10

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls		0.59		<0.01	0.01		2	5
Ossian	0.04	0.84	0.90	<0.01	0.01	102	3	3
Outer Dowsing		0.77		<0.01	0.01		4	7
Pentland				<0.01	0.01		1	0
Race Bank				<0.01	0.01		0	0
Salamander	0.01	0.69	0.90	<0.01	0.01	24	0	1
SeaGreen Bravo	0.05	0.94	0.90	<0.01	0.01	166	6	6
SeaGreen Alpha	0.05	0.94	0.90	<0.01	0.01	288	14	7
Sheringham Shoal Extension				<0.01	0.01		1	0
Teesside	0.01	0.53	0.90	<0.01	0.01	1	0	0
Thanet				<0.01	0.01		0	0
Triton Knoll				<0.01	0.01		1	2
West of Orkney				<0.01	0.01		4	7
Total population estimates (all projects including Morven North and Morven South)						2,903	333	393
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				9	1	1
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				11		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.120		

Table 5.99: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	10,318	1.003	9.47	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	8.0	0.088	9,940	1.002	5.67	0.999	0.965	47.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	23.9	0.263	9,230	1.000	-1.37	0.997	0.896	40.4
Applicant	10.9	0.120	9,750	1.001	4.45	0.999	0.951	45.4

St Abb's Head to Fast Castle Special Protection Area

5.5.3.94 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.100 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.95 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.100: Predicted annual mortality of kittiwake at the St Abb's Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	0.2 to 0.6	0.0 to 0.0	0.0 to 0.0	0.2 to 0.6
Morven South	0.0 to 0.1	0.0 to 0.0	0.0 to 0.0	0.0 to 0.1
Total annual mortality (birds/annum)				0.2 to 0.7
Change in baseline mortality (percentage point change)				0.002 to 0.007
Applicant's approach				
Morven North	0.3	0.0	0.0	0.3
Morven South	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)				0.4
Change in baseline mortality (percentage point change)				0.004

5.5.3.96 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the St Abb's Head to Fast Castle SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPs as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.97 Table 5.101 (NatureScot's apportioning approach) and Table 5.102 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.98 The predicted in-combination impact on kittiwake at the St Abb's Head to Fast Castle SPA is presented in Table 5.101 (NatureScot's apportioning approach) and Table 5.102 (Applicant's approach). The total in-combination impact apportioned to the kittiwake population at the St Abb's Head to Fast Castle SPA is 17 to 51 birds/annum when applying NatureScot's approach and 33 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.99 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.815 to 0.934; (i.e. the population after 35 years, would be 6.6 to 18.5% smaller than the CPS with a 50th percentile value of 32.4 to 43.8 (Table 5.103)). In terms of the population size, this means that the median of the impacted population fell within the 32nd to 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.998 which translates to a growth rate 0.2 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 1.0 to 1.1% for the Applicant and upper NatureScot approaches respectively. and is considered to represent an immaterial contribution to the existing in-combination impact.
- 5.5.3.100 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.876 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 12.4% smaller than the counterfactual population size). The 50th percentile value is 38.4, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.101 The population of kittiwake at the St Abb's Head to Fast Castle SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the St Abb's Head to Fast Castle SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has stayed stable since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.102 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.103 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Salamander The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.104 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. The contribution of Morven North to the in-combination impact is also not considered to materially alter the current in-combination impact.
- 5.5.3.105 Impacts on kittiwake that undermine the conservation objectives of the at the St Abb's Head to Fast Castle SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.

5.5.3.106 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.101: Mean-peak population estimates for kittiwake at the St Abb’s Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.53	0.90	<0.01	0.01	2	0	1
Beatrice	0.00	0.53	0.90	<0.01	0.01	0	4	5
Berwick Bank	0.52	0.53	0.90	<0.01	0.01	5284	55	90
Blyth Demo	0.09	0.53	0.90	<0.01	0.01	2	2	0
Buchan	0.01	0.53	0.90	<0.01	0.01	1	1	2
Caledonia North	0.01	0.53	0.90	<0.01	0.01	2	2	0
Caledonia South	0.01	0.53	0.90	<0.01	0.01	5	2	0
Cenos	0.05	0.53	0.90	<0.01	0.01	5	0	0
Dogger Bank A	0.00	0.53	0.90	<0.01	0.01	0	8	45
Dogger Bank B	0.00	0.53	0.90	<0.01	0.01	0	9	56
Dogger Bank South	0.02	0.53	0.90	<0.01	0.01	104	26	18
Dogger Bank C	0.00	0.53	0.90	<0.01	0.01	0	5	32
Sofia	0.00	0.53	0.90	<0.01	0.01	0	6	44
Dudgeon				<0.01	0.01		0	1
Dudgeon Extension				<0.01	0.01		7	1
East Anglia One				<0.01	0.01		4	2
East Anglia One North				<0.01	0.01		1	1

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				<0.01	0.01		7	5
East Anglia Two				<0.01	0.01		1	2
Five Estuaries				<0.01	0.01		1	4
Galloper				<0.01	0.01		2	5
Green Volt	0.02	0.53	0.90	<0.01	0.01	2	1	1
Hornsea Project One				<0.01	0.01		105	8
Hornsea Project Two				<0.01	0.01		7	14
Hornsea Project Three				<0.01	0.01		12	14
Hornsea Four	0.00	0.53	0.90	<0.01	0.01	0	6	3
Humber Gateway	0.00	0.53	0.90	<0.01	0.01	0	0	0
Inch Cape	0.06	0.53	0.90	<0.01	0.01	104	11	5
Kincardine	0.00	0.53	0.90	<0.01	0.01	0	3	0
Lincs				<0.01	0.01		0	0
Moray East	0.00	0.53	0.90	<0.01	0.01	0	1	1
Moray West	0.00	0.53	0.90	<0.01	0.01	0	7	7
Morven North	0.05	0.53	0.90	<0.01	0.01	62	2	1
Morven South	0.07	0.53	0.90	<0.01	0.01	14	1	1
Muir Mhor	0.02	0.53	0.90	<0.01	0.01	30	0	5
Neart na Gaoithe	0.10	0.53	0.90	<0.01	0.01	102	10	1

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				<0.01	0.01		13	7
Norfolk Vanguard				<0.01	0.01		4	11
North Falls				<0.01	0.01		2	5
Ossian	0.06	0.53	0.90	<0.01	0.01	91	3	4
Outer Dowsing				<0.01	0.01		5	7
Pentland				<0.01	0.01		1	0
Race Bank				<0.01	0.01		0	0
Salamander	0.01	0.53	0.90	<0.01	0.01	19	1	1
SeaGreen Bravo	0.02	0.53	0.90	<0.01	0.01	49	7	6
SeaGreen Alpha	0.02	0.53	0.90	<0.01	0.01	85	16	7
Sheringham Shoal Extension				<0.01	0.01		1	0
Teesside	0.02	0.53	0.90	<0.01	0.01	2	0	0
Thanet				<0.01	0.01		0	0
Triton Knoll				<0.01	0.01		1	2
West of Orkney				<0.01	0.01		4	8
Total population estimates (all projects including Morven North and Morven South)						5,964	366	431
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				8	4	5
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				24	12	14

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			17			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			51			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.165			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.496			

Table 5.102: Mean-peak population estimates for kittiwake at the St Abb's Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.53	0.90	<0.01	0.01	2	0	1
Beatrice	0.00	0.53	0.90	<0.01	0.01	0	4	5
Berwick Bank	0.52	0.92	0.90	<0.01	0.01	9162	55	90
Blyth Demo	0.09	0.53	0.90	<0.01	0.01	2	2	0
Buchan	0.01	0.82	0.90	<0.01	0.01	2	1	2
Caledonia North	0.01	0.53	0.90	<0.01	0.01	2	2	0
Caledonia South	0.01	0.53	0.90	<0.01	0.01	5	2	0
Cenos	0.05	0.87	0.90	<0.01	0.01	8	0	0
Dogger Bank A	0.00	0.53	0.90	<0.01	0.01	0	8	45
Dogger Bank B	0.00	0.53	0.90	<0.01	0.01	0	9	56
Dogger Bank South	0.02	0.53	0.90	<0.01	0.01	104	26	18
Dogger Bank C	0.00	0.53	0.90	<0.01	0.01	0	5	32
Sofia	0.00	0.53	0.90	<0.01	0.01	0	6	44
Dudgeon				<0.01	0.01		0	1
Dudgeon Extension				<0.01	0.01		7	1
East Anglia One				<0.01	0.01		4	2
East Anglia One North				<0.01	0.01		1	1
East Anglia Three				<0.01	0.01		7	5

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				<0.01	0.01		1	2
Five Estuaries				<0.01	0.01		1	4
Galloper				<0.01	0.01		2	5
Green Volt	0.02	0.53	0.90	<0.01	0.01	2	1	1
Hornsea Project One		0.74		<0.01	0.01		105	8
Hornsea Project Two		0.86		<0.01	0.01		7	14
Hornsea Project Three		0.88		<0.01	0.01		12	14
Hornsea Four	0.00	0.53	0.90	<0.01	0.01	0	6	3
Humber Gateway	0.00	0.53	0.90	<0.01	0.01	0	0	0
Inch Cape	0.06	0.53	0.90	<0.01	0.01	104	11	5
Kincardine	0.00	0.95	0.90	<0.01	0.01	0	3	0
Lincs				<0.01	0.01		0	0
Moray East	0.00	0.92	0.90	<0.01	0.01	0	1	1
Moray West	0.00	0.97	0.90	<0.01	0.01	0	7	7
Morven North	0.05	0.87	0.90	<0.01	0.01	102	2	1
Morven South	0.07	0.78	0.90	<0.01	0.01	20	1	1
Muir Mhor	0.02	0.53	0.90	<0.01	0.01	30	0	5
Neart na Gaoithe	0.10	0.82	0.90	<0.01	0.01	158	10	1
Norfolk Boreas				<0.01	0.01		13	7
Norfolk Vanguard				<0.01	0.01		4	11

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls		0.59		<0.01	0.01		2	5
Ossian	0.06	0.84	0.90	<0.01	0.01	144	3	4
Outer Dowsing		0.77		<0.01	0.01		5	7
Pentland				<0.01	0.01		1	0
Race Bank				<0.01	0.01		0	0
Salamander	0.01	0.69	0.90	<0.01	0.01	24	1	1
SeaGreen Bravo	0.02	0.94	0.90	<0.01	0.01	87	7	6
SeaGreen Alpha	0.02	0.94	0.90	<0.01	0.01	150	16	7
Sheringham Shoal Extension				<0.01	0.01		1	0
Teesside	0.02	0.53	0.90	<0.01	0.01	2	0	0
Thanet				<0.01	0.01		0	0
Triton Knoll				<0.01	0.01		1	2
West of Orkney				<0.01	0.01		4	8
Total population estimates (all projects including Morven North and Morven South)						10,110	366	431
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				30	1	1
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				33		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.318		

Table 5.103: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the St Abb's Head to Fast Castle Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	11,660	1.003	9.61	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	17.0	0.165	10,900	1.001	2.30	0.998	0.934	43.8
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	51.1	0.496	9,511	0.997	-10.64	0.994	0.815	32.4
Applicant	32.7	0.318	10,210	0.999	-3.66	0.996	0.876	38.4

Troup, Pennan and Lion's Heads Special Protection Area

5.5.3.107 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.104 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.108 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.104: Predicted annual mortality of kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	0.2 to 0.6	0.0 to 0.1	0.0 to 0.0	0.2 to 0.7
Morven South	0.0 to 0.1	0.0 to 0.1	0.0 to 0.0	0.1 to 0.2
Total annual mortality (birds/annum)				0.3 to 0.9
Change in baseline mortality (percentage point change)				0.001 to 0.004
Applicant's approach				
Morven North	0.3	0.0	0.0	0.4
Morven South	0.0	0.0	0.0	0.1
Total annual mortality (birds/annum)				0.4
Change in baseline mortality (percentage point change)				0.002

5.5.3.109 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of kittiwake from the Troup, Pennan and Lion's Heads SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.110 Table 5.105 (NatureScot's apportioning approach) and Table 5.106 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.111 The predicted in-combination impact on kittiwake at the Troup, Pennan and Lion's Heads SPA is presented in Table 5.105 (NatureScot's apportioning approach) and Table 5.106 (Applicant's approach). The total in-combination impact apportioned to the kittiwake population at the Troup, Pennan and Lion's Heads SPA is 15 to 46 birds/annum when applying NatureScot's approach and 17 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.112 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.914 to 0.970; (i.e. the population after 35 years would be 3.0 to 8.6% smaller than the CPS with a 50th percentile value of 42.0 to 46.8 (Table 5.107)). In terms of the population size, this means that the median of the impacted population fell within the 42nd to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population. However, it is also important to note that the contribution of Morven North to the in-combination total is only 1.6 to 2.2% for the upper NatureScot and Applicant approaches respectively, and is considered to represent an immaterial contribution to the existing in-combination impact.
- 5.5.3.113 When modelling the annual impact associated with the Applicant's approach for kittiwake, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.967 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.3% smaller than the counterfactual population size). The 50th percentile value is 47.1, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.114 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.115 The population of kittiwake at Troup, Pennan and Lion's Heads SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Troup, Pennan and Lion's Heads SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.116 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhòr, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.117 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA has decreased between the two most recent national censuses. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is not considered to represent a material increase in the existing in-combination impact.
- 5.5.3.118 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.

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- 5.5.3.119 Impacts on kittiwake that undermine the conservation objectives of the at the Troup, Pennan and Lion's Heads SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.120 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.105: Mean-peak population estimates for kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.06	0.53	0.90	0.02	0.03	4	1	2
Beatrice	0.03	0.53	0.90	0.02	0.03	13	15	20
Berwick Bank	0.01	0.53	0.90	0.02	0.03	51	241	392
Blyth Demo	0.01	0.53	0.90	0.02	0.03	0	9	0
Buchan	0.21	0.53	0.90	0.02	0.03	18	2	10
Caledonia North	0.16	0.53	0.90	0.02	0.03	55	7	2
Caledonia South	0.29	0.53	0.90	0.02	0.03	210	9	1
Cenos	0.12	0.53	0.90	0.02	0.03	12	1	1
Dogger Bank A				0.02	0.03		33	198
Dogger Bank B				0.02	0.03		41	243
Dogger Bank South				0.02	0.03		112	78
Dogger Bank C				0.02	0.03		20	138
Sofia				0.02	0.03		27	190
Dudgeon				0.02	0.03		0	2
Dudgeon Extension				0.02	0.03		31	4
East Anglia One				0.02	0.03		16	8
East Anglia One North				0.02	0.03		4	6

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				0.02	0.03		32	20
East Anglia Two				0.02	0.03		5	10
Five Estuaries				0.02	0.03		5	16
Galloper				0.02	0.03		8	20
Green Volt	0.19	0.53	0.90	0.02	0.03	16	3	2
Hornsea Project One				0.02	0.03		461	34
Hornsea Project Two				0.02	0.03		31	60
Hornsea Project Three				0.02	0.03		52	62
Hornsea Four				0.02	0.03		25	13
Humber Gateway				0.02	0.03		0	1
Inch Cape	0.00	0.53	0.90	0.02	0.03	0	46	24
Kincardine	0.02	0.53	0.90	0.02	0.03	6	14	2
Lincs				0.02	0.03		1	0
Moray East	0.25	0.53	0.90	0.02	0.03	235	3	4
Moray West	0.07	0.53	0.90	0.02	0.03	231	32	31
Morven North	0.06	0.53	0.90	0.02	0.03	67	9	4
Morven South	0.05	0.53	0.90	0.02	0.03	10	6	3
Muir Mhor	0.15	0.53	0.90	0.02	0.03	240	1	21
Neart na Gaoithe	0.00	0.53	0.90	0.02	0.03	0	43	4

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				0.02	0.03		55	30
Norfolk Vanguard				0.02	0.03		19	47
North Falls				0.02	0.03		10	24
Ossian	0.07	0.53	0.90	0.02	0.03	105	12	17
Outer Dowsing				0.02	0.03		21	32
Pentland	0.00	0.53	0.90	0.02	0.03	0	3	1
Race Bank				0.02	0.03		2	1
Salamander	0.16	0.53	0.90	0.02	0.03	291	2	3
SeaGreen Bravo	0.00	0.53	0.90	0.02	0.03	0	29	27
SeaGreen Alpha	0.00	0.53	0.90	0.02	0.03	0	69	32
Sheringham Shoal Extension				0.02	0.03		3	2
Teesside				0.02	0.03		0	0
Thanet				0.02	0.03		1	0
Triton Knoll				0.02	0.03		6	8
West of Orkney	0.01	0.53	0.90	0.02	0.03	8	17	35
Total population estimates (all projects including Morven North and Morven South)						1,573	1,600	1,888
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				5	5	6
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				14	14	17

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			15			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			46			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.072			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.215			

Table 5.106: Mean-peak population estimates for kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.06	0.53	0.90	0.02	0.03	4	1	2
Beatrice	0.03	0.53	0.90	0.02	0.03	13	15	20
Berwick Bank	0.01	0.92	0.90	0.02	0.03	88	241	392
Blyth Demo	0.01	0.53	0.90	0.02	0.03	0	9	0
Buchan	0.21	0.82	0.90	0.02	0.03	28	2	10
Caledonia North	0.16	0.53	0.90	0.02	0.03	55	7	2
Caledonia South	0.29	0.53	0.90	0.02	0.03	210	9	1
Cenos	0.12	0.87	0.90	0.02	0.03	20	1	1
Dogger Bank A				0.02	0.03		33	198
Dogger Bank B				0.02	0.03		41	243
Dogger Bank South				0.02	0.03		112	78
Dogger Bank C				0.02	0.03		20	138
Sofia				0.02	0.03		27	190
Dudgeon				0.02	0.03		0	2
Dudgeon Extension				0.02	0.03		31	4
East Anglia One				0.02	0.03		16	8
East Anglia One North				0.02	0.03		4	6
East Anglia Three				0.02	0.03		32	20

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.02	0.03		5	10
Five Estuaries				0.02	0.03		5	16
Galloper				0.02	0.03		8	20
Green Volt	0.19	0.53	0.90	0.02	0.03	16	3	2
Hornsea Project One		0.74		0.02	0.03		461	34
Hornsea Project Two		0.86		0.02	0.03		31	60
Hornsea Project Three		0.88		0.02	0.03		52	62
Hornsea Four				0.02	0.03		25	13
Humber Gateway				0.02	0.03		0	1
Inch Cape	0.00	0.53	0.90	0.02	0.03	0	46	24
Kincardine	0.02	0.95	0.90	0.02	0.03	11	14	2
Lincs				0.02	0.03		1	0
Moray East	0.25	0.92	0.90	0.02	0.03	404	3	4
Moray West	0.07	0.97	0.90	0.02	0.03	424	32	31
Morven North	0.06	0.87	0.90	0.02	0.03	110	9	4
Morven South	0.05	0.78	0.90	0.02	0.03	15	6	3
Muir Mhor	0.15	0.53	0.90	0.02	0.03	240	1	21
Neart na Gaoithe	0.00	0.82	0.90	0.02	0.03	0	43	4
Norfolk Boreas				0.02	0.03		55	30
Norfolk Vanguard				0.02	0.03		19	47

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls		0.59		0.02	0.03		10	24
Ossian	0.07	0.84	0.90	0.02	0.03	167	12	17
Outer Dowsing		0.77		0.02	0.03		21	32
Pentland	0.00	0.53	0.90	0.02	0.03	0	3	1
Race Bank				0.02	0.03		2	1
Salamander	0.16	0.69	0.90	0.02	0.03	379	2	3
SeaGreen Bravo	0.00	0.94	0.90	0.02	0.03	0	29	27
SeaGreen Alpha	0.00	0.94	0.90	0.02	0.03	0	69	32
Sheringham Shoal Extension				0.02	0.03		3	2
Teesside				0.02	0.03		0	0
Thanet				0.02	0.03		1	0
Triton Knoll				0.02	0.03		6	8
West of Orkney	0.01	0.53	0.90	0.02	0.03	8	17	35
Total population estimates (all projects including Morven North and Morven South)						2,191	1,600	1,888
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				7	5	6
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				17		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.080		

Table 5.107: Summary of population viability analysis results for in-combination displacement impacts on the kittiwake feature of the Troup, Pennan and Lion's Heads Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	24,166	1.002	8.75	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	15.2	0.072	23,355	1.002	5.98	0.999	0.970	46.8
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	45.5	0.215	22,087	1.000	-0.26	0.998	0.914	42.0
Applicant	17.0	0.080	23,414	1.002	5.56	0.999	0.967	47.1

Guillemot

5.5.3.121 Mean-peak population estimates for guillemot apportioned to each of the SPAs identified in paragraph 5.5.3.1 are presented on a seasonal basis in the following SPA-specific sections. Impacts predicted for each SPA using the displacement and mortality rates advocated by NatureScot and the Applicant are also provided. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance

5.5.3.122 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Buchan Ness to Collieston Coast Special Protection Area

5.5.3.123 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.108 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches is above the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been conducted.

Table 5.108: Predicted annual mortality of guillemot at the Buchan Ness to Collieston Coast SPA resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Annual
NatureScot’s approach				
Morven North	6.3 to 10.5	11.5 to 34.5	3.2 to 9.6	21.0 to 54.6
Morven South	n/a	4.5 to 13.4	1.2 to 3.7	5.7 to 17.2
Total annual mortality (birds/annum)				26.7 to 71.8
Change in baseline mortality (percentage point change)				0.068 to 0.182
Applicant’s approach				
Morven North	1.7	9.6	2.7	14.0
Morven South	n/a	3.7	1.0	4.8
Total annual mortality (birds/annum)				18.8
Change in baseline mortality (percentage point change)				0.048

5.5.3.124 PVA modelling for the guillemot population at the Buchan Ness to Collieston Coast SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median CPS of 0.931 to 0.974 (i.e. the population after 35 years, would be 2.6% to 6.9% smaller than the CPS with a 50th percentile value of 34.1 to 43.7 (Table 5.110)). In terms of the population size, this means that the median of the impacted population fell within the 34th or 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently

seen in the regional population and would therefore be undetectable against natural population fluctuations.

- 5.5.3.125 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.981 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.9% smaller than the counterfactual population size). The 50th percentile value is 45.7, well within the margin of error of the non-impacted scenario. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.
- 5.5.3.126 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the guillemot population of the Buchan Ness to Collieston Coast SPA in relation to displacement impacts associated with the Morven Programme.
- 5.5.3.127 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of guillemot from the Buchan Ness to Collieston Coast SPA, there are a number of projects that require consideration in the breeding season. In non-breeding seasons, all projects considered in the breeding season are included alongside any additional projects located between the Troup, Pennan and Lion's Heads SPA to the north and St Abb's Head to Fast Castle SPA in the south.
- 5.5.3.128 Table 5.109 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.129 The predicted in-combination impact on guillemot at the Buchan Ness to Collieston Coast SPA is presented in Table 5.109 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the guillemot population at the Buchan Ness to Collieston Coast SPA is 284 to 601 birds/annum when applying NatureScot's approach and 132 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.130 PVA modelling for the guillemot population at the Buchan Ness to Collieston Coast SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.549 to 0.754 (i.e. the population after 35 years, would be 24.6% to 45.1% smaller than the CPS with a 50th percentile value of 0 to 5.9 (Table 5.110)). In terms of the population size, this means that the median of the impacted population fell within the 1st or 6th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.983 to 0.992 which translates to a growth rate 0.8 to 1.7% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.131 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.877 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 12.3% smaller than the counterfactual population size). The 50th percentile value is 23.8, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

- 5.5.3.132 The current population at the SPA is above the population at designation (Table 5.8). The population of guillemot at the Buchan Ness to Collieston Coast SPA remained stable between the Seabird 2000 and Seabirds Count national censuses but has decreased slightly since Seabirds Count. Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the predicted in-combination impact.
- 5.5.3.133 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.134 The populations of guillemot at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination. It is therefore considered that these populations likely represent an over-estimate of the number of guillemot present at each project between July and March.
- 5.5.3.135 For the Muir Mhòr project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.136 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could impact the guillemot population at the SPA. However, the population at the SPA is well above the cited population (Table 5.8) and the PVA modelling predicts that the population growth rate will remain positive.
- 5.5.3.137 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of guillemot at the SPA would be maintained.
- 5.5.3.138 Impacts on guillemot that undermine the conservation objectives of the at the Buchan Ness to Collieston Coast SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.139 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the guillemot population of the Buchan Ness to Collieston Coast SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.109: Mean-peak population estimates for guillemot at the Buchan Ness to Collieston Coast Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.79	0.58	0.93		0.14	236		29
Berwick Bank	0.01	0.58	0.93		0.03	357		1325
Green Volt	0.33	0.58	0.93		0.01	772		206
Inch Cape	0.03	0.58	0.93		0.02	140		72
Kincardine	0.10	0.58	0.93		0.06	34		461
Moray West	0.01	0.58	0.93		0.01	131		382
Morven North	0.16	0.58	0.93	0.08	0.08	349	1917	536
Morven South	0.00	0.58	0.93	0.08	0.08	0	746	207
Muir Mhor	0.61	0.58	0.93		0.35	4261		4142
Near na Gaoithe	0.01	0.58	0.93		0.01	36		60
Ossian	0.35	0.58	0.93		0.06	2062		2956
Salamander	0.76	0.58	0.93		0.22	1463		2587
SeaGreen Bravo	0.05	0.58	0.93		0.03	297		118
SeaGreen Alpha	0.05	0.58	0.93		0.03	363		135
Total population estimates (all projects including Morven North and Morven South)						10,500	2,663	13,216
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				189	16	79
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				315	48	238

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				53	13	66
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				284		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				601		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				132		
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.721		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				1.523		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				0.334		

Table 5.110: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Morven Programme (Scenario 3)								
Baseline	-	-	146,425	1.025	139.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	26.7	0.068	142,542	1.025	133.2	0.999	0.974	43.7
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	71.8	0.182	136,288	1.023	123.0	0.998	0.931	34.1
Applicant	18.8	0.048	143,706	1.025	123.0	1.000	0.981	45.7
In-combination (Scenario 4)								
Baseline	c	-	146,425	1.025	139.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	284.3	0.721	110,375	1.017	80.4	0.992	0.754	5.9
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	600.8	1.523	80,329	1.008	31.2	0.983	0.549	0.0
Applicant	131.9	0.334	128,444	1.021	110.1	0.996	0.877	22.9

Fowlsheugh Special Protection Area

5.5.3.140 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.111 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches is above the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been conducted.

Table 5.111: Predicted annual mortality of guillemot at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Annual
NatureScot's approach				
Morven North	30.4 to 50.7	27.3 to 81.9	7.6 to 22.9	65.3 to 155.4
Morven South	7.4 to 12.3	10.6 to 31.9	3.0 to 8.9	20.9 to 53.0
Total annual mortality (birds/annum)				86.3 to 208.4
Change in baseline mortality (percentage point change)				0.092 to 0.223
Applicant's approach				
Morven North	8.4	22.7	6.4	37.5
Morven South	n/a	8.8	2.5	11.3
Total annual mortality (birds/annum)				48.9
Change in baseline mortality (percentage point change)				0.052

5.5.3.141 PVA modelling for the guillemot population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.917 to 0.965 (i.e. the population after 35 years, would be 5.5 to 8.3% smaller than the CPS with a 50th percentile value of 31.7 to 42.6 (Table 5.114)). In terms of the population size, this means that the median of the impacted population fell within the 32nd or 43rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.142 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.980 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 2.0% smaller than the counterfactual population size). The 50th percentile value is 46.0, well within the margin of error of the non-impacted scenario. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.143 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the guillemot population of the Fowlsheugh SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

- 5.5.3.144 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of guillemot from the Fowlsheugh SPA, there are a number of projects that require consideration in the breeding season. In non-breeding seasons, all projects considered in the breeding season are included alongside any additional projects located between the Troup, Pennan and Lion's Heads SPA to the north and St Abb's Head to Fast Castle SPA in the south.
- 5.5.3.145 Table 5.112 presents the seasonal population estimates for those projects considered in-combination when applying NatureScot's advocated approach for Morven North and Morven South. Table 5.113 provides the same information albeit for the Applicant's approach. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.146 The predicted in-combination impact on guillemot at the Fowlsheugh SPA is presented in Table 5.112 when applying both NatureScot's advocated displacement and mortality rates and in Table 5.113 for the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the guillemot population at the Fowlsheugh SPA is 724 to 1,475 birds/annum when applying NatureScot's approach and 311 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.147 PVA modelling for the guillemot population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.538 to 0.738 (i.e. the population after 35 years, would be 26.2% to 46.3% smaller than the CPS with a 50th percentile value of 0 to 4.7 (Table 5.114)). In terms of the population size, this means that the median of the impacted population fell within the 1st or 5th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.982 to 0.991 which translates to a growth rate 0.9 to 1.8% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.148 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.878 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 12.2% smaller than the counterfactual population size). The 50th percentile value is 24.2, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.149 The current population at the SPA is above the population at designation (Table 5.8). The population of guillemot at the Fowlsheugh SPA remained stable between the Seabird 2000 and Seabirds Count national censuses but has increased subsequently (BTO *et al.*, 2025). Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the predicted in-combination impact.
- 5.5.3.150 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.151 The populations of guillemot at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction

factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination. It is therefore considered that these populations likely represent an over-estimate of the number of guillemot present at each project between July and March.

- 5.5.3.152 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Green Volt. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.153 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could impact the guillemot population at the SPA. However, the population at the SPA is above the cited population (Table 5.8) and as the PVA modelling predicts that the population growth rate will remain positive.
- 5.5.3.154 When considered alongside other factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of guillemot at the SPA would be maintained.
- 5.5.3.155 Impacts on guillemot that undermine the conservation objectives of the at the Fowlsheugh SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented Table 5.9) are discussed in Appendix A.
- 5.5.3.156 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the guillemot population of the Fowlsheugh SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.112: Mean-peak population estimates for guillemot at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.16	0.58	0.93		0.32	49		70
Berwick Bank	0.36	0.58	0.93		0.22	14236		9850
Inch Cape	0.38	0.58	0.93		0.22	1650		848
Kincardine	0.82	0.58	0.93		0.47	277		3779
Morven North	0.77	0.58	0.93	0.20	0.20	1690	4548	1271
Morven South	0.92	0.58	0.93	0.20	0.20	409	1770	492
Muir Mhor	0.00	0.58	0.93		0.00	0		0
Nearr na Gaoithe	0.09	0.58	0.93		0.05	231		387
Ossian	0.26	0.58	0.93		0.15	1544		7012
Salamander	0.00	0.58	0.93		0.00	0		0
SeaGreen Bravo	0.68	0.58	0.93		0.39	4042		1608
SeaGreen Alpha	0.68	0.58	0.93		0.39	4947		1833
Total population estimates (all projects including Morven North and Morven South)						29,074	6,318	27,150
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				523	38	163
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				872	114	489
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				724		

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1,475			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.774			
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1.576			

Table 5.113: Mean-peak population estimates for guillemot at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach).

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.16	0.58	0.93		0.32	49		70
Berwick Bank	0.36	0.58	0.93		0.22	14236		9850
Inch Cape	0.38	0.58	0.93		0.22	1650		848
Kincardine	0.82	0.58	0.93		0.47	277		3779
Morven North	0.77	0.58	0.93	0.20	0.20	1690	4548	1271
Morven South	0.00	n/a	n/a	0.20	0.20	0	1770	492
Muir Mhor	0.00	0.58	0.93		0.00	0		0
Near na Gaoithe	0.09	0.58	0.93		0.05	231		387
Ossian	0.26	0.58	0.93		0.15	1544		7012
Salamander	0.00	0.58	0.93		0.00	0		0
SeaGreen Bravo	0.68	0.58	0.93		0.39	4042		1608
SeaGreen Alpha	0.68	0.58	0.93		0.39	4947		1833
Total population estimates (all projects including Morven North and Morven South)						28,665	6,318	27,150
Displacement mortality	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				143	32	136
Annual mortality (birds/annum)	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				311		

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Change in baseline mortality (percentage point change)	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0.332			

Table 5.114: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Fowlsheugh Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	354,894	1.025	138.83	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	86.3	0.092	342,570	1.024	130.36	0.999	0.965	42.6
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	208.4	0.223	325,301	1.023	118.93	0.998	0.917	31.7
Applicant	48.9	0.052	347,936	1.025	133.95	0.999	0.980	46.0
In-combination (Scenario 4)								
Baseline	-	-	354,894	1.025	138.83	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	724.1	0.774	262,096	1.016	76.38	0.991	0.738	4.7
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	1,474.6	1.576	191,043	1.007	28.37	0.982	0.538	0.0
Applicant	310.7	0.332	311,937	1.021	109.83	0.996	0.878	24.2

Forth Islands Special Protection Area

5.5.3.157 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.115 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches is above the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been conducted.

Table 5.115: Predicted annual mortality of guillemot at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Annual
NatureScot’s approach				
Morven North	n/a	10.4 to 31.1	2.9 to 8.7	13.3 to 39.8
Morven South	n/a	4.0 to 12.1	1.1 to 3.4	5.2 to 15.5
Total annual mortality (birds/annum)				18.4 to 55.2
Change in baseline mortality (percentage point change)				0.052 to 0.155
Applicant’s approach				
Morven North	n/a	8.6	2.4	11.0
Morven South	n/a	3.4	0.9	4.3
Total annual mortality (birds/annum)				15.3
Change in baseline mortality (percentage point change)				0.043

5.5.3.158 PVA modelling for the guillemot population at the Forth Islands SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median CPS of 0.941 to 0.980 (i.e. the population after 35 years, would be 2.0 to 5.9% smaller than the CPS with a 50th percentile value of 36.1 to 45.3 (Table 5.117)). In terms of the population size, this means that the median of the impacted population fell within the 36th or 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.159 When modelling the annual impact associated with the Applicant’s approach for guillemot, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.983 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.7% smaller than the counterfactual population size). The 50th percentile value is 46.0, well within the margin of error of the non-impacted scenario. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.160 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the guillemot population of the Forth Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

- 5.5.3.161 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of guillemot from Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In non-breeding seasons, all projects considered in the breeding season are included alongside any additional projects located between the Troup, Pennan and Lion's Heads SPA to the north and St Abb's Head to Fast Castle SPA in the south.
- 5.5.3.162 Table 5.116 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.163 The predicted in-combination impact on guillemot at the Forth Islands SPA is presented in Table 5.116 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the guillemot population at the Forth Islands SPA is 261 to 570 birds/annum when applying NatureScot's approach and 129 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.164 PVA modelling for the guillemot population at the Forth Islands SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.532 to 0.750 (i.e. the population after 35 years, would be 25.0% to 46.8% smaller than the CPS with a 50th percentile value of 0 to 5.4 (Table 5.117)). In terms of the population size, this means that the median of the impacted population fell within the 1st or 5th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.982 to 0.992 which translates to a growth rate 0.8 to 1.8% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.165 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.868 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 13.2% smaller than the counterfactual population size). The 50th percentile value is 21.5, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.166 The current population at the SPA is above the population at designation (Table 5.8). The population of guillemot at the Forth Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses but remains above the designated population (Table 5.8). Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the predicted in-combination impact.
- 5.5.3.167 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.168 The populations of guillemot at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination. It is therefore considered that these

populations likely represent an over-estimate of the number of guillemot present at each project between July and March.

- 5.5.3.169 For the Berwick Bank project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEIOI of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.170 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could impact the guillemot population at the SPA. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining and, as a result of the predicted in-combination impact, may decline below the designated population during the lifetime of Morven North.
- 5.5.3.171 Whilst the in-combination total is considered to be an over-estimate due to various factors discussed in paragraph 5.5.3.6, such over-estimation is unlikely to be of a magnitude that would reduce the predicted in-combination total to a level at which impacts that undermine the conservation objectives for the Forth Islands SPA can be ruled out as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.172 Therefore due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for an AEIOI on the guillemot population of the Forth Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.116: Mean-peak population estimates for guillemot at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.00	0.58	0.93		0.00	0		0
Berwick Bank	0.11	0.58	0.93		0.16	4322		6979
Inch Cape	0.35	0.58	0.93		0.20	1532		787
Kincardine	0.00	0.58	0.93		0.00	0		0
Morven North	0.00	0.58	0.93	0.07	0.07	0	1727	482
Morven South	0.00	0.58	0.93	0.07	0.07	0	672	187
Muir Mhor	0.00	0.58	0.93		0.00	0		0
Near na Gaoithe	0.65	0.58	0.93		0.37	1704		2852
Ossian	0.00	0.58	0.93		0.06	0		2662
Salamander	0.00	0.58	0.93		0.00	0		0
SeaGreen Bravo	0.10	0.58	0.93		0.06	594		236
SeaGreen Alpha	0.10	0.58	0.93		0.06	726		269
Total population estimates (all projects including Morven North and Morven South)						8,878	2,399	14,455
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				160	14	87
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				266	43	260
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				44	12	72

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			261			
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			570			
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			129			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.735			
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1.604			
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0.362			

Table 5.117: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Morven Programme (Scenario 3)								
Baseline	-	-	125,462	1.025	139.24	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	18.4	0.052	123,047	1.025	133.44	0.999	0.980	45.5
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	55.2	0.155	118,233	1.024	125.13	0.998	0.941	36.1
Applicant	15.3	0.043	123,438	1.025	123.13	1.000	0.983	46.0
In-combination (Scenario 4)								
Baseline	-	-	125,462	1.025	139.24	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	260.9	0.735	94,128	1.017	79.42	0.992	0.750	5.4
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	569.7	1.604	66,674	1.007	27.30	0.982	0.532	0.0
Applicant	128.7	0.362	109,011	1.021	107.39	0.996	0.868	21.5

St Abb’s Head to Fast Castle Special Protection Area

5.5.3.173 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.118 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches is above the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been conducted.

Table 5.118: Predicted annual mortality of guillemot at the St Abb’s Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Annual
NatureScot’s approach				
Morven North	n/a	17.9 to 53.7	5.0 to 15.0	22.9 to 68.7
Morven South	n/a	7.0 to 20.9	1.9 to 5.8	8.9 to 26.7
Total annual mortality (birds/annum)				31.8 to 95.5
Change in baseline mortality (percentage point change)				0.052 to 0.155
Applicant’s approach				
Morven North	n/a	14.9	4.2	19.1
Morven South	n/a	5.8	1.6	7.4
Total annual mortality (birds/annum)				26.5
Change in baseline mortality (percentage point change)				0.043

5.5.3.174 PVA modelling for the guillemot population at the St Abb’s Head to Fast Castle SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median CPS of 0.941 to 0.980 (i.e. the population after 35 years, would be 2.0% to 5.9% smaller than the CPS with a 50th percentile value of 36.8 to 46.3 (Table 5.120)). In terms of the population size, this means that the median of the impacted population fell within the 37th or 46th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.175 When modelling the annual impact associated with the Applicant’s approach for guillemot, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.983 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.7% smaller than the counterfactual population size). The 50th percentile value is 46.9, well within the margin of error of the non-impacted scenario. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.176 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the guillemot population of the St Abb’s Head to Fast Castle SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

- 5.5.3.177 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of guillemot from the St Abb's Head to Fast Castle SPA, there are a number of projects that require consideration in the breeding season. In non-breeding seasons, all projects considered in the breeding season are included alongside any additional projects located between the Troup, Pennan and Lion's Heads SPA to the north and St Abb's Head to Fast Castle SPA in the south.
- 5.5.3.178 Table 5.119 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.179 The predicted in-combination impact on guillemot at the St Abb's Head to Fast Castle SPA is presented in Table 5.119 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the guillemot population at the St Abb's Head to Fast Castle SPA is 498 to 1,040 birds/annum when applying NatureScot's approach and 226 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.180 PVA modelling for the guillemot population at the St Abb's Head to Fast Castle SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.513 to 0.728 (i.e. the population after 35 years, would be 27.2% to 48.7% smaller than the CPS with a 50th percentile value of 0.0 to 4.20 (Table 5.120)). In terms of the population size, this means that the median of the impacted population fell within the 1st or 4th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.981 to 0.991 which translates to a growth rate 0.9 to 1.9% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.181 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.866 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 13.4% smaller than the counterfactual population size). The 50th percentile value is 21.5, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.182 The current population at the SPA is above the population at designation (Table 5.8). The population of guillemot at the St Abb's Head to Fast Castle SPA increased between the Seabird 2000 and Seabirds Count national censuses and has remained stable subsequently (BTO *et al.*, 2025). Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the predicted in-combination impact.
- 5.5.3.183 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.184 The populations of guillemot at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction

factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination. It is therefore considered that these populations likely represent an over-estimate of the number of guillemot present at each project between July and March.

- 5.5.3.185 For the Berwick Bank project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEI of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.186 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could impact the guillemot population at the SPA. However, the population at the SPA is above the cited population (Table 5.8) and as the PVA modelling predicts that the population growth rate will remain positive.
- 5.5.3.187 When considered alongside other factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of guillemot at the SPA would be maintained.
- 5.5.3.188 Impacts on guillemot that undermine the conservation objectives of the at the St Abb's Head to Fast Castle SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.189 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEI on the guillemot population of the St Abb's Head to Fast Castle SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.119: Mean-peak population estimates for guillemot at the St Abb’s Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.00	0.58	0.93		0.00	0		0
Berwick Bank	0.42	0.58	0.93		0.33	16496		14576
Inch Cape	0.15	0.58	0.93		0.09	670		344
Kincardine	0.00	0.58	0.93		0.00	0		0
Morven North	0.00	0.58	0.93	0.13	0.13	0	2985	834
Morven South	0.00	0.58	0.93	0.13	0.13	0	1161	323
Muir Mhor	0.00	0.58	0.93		0.00	0		0
Neart na Gaoithe	0.23	0.58	0.93		0.13	595		996
Ossian	0.00	0.58	0.93		0.10	0		4603
Salamander	0.00	0.58	0.93		0.00	0		0
SeaGreen Bravo	0.09	0.58	0.93		0.05	520		207
SeaGreen Alpha	0.09	0.58	0.93		0.05	637		236
Total population estimates (all projects including Morven North and Morven South)						18,918	4,146	22,120
Displacement mortality	NatureScot’s approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				341	25	133
	NatureScot’s approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				568	75	398

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
	Applicant's approach		(50% displacement rate; 1% mortality rate in all seasons)			95	21	111
Annual mortality (birds/annum)	NatureScot's approach		(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			498		
	NatureScot's approach		(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1,040		
	Applicant's approach		(50% displacement rate; 1% mortality rate in all seasons)			226		
Change in baseline mortality (percentage point change)	NatureScot's approach		(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.811		
	NatureScot's approach		(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1.694		
	Applicant's approach		(50% displacement rate; 1% mortality rate in all seasons)			0.368		

Table 5.120: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the St Abb’s Head to Fast Castle Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	232,797	1.025	138.92	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	31.8	0.052	228,443	1.025	134.03	0.999	0.980	46.3
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	95.5	0.155	219,147	1.023	124.69	0.998	0.941	36.8
Applicant	26.5	0.043	229,092	1.025	134.81	1.000	0.983	46.9
In-combination (Scenario 4)								
Baseline	-	-	232,797	1.025	138.9	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	498.1	0.811	169,649	1.016	73.7	0.991	0.728	4.2
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	1,040.3	1.694	119,442	1.006	22.5	0.981	0.513	0.0
Applicant	225.9	0.368	201,804	1.021	107.0	0.996	0.866	21.5

Troup, Pennan and Lion’s Heads Special Protection Area

5.5.3.190 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.121 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches is above the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been conducted.

Table 5.121: Predicted annual mortality of guillemot at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Annual
NatureScot’s approach				
Morven North	n/a	9.3 to 27.9	2.6 to 7.8	11.9 to 35.7
Morven South	n/a	3.6 to 10.9	1.0 to 3.0	4.6 to 13.9
Total annual mortality (birds/annum)				16.5 to 49.6
Change in baseline mortality (percentage point change)				0.052 to 0.155
Applicant’s approach				
Morven North	n/a	7.8	2.2	9.9
Morven South	n/a	3.0	0.8	3.9
Total annual mortality (birds/annum)				13.8
Change in baseline mortality (percentage point change)				0.043

5.5.3.191 PVA modelling for the guillemot population at the Troup, Pennan and Lion’s Heads SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median CPS of 0.941 to 0.980 (i.e. the population after 35 years, would be 2.0% to 5.9% smaller than the CPS with a 50th percentile value of 36.3 to 45.3 (Table 5.123)). In terms of the population size, this means that the median of the impacted population fell within the 36th or 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.192 When modelling the annual impact associated with the Applicant’s approach for guillemot, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.983 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.7% smaller than the counterfactual population size). The 50th percentile value is 46.0, well within the margin of error of the non-impacted scenario. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.193 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the guillemot population of the Troup, Pennan and Lion’s Heads SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

- 5.5.3.194 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of guillemot from the Troup, Pennan and Lion's Heads SPA, there are a number of projects that require consideration in the breeding season. In non-breeding seasons, all projects considered in the breeding season are included alongside any additional projects located between the Troup, Pennan and Lion's Heads SPA to the north and St Abb's Head to Fast Castle SPA in the south.
- 5.5.3.195 Table 5.122 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.196 The predicted in-combination impact on guillemot at the Troup, Pennan and Lion's Heads SPA is presented in Table 5.122 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the guillemot population at the Troup, Pennan and Lion's Heads SPA is 200 to 425 birds/annum when applying NatureScot's approach and 94 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.197 PVA modelling for the guillemot population at the Troup, Pennan and Lion's Heads SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.592 to 0.782 (i.e. the population after 35 years, would be 21.8% to 40.8% smaller than the CPS with a 50th percentile value of 0.3 to 8.6 (Table 5.123)). In terms of the population size, this means that the median of the impacted population fell within the 1st or 9th percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.985 to 0.993 which translates to a growth rate 0.7 to 1.5% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.198 When modelling the annual impact associated with the Applicant's approach for guillemot, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.892 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 10.8% smaller than the counterfactual population size). The 50th percentile value is 25.1, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.199 The population of guillemot at the Troup, Pennan and Lion's Heads SPA declined between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025). However, the current population is below the population at designation (Table 5.8). Under all scenarios the counterfactual scenario predicts a positive population growth rate and under the impacted scenario the population growth rate for guillemot remains positive meaning the population will continue to grow despite the presence of Morven North.
- 5.5.3.200 For the Buchan offshore wind farm project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEI of the SPA. As a result this project has been required to submit derogation case which include compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

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- 5.5.3.201 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.202 The populations of guillemot at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for guillemot for July to March. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination. It is therefore considered that these populations likely represent an over-estimate of the number of guillemot present at each project between July and March.
- 5.5.3.203 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could impact the guillemot population at the SPA. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining.
- 5.5.3.204 Whilst the in-combination total is considered to be an over-estimate due to various factors discussed in paragraph 5.5.3.6, such over-estimation is unlikely to be of a magnitude that would reduce the predicted in-combination total to a level at which impacts that undermine the conservation objectives for the Forth Islands SPA can be ruled out as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.205 Therefore due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for an AEOL on the guillemot population of the Troup, Pennan and Lion's Heads SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.122: Mean-peak population estimates for guillemot at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aberdeen	0.00	0.58	0.93		0.11	0		24
Beatrice	0.02	0.58	0.93		0.04	109		222
Berwick Bank	0.00	0.58	0.93		0.03	0		1148
Buchan	0.37	0.58	0.93		0.21	1569		1688
Caledonia North	0.07	0.58	0.93		0.01	282		13
Caledona South	0.16	0.58	0.93		0.01	975		52
Green Volt	0.12	0.58	0.93		0.01	287		153
Inch Cape	0.00	0.58	0.93		0.00	0		0
Kincardine	0.02	0.58	0.93		0.01	5		74
Moray East	0.05	0.58	0.93			287		0
Moray West	0.06	0.58	0.93		0.01	784		382
Morven North	0.00	0.58	0.93	0.07	0.07	0	1550	433
Morven South	0.00	0.58	0.93	0.07	0.07	0	603	168
Muir Mhor	0.37	0.58	0.93		0.21	2581		2509
Nearr na Gaoithe	0.00	0.58	0.93		0.00	0		0
Ossian	0.00	0.58	0.93		0.05	0		2391
Salamander	0.23	0.58	0.93		0.00	440		0
SeaGreen Bravo	0.00	0.58	0.93		0.00	0		0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Non-breeding	Breeding	Post-breeding	Non-breeding
	Colony	Immature	Sabbatical					
SeaGreen Alpha	0.00	0.58	0.93		0.00	0		0
Total population estimates (all projects including Morven North and Morven South)						7,319	2,153	9,255
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				132	13	56
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				220	39	167
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				37	11	46
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				200		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				425		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				94		
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.628		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				1.332		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				0.294		

Table 5.123: Summary of population viability analysis results for in-combination displacement impacts on the guillemot feature of the Troup, Pennan and Lion's Heads Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	124,364	1.025	140.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	16.5	0.052	121,784	1.025	135.4	0.999	0.980	45.3
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	49.6	0.155	117,010	1.024	125.9	0.998	0.941	36.3
Applicant	13.8	0.043	122,276	1.025	136.2	1.000	0.983	46.0
In-combination (Scenario 4)								
Baseline	-	-	124,364	1.025	140.1	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	200.2	0.628	97,212	1.018	87.8	0.993	0.782	8.6
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	424.9	1.332	73,663	1.010	42.2	0.985	0.592	0.3
Applicant	93.6	0.294	110,776	1.022	114.1	0.997	0.892	25.1

Razorbill

5.5.3.206 Mean-peak population estimates for razorbill apportioned to each of the SPAs identified in paragraph 5.5.3.1 are presented on a seasonal basis in the following SPA-specific sections. Impacts predicted for each SPA using the displacement and mortality rates advocated by NatureScot and the Applicant are also provided. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance

5.5.3.207 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

East Caithness Cliffs Special Protection Area

5.5.3.208 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.124 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.209 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the East Caithness Cliffs SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.124: Predicted annual mortality of razorbill at the East Caithness Cliffs Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Pre-breeding	Annual
NatureScot's approach					
Morven North	n/a	1.7 to 5.0	0.1 to 0.3	0.0 to 0.1	1.8 to 5.4
Morven South	n/a	0.7 to 2.2	0.1 to 0.2	0.0 to 0.1	0.8 to 2.5
Total annual mortality (birds/annum)					2.6 to 7.9
Change in baseline mortality (percentage point change)					0.006 to 0.018
Applicant's approach					
Morven North	n/a	1.4	0.1	0.0	1.5
Morven South	n/a	0.6	0.1	0.0	0.7
Total annual mortality (birds/annum)					2.2
Change in baseline mortality (percentage point change)					0.005

5.5.3.210 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the East Caithness Cliffs SPA, there are a number of projects that

require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.211 Table 5.125 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.212 The predicted in-combination impact on razorbill at the East Caithness Cliffs SPA is presented in Table 5.125 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the East Caithness Cliffs SPA is 116 to 257 birds/annum when applying NatureScot's approach and 59 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.213 PVA modelling for the razorbill population at the East Caithness Cliffs SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.790 to 0.899 (i.e. the population after 35 years, would be 10.1% to 21.0% smaller than the CPS with a 50th percentile value of 31.0 to 41.1 (Table 5.126)). In terms of the population size, this means that the median of the impacted population fell within the 31st or 41st percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.993 to 0.997 which translates to a growth rate 0.3 to 0.7% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.214 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.948 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 5.2% smaller than the counterfactual population size). The 50th percentile value is 45.4, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.215 The current population at the SPA is above the population at designation (Table 5.8). The population of razorbill at the East Caithness Cliffs SPA increased between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025).

5.5.3.216 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.

5.5.3.217 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.

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- 5.5.3.218 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Green Volt and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.219 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from being maintained, noting that the population of razorbill at the SPA is significantly higher than the designated population.
- 5.5.3.220 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of razorbill at the SPA would be maintained.
- 5.5.3.221 Impacts on razorbill that undermine the conservation objectives of the at the East Caithness Cliffs SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.222 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the East Caithness Cliffs SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.125: Mean-peak population estimates for razorbill at the East Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen				0.04	0.03	0.04		2	0	1
Aspen	0.00			0.04	0.03	0.04		0	1	1
Beatrice	0.98	0.57	0.93	0.04	0.03	0.04	516	0	72	0
Berwick Bank				0.04	0.03	0.04		374	48	316
Blyth Demo				0.04	0.03	0.04		4	1	0
Buchan	0.51	0.57	0.93	0.04	0.03	0.04	71	3	1	5
Caledonia North	0.75	0.57	0.93	0.04	0.03	0.04	349	56	4	15
Caledonia South	0.67	0.57	0.93	0.04	0.03	0.04	389	34	6	11
Cenos				0.04	0.03	0.04				
Dogger Bank A				0.04	0.03	0.04		136	77	259
Dogger Bank B				0.04	0.03	0.04		168	95	319
Dogger Bank South				0.04	0.03	0.04		268	200	266
Dogger Bank C				0.04	0.03	0.04		34	40	113
Sofia				0.04	0.03	0.04		58	58	173
Dudgeon				0.04	0.03	0.04		5	24	19
Dudgeon Extension				0.04	0.03	0.04		39	29	14
East Anglia One				0.04	0.03	0.04		3	10	33

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
East Anglia One North				0.04	0.03	0.04		4	2	9
East Anglia Three				0.04	0.03	0.04		47	51	64
East Anglia Two				0.04	0.03	0.04		2	5	10
Five Estuaries				0.04	0.03	0.04		12	36	32
Galloper				0.04	0.03	0.04		2	5	33
Green Volt	0.57			0.04	0.03	0.04		0	2	0
Hornsea Project One				0.04	0.03	0.04		372	72	97
Hornsea Project Two				0.04	0.03	0.04		178	25	70
Hornsea Project Three				0.04	0.03	0.04		85	125	52
Hornsea Four				0.04	0.03	0.04		182	16	19
Humber Gateway				0.04	0.03	0.04		5	2	1
Inch Cape				0.04	0.03	0.04		315	20	32
Kincardine				0.04	0.03	0.04		0	0	0
Lincs				0.04	0.03	0.04		7	1	0
Moray East	0.75	0.57	0.93	0.04	0.03	0.04	1054	0	49	0
Moray West	0.94	0.57	0.93	0.04	0.03	0.04	1402	150	6	151
Morven North	0.00	0.00	0.00	0.04	0.03	0.04		276	18	5
Morven South	0.00	0.00	0.00	0.04	0.03	0.04		124	14	4
Muir Mhor				0.04	0.03	0.04		59	1	5
Neart na Gaoithe				0.04	0.03	0.04		0	106	0

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Norfolk Boreas				0.04	0.03	0.04		11	37	15
Norfolk Vanguard				0.04	0.03	0.04		37	22	39
North Falls				0.04	0.03	0.04		10	61	74
Ossian				0.04	0.03	0.04		110	5	9
Outer Dowsing				0.04	0.03	0.04		92	61	217
Pentland	0.16	0.57	0.93	0.04	0.03	0.04	12	1	1	1
Race Bank				0.04	0.03	0.04		12	3	1
Rampion				0.04	0.03	0.04		0	5	22
Rampion 2				0.04	0.03	0.04		1	41	266
Salamander				0.04	0.03	0.04		0	17	0
SeaGreen Bravo				0.04	0.03	0.04		54	8	26
SeaGreen Alpha				0.04	0.03	0.04		56	26	40
Sheringham Shoal Extension				0.04	0.03	0.04		13	24	6
Teesside				0.04	0.03	0.04		3	0	1
Thanet				0.04	0.03	0.04		0	2	1
Triton Knoll				0.04	0.03	0.04		28	76	19
West of Orkney	0.34	0.57	0.93	0.04	0.03	0.04	26	5	1	6
Total population estimates (all projects including Morven North and Morven South)							3,817	3,438	1,609	2,871

Project	Seasonal apportioning values					Apportioned population estimates				
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Displacement mortality	NatureScot's approach			(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			69	21	10	17
	NatureScot's approach			(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			115	62	29	52
	Applicant's approach			(50% displacement rate; 1% mortality rate in all seasons)			19	17	8	14
Annual mortality (birds/annum)	NatureScot's approach			(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			116			
	NatureScot's approach			(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			257			
	Applicant's approach			(50% displacement rate; 1% mortality rate in all seasons)			59			
Change in baseline mortality (percentage point change)	NatureScot's approach			(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.258			
	NatureScot's approach			(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.572			
	Applicant's approach			(50% displacement rate; 1% mortality rate in all seasons)			0.130			

Table 5.126: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the East Caithness Cliffs Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	12,244	0.976	-57.06	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	116.2	0.258	11,000	0.973	-61.30	0.997	0.899	41.1
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	257.0	0.572	9,666	0.970	-66.10	0.993	0.790	31.0
Applicant	58.7	0.131	11,589	0.975	-59.26	0.999	0.948	45.4

Flamborough and Filey Coast Special Protection Area

5.5.3.223 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.127 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.224 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the razorbill population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.127: Predicted annual mortality of razorbill at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Pre-breeding	Annual
NatureScot’s approach					
Morven North	n/a	1.3 to 4.0	0.1 to 0.3	0.0 to 0.1	1.4 to 4.3
Morven South	n/a	0.6 to 1.8	0.1 to 0.2	0.0 to 0.1	0.7 to 2.0
Total annual mortality (birds/annum)					2.1 to 6.3
Change in baseline mortality (percentage point change)					0.005 to 0.014
Applicant’s approach					
Morven North	n/a	1.1	0.1	0.0	1.2
Morven South	n/a	0.5	0.1	0.0	0.6
Total annual mortality (birds/annum)					1.8
Change in baseline mortality (percentage point change)					0.004

5.5.3.225 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the Flamborough and Filey Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPs as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.226 Table 5.128 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.227 The predicted in-combination impact on razorbill at the Flamborough and Filey Coast SPA is presented in Table 5.128 when applying both NatureScot’s advocated displacement and mortality rates and the Applicant’s displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the Flamborough and Filey Coast SPA is 147 to 296 birds/annum when applying NatureScot’s approach and 62 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.228 PVA modelling for the razorbill population at the Flamborough and Filey Coast SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.762 to 0.874 (i.e. the population after 35 years, would be 12.6% to 23.8% smaller than the CPS with a 50th percentile value of 28.2 to 38.8 (Table 5.129)). In terms of the population size, this means that the median of the impacted population fell within the 28th or 39th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.992 to 0.996 which translates to a growth rate 0.4 to 0.8% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.229 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.945 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 5.5% smaller than the counterfactual population size). The 50th percentile value is 45.2, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.230 The current population at the SPA is above the population at designation (Table 5.8). The population of razorbill at the Flamborough and Filey Coast SPA increased between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025).
- 5.5.3.231 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.232 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.
- 5.5.3.233 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Dogger Bank South, Five Estuaries, North Falls, Outer Dowsing, Sheringham Shoal Extension and Dudgeon Extension. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.234 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from being maintained, noting that the population of razorbill at the SPA is significantly higher than the designated population.

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- 5.5.3.235 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of razorbill at the SPA would be maintained.
- 5.5.3.236 Impacts on razorbill that undermine the conservation objectives of the at the Flamborough and Filey Coast SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.237 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the razorbill population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.128: Mean-peak population estimates for razorbill at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen European Offshore Wind Deployment Centre				0.03	0.03	0.03		1	0	1
Aspen	0.00			0.03	0.03	0.03		0	1	1
Beatrice				0.03	0.03	0.03		0	57	0
Berwick Bank	0.01			0.03	0.03	0.03		299	38	253
Blyth Demonstration Project (Phase 1)	0.84	0.57	0.93	0.03	0.03	0.03	23	3	0	0
Buchan				0.03	0.03	0.03		2	1	4
Caledonia North	0.00			0.03	0.03	0.03		44	3	12
Caledonia South	0.00			0.03	0.03	0.03		27	5	8
Cenos	0.00			0.03	0.03	0.03				
Dogger Bank Creyke Beck A				0.03	0.03	0.03		109	61	207
Dogger Bank Creyke Beck B				0.03	0.03	0.03		135	76	255

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Dogger Bank South	1.00	0.57	0.93	0.03	0.03	0.03	1501	215	160	213
Dogger Bank Teesside A				0.03	0.03	0.03		27	32	91
Sofia (Dogger Bank Teesside B)				0.03	0.03	0.03		46	46	139
Dudgeon				0.03	0.03	0.03		4	19	15
Dudgeon Extension				0.03	0.03	0.03		31	23	11
East Anglia One				0.03	0.03	0.03		2	8	27
East Anglia One North				0.03	0.03	0.03		3	1	7
East Anglia Three				0.03	0.03	0.03		38	41	52
East Anglia Two				0.03	0.03	0.03		1	4	8
Five Estuaries				0.03	0.03	0.03		10	29	26
Galloper				0.03	0.03	0.03		2	4	26
Green Volt	0.00			0.03	0.03	0.03		0	2	0
Hornsea Project One	1.00	0.57	0.93	0.03	0.03	0.03	1233	298	57	78
Hornsea Project Two	1.00	0.57	0.93	0.03	0.03	0.03	1333	143	20	56

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Hornsea Three				0.03	0.03	0.03		68	100	42
Hornsea Four	1.00	0.57	0.93	0.03	0.03	0.03	205	146	12	15
Humber Gateway	1.00	0.57	0.93	0.03	0.03	0.03	10	4	1	1
Inch Cape				0.03	0.03	0.03		252	16	26
Kincardine				0.03	0.03	0.03		0	0	0
Lincs	1.00	0.57	0.93	0.03	0.03	0.03	0	6	1	0
Moray East				0.03	0.03	0.03		0	39	0
Moray West				0.03	0.03	0.03		120	5	121
Morven North	0.00	0.00	0.00	0.03	0.03	0.03		221	15	4
Morven South	0.00	0.00	0.00	0.03	0.03	0.03		99	11	3
Muir Mhor				0.03	0.03	0.03		47	1	4
Na Gaoithe				0.03	0.03	0.03		0	85	0
Norfolk Boreas				0.03	0.03	0.03		9	29	12
Norfolk Vanguard				0.03	0.03	0.03		29	17	31
North Falls				0.03	0.03	0.03		8	49	59
Ossian				0.03	0.03	0.03		88	4	8
Outer Dowsing	1.00	0.57	0.93	0.03	0.03	0.03	1678	74	49	174
Race Bank	1.00	0.57	0.93	0.03	0.03	0.03	16	10	3	1
Rampion				0.03	0.03	0.03		0	4	17

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Rampion 2				0.03	0.03	0.03		1	33	213
Salamander				0.03	0.03	0.03		0	13	0
Seagreen Bravo				0.03	0.03	0.03		43	7	21
Seagreen Alpha				0.03	0.03	0.03		45	21	32
Sheringham Shoal Extension				0.03	0.03	0.03		11	19	5
Teesside	1.00	0.57	0.93	0.03	0.03	0.03	16	3	0	1
Thanet				0.03	0.03	0.03		0	2	1
Triton Knoll	1.00	0.57	0.93	0.03	0.03	0.03	71	23	61	15
Total population estimates (all projects including Morven North and Morven South)							6,085	2,746	1,286	2,292
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				110	16	8	14	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				183	49	23	41	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				30	14	6	11	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				147				
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				296				

Project	Seasonal apportioning values					Apportioned population estimates				
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						62		
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)						0.327		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)						0.657		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						0.138		

Table 5.129: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	11,917	0.976	-57.22	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	147.5	0.327	10,371	0.972	-62.60	0.996	0.874	38.8
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	296.4	0.657	9,054	0.969	-67.41	0.992	0.762	28.2
Applicant	62.0	0.138	11,218	0.975	-59.49	0.998	0.945	45.2

Forth Islands Special Protection Area

5.5.3.238 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.130 for both NatureScot’s and the Applicant’s approach. The predicted impact under the upper NatureScot displacement and mortality rate scenario exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been undertaken.

Table 5.130: Predicted annual mortality of razorbill at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Pre-breeding	Annual
NatureScot’s approach					
Morven North	0.4 to 0.6	0.3 to 1.0	0.0 to 0.1	0.0 to 0.0	0.7 to 1.7
Morven South	0.1 to 0.1	0.2 to 0.5	0.0 to 0.1	0.0 to 0.0	0.3 to 0.7
Total annual mortality (birds/annum)					1.0 to 2.4
Change in baseline mortality (percentage point change)					0.012 to 0.028
Applicant’s approach					
Morven North	0.1	0.3	0.0	0.0	0.4
Morven South	0.0	0.1	0.0	0.0	0.2
Total annual mortality (birds/annum)					0.6
Change in baseline mortality (percentage point change)					0.007

5.5.3.239 PVA modelling for the razorbill population at the Forth Island SPA when applying the annual impact calculated using NatureScot’s upper displacement and mortality rates indicates a median CPS of 0.988 (i.e. the population after 35 years, would be 1.2% smaller than the CPS with a 50th percentile value of 49.1 (Table 5.132)). In terms of the population size, this means that the median of the impacted population fell within the 49th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which translates to a growth rate 0.0% smaller than the counterfactual (unimpacted) growth rate. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.240 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the Forth Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

5.5.3.241 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the Forth Islands SPA, there are a number of projects that require

consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.242 Table 5.131 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.243 The predicted in-combination impact on razorbill at the Forth Islands SPA is presented in Table 5.131 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the Forth Islands SPA is 49 to 95 birds/annum when applying NatureScot's approach and 19 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.244 PVA modelling for the razorbill population at the Forth Island SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.630 to 0.789 (i.e. the population after 35 years, would be 21.1% to 37.0% smaller than the CPS with a 50th percentile value of 16.9 to 30.6 (Table 5.132)). In terms of the population size, this means that the median of the impacted population fell within the 17th or 31st percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.987 to 0.993 which translates to a growth rate 0.7 to 1.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.245 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.912 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.8% smaller than the counterfactual population size). The 50th percentile value is 42.2, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.246 The current population at the SPA is above the population at designation (Table 5.8). The population of razorbill at the Forth Islands SPA increased between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025).

5.5.3.247 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.

5.5.3.248 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.

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- 5.5.3.249 For the Berwick Bank project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.250 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. However, the population at the SPA is significantly above the cited population (Table 5.8) and as the PVA modelling predicts that the population growth rate will remain positive, the conservation objectives for the SPA will not be undermined.
- 5.5.3.251 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of razorbill at the SPA would be maintained.
- 5.5.3.252 Impacts on razorbill that undermine the conservation objectives of the at the Forth Islands SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.253 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the Forth Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.131: Mean-peak population estimates for razorbill at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen European Offshore Wind Deployment Centre	0.04	0.57	0.93	0.01	0.01	0.01	4	0	0	0
Aspen	0.00			0.01	0.01	0.01		0	0	0
Beatrice				0.01	0.01	0.01		0	15	0
Berwick Bank	0.27	0.57	0.93	0.01	0.01	0.01	569	78	10	66
Blyth Demonstration Project (Phase 1)				0.01	0.01	0.01		1	0	0
Buchan				0.01	0.01	0.01		1	0	1
Caledonia North	0.00			0.01	0.01	0.01		12	1	3
Caledonia South	0.00			0.01	0.01	0.01		7	1	2
Cenos	0.00			0.01	0.01	0.01				
Dogger Bank Creyke Beck A				0.01	0.01	0.01		29	16	54
Dogger Bank Creyke Beck B				0.01	0.01	0.01		35	20	67

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Dogger Bank South				0.01	0.01	0.01		56	42	56
Dogger Bank Teesside A				0.01	0.01	0.01		7	8	24
Sofia (Dogger Bank Teesside B)				0.01	0.01	0.01		12	12	36
Dudgeon				0.01	0.01	0.01		1	5	4
Dudgeon Extension				0.01	0.01	0.01		8	6	3
East Anglia One				0.01	0.01	0.01		1	2	7
East Anglia One North				0.01	0.01	0.01		1	0	2
East Anglia Three				0.01	0.01	0.01		10	11	14
East Anglia Two				0.01	0.01	0.01		0	1	2
Five Estuaries				0.01	0.01	0.01		3	8	7
Galloper				0.01	0.01	0.01		0	1	7
Green Volt	0.00			0.01	0.01	0.01		0	0	0
Hornsea Project One				0.01	0.01	0.01		78	15	20
Hornsea Project Two				0.01	0.01	0.01		37	5	15

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Hornsea Three				0.01	0.01	0.01		18	26	11
Hornsea Four				0.01	0.01	0.01		38	3	4
Humber Gateway				0.01	0.01	0.01		1	0	0
Inch Cape	0.24	0.57	0.93	0.01	0.01	0.01	592	66	4	7
Kincardine	0.00	0.57	0.93	0.01	0.01	0.01	0	0	0	0
Lincs				0.01	0.01	0.01		1	0	0
Moray East				0.01	0.01	0.01		0	10	0
Moray West				0.01	0.01	0.01		31	1	32
Morven North	0.12	0.57	0.93	0.01	0.01	0.01		58	4	1
Morven South	0.16	0.57	0.93	0.01	0.01	0.01		26	3	1
Muir Mhor				0.01	0.01	0.01		12	0	1
Na Gaoithe	0.71	0.57	0.93	0.01	0.01	0.01	469	0	22	0
Norfolk Boreas				0.01	0.01	0.01		2	8	3
Norfolk Vanguard				0.01	0.01	0.01		8	5	8
North Falls				0.01	0.01	0.01		2	13	15
Ossian	0.15	0.57	0.93	0.01	0.01	0.01	41	23	1	2
Outer Dowsing				0.01	0.01	0.01		19	13	46
Race Bank				0.01	0.01	0.01		3	1	0
Rampion				0.01	0.01	0.01		0	1	5

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Rampion 2				0.01	0.01	0.01		0	9	56
Salamander				0.01	0.01	0.01		0	3	0
Seagreen Bravo	0.10	0.57	0.93	0.01	0.01	0.01	201	11	2	5
Seagreen Alpha	0.10	0.57	0.93	0.01	0.01	0.01	304	12	6	8
Sheringham Shoal Extension				0.01	0.01	0.01		3	5	1
Teesside				0.01	0.01	0.01		1	0	0
Thanet				0.01	0.01	0.01		0	0	0
Triton Knoll				0.01	0.01	0.01		6	16	4
Total population estimates (all projects including Morven North and Morven South)							2,180	721	338	602
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				39	4	2	4	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				65	13	6	11	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				11	4	2	3	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				49				
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				95				

Project	Seasonal apportioning values					Apportioned population estimates				
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						19		
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)						0.579		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)						1.121		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						0.226		

Table 5.132: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	2,374	0.976	-56.96	-	-	-
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	2.4	0.028	2,341	0.976	-57.60	1.000	0.988	49.1
In-combination (Scenario 4)								
Baseline	-	-	2,369	0.976	-56.88	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	49.2	0.579	1,863	0.970	-66.15	0.993	0.789	30.6
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	95.3	1.121	1,500	0.963	-72.90	0.987	0.630	16.9
Applicant	19.2	0.226	2,155	0.974	-60.74	0.997	0.912	42.2

Fowlsheugh Special Protection Area

5.5.3.254 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.133 for both NatureScot’s and the Applicant’s approach. The predicted impact under the upper NatureScot displacement and mortality rate scenario exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been undertaken.

Table 5.133: Predicted annual mortality of razorbill at the Fowlsheugh Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Pre-breeding	Annual
NatureScot’s approach					
Morven North	1.6 to 2.6	0.5 to 1.4	0.0 to 0.1	0.0 to 0.0	2.1 to 4.1
Morven South	0.3 to 0.4	0.2 to 0.6	0.0 to 0.1	0.0 to 0.0	0.5 to 1.1
Total annual mortality (birds/annum)					2.6 to 5.3
Change in baseline mortality (percentage point change)					0.012 to 0.025
Applicant’s approach					
Morven North	0.4	0.4	0.0	0.0	0.9
Morven South	0.1	0.2	0.0	0.0	0.3
Total annual mortality (birds/annum)					1.1
Change in baseline mortality (percentage point change)					0.005

5.5.3.255 PVA modelling for the razorbill population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot’s upper displacement and mortality rates indicates a median CPS of 0.989 (i.e. the population after 35 years, would be 1.0% smaller than the CPS with a 50th percentile value of 49.4 (Table 5.135)). In terms of the population size, this means that the median of the impacted population fell within the 49th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which translates to a growth rate 0.0% smaller than the counterfactual (unimpacted) growth rate. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.256 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the razorbill population of the Fowlsheugh SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

5.5.3.257 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the Fowlsheugh SPA, there are a number of projects that require

consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

- 5.5.3.258 Table 5.134 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.259 The predicted in-combination impact on razorbill at the Fowlsheugh SPA is presented in Table 5.134 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the Fowlsheugh SPA is 104 to 192 birds/annum when applying NatureScot's approach and 36 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.260 PVA modelling for the razorbill population at the Fowlsheugh SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.685 to 0.814 (i.e. the population after 35 years, would be 18.6% to 31.5% smaller than the CPS with a 50th percentile value of 21.2 to 32.9 (Table 5.135)). In terms of the population size, this means that the median of the impacted population fell within the 21st or 33rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.989 to 0.994 which translates to a growth rate 0.6 to 1.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.261 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.931 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 6.9% smaller than the counterfactual population size). The 50th percentile value is 44.4, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.262 The current population at the SPA is above the population at designation (Table 5.8). The population of razorbill at the Fowlsheugh SPA increased between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025).
- 5.5.3.263 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.264 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.
- 5.5.3.265 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have

been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.3.266 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. The population at the SPA is above the cited population (Table 5.8) and the population has increased between the two most recent national census. The in-combination impact is considered to be an over-estimate due to various factors discussed in paragraph 5.5.3.6 and when some of these are taken into account within the Applicant's approach, the predicted effect on the growth rate of the SPA population as predicted by the PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from recovering.
- 5.5.3.267 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of razorbill at the SPA would be maintained.
- 5.5.3.268 Impacts on razorbill that undermine the conservation objectives of the at the Fowlsheugh SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.269 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the Fowlsheugh SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.134: Mean-peak population estimates for razorbill at the Fowlsheugh Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen European Offshore Wind Deployment Centre	0.87	0.57	0.93	0.01	0.01	0.01	81	0	0	0
Aspen	0.00			0.01	0.01	0.01		0	0	0
Beatrice				0.01	0.01	0.01		0	20	0
Berwick Bank	0.29	0.57	0.93	0.01	0.01	0.01	626	105	14	89
Blyth Demonstration Project (Phase 1)				0.01	0.01	0.01		1	0	0
Buchan				0.01	0.01	0.01		1	0	2
Caledonia North	0.00			0.01	0.01	0.01		16	1	4
Caledonia South	0.00			0.01	0.01	0.01		10	2	3
Cenos	0.00			0.01	0.01	0.01				
Dogger Bank Creyke Beck A				0.01	0.01	0.01		38	22	73
Dogger Bank Creyke Beck B				0.01	0.01	0.01		47	27	90

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Dogger Bank South				0.01	0.01	0.01		76	56	75
Dogger Bank Teesside A				0.01	0.01	0.01		10	11	32
Sofia (Dogger Bank Teesside B)				0.01	0.01	0.01		16	16	49
Dudgeon				0.01	0.01	0.01		1	7	5
Dudgeon Extension				0.01	0.01	0.01		11	8	4
East Anglia One				0.01	0.01	0.01		1	3	9
East Anglia One North				0.01	0.01	0.01		1	1	2
East Anglia Three				0.01	0.01	0.01		13	14	18
East Anglia Two				0.01	0.01	0.01		1	1	3
Five Estuaries				0.01	0.01	0.01		3	10	9
Galloper				0.01	0.01	0.01		1	1	9
Green Volt	0.00			0.01	0.01	0.01		0	1	0
Hornsea Project One				0.01	0.01	0.01		105	20	27
Hornsea Project Two				0.01	0.01	0.01		50	7	20

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Hornsea Three				0.01	0.01	0.01		24	35	15
Hornsea Four				0.01	0.01	0.01		51	4	5
Humber Gateway				0.01	0.01	0.01		1	1	0
Inch Cape	0.37	0.57	0.93	0.01	0.01	0.01	927	89	6	9
Kincardine	1.00	0.57	0.93	0.01	0.01	0.01	34	0	0	0
Lincs				0.01	0.01	0.01		2	0	0
Moray East				0.01	0.01	0.01		0	14	0
Moray West				0.01	0.01	0.01		42	2	43
Morven North	0.52	0.57	0.93	0.01	0.01	0.01	88	78	5	1
Morven South	0.46	0.57	0.93	0.01	0.01	0.01	14	35	4	1
Muir Mhor	0.42	0.57	0.93	0.01	0.01	0.01	347	17	0	1
Neart na Gaoithe	0.08	0.57	0.93	0.01	0.01	0.01	51	0	30	0
Norfolk Boreas				0.01	0.01	0.01		3	10	4
Norfolk Vanguard				0.01	0.01	0.01		10	6	11
North Falls				0.01	0.01	0.01		3	17	21
Ossian	0.42	0.57	0.93	0.01	0.01	0.01	117	31	1	3
Outer Dowsing				0.01	0.01	0.01		26	17	61
Race Bank				0.01	0.01	0.01		3	1	0
Rampion				0.01	0.01	0.01		0	2	6

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Rampion 2				0.01	0.01	0.01		0	12	75
Salamander	0.24	0.57	0.93	0.01	0.01	0.01	42	0	5	0
Seagreen Bravo	0.56	0.57	0.93	0.01	0.01	0.01	1087	15	2	7
Seagreen Alpha	0.56	0.57	0.93	0.01	0.01	0.01	1649	16	7	11
Sheringham Shoal Extension				0.01	0.01	0.01		4	7	2
Teesside				0.01	0.01	0.01		1	0	0
Thanet				0.01	0.01	0.01		0	1	0
Triton Knoll				0.01	0.01	0.01		8	21	5
Total population estimates (all projects including Morven North and Morven South)							5,062	968	453	808
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				91	6	3	5	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				152	17	8	15	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				25	5	2	4	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				104				
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				192				

Project	Seasonal apportioning values					Apportioned population estimates					
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding	
	Colony	Immature	Sabbatical								
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						36			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)						0.498			
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)						0.915			
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						0.174			

Table 5.135: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Fowlsheugh Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	5,705	0.976	-56.91	-	-	-
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	5.3	0.025	5,662	0.976	-57.47	1.000	0.989	49.4
In-combination (Scenario 4)								
Baseline	-	-	5,706	0.976	-57.00	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	104.5	0.498	4,638	0.970	-65.11	0.994	0.814	32.9
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	192.0	0.915	3,895	0.966	-70.67	0.989	0.685	21.2
Applicant	36.5	0.174	5,319	0.974	-59.95	0.998	0.931	44.4

St Abb’s Head to Fast Castle Special Protection Area

5.5.3.270 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.136 for both NatureScot’s and the Applicant’s approach. The predicted impact under the upper NatureScot displacement and mortality rate scenario exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been undertaken.

Table 5.136: Predicted annual mortality of razorbill at the St Abb’s Head to Fast Castle Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Non-breeding	Pre-breeding	Annual
NatureScot’s approach					
Morven North	0.2 to 0.3	0.2 to 0.5	0.0 to 0.0	0.0 to 0.0	0.3 to 0.8
Morven South	0.0 to 0.1	0.1 to 0.2	0.0 to 0.0	0.0 to 0.0	0.1 to 0.3
Total annual mortality (birds/annum)					0.5 to 1.1
Change in baseline mortality (percentage point change)					0.011 to 0.026
Applicant’s approach					
Morven North	0.0	0.1	0.0	0.0	0.2
Morven South	0.0	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)					0.3
Change in baseline mortality (percentage point change)					0.006

5.5.3.271 PVA modelling for the razorbill population at the St Abb’s Head to Fast Castle SPA when applying the annual impact calculated using NatureScot’s upper displacement and mortality rates indicates a median CPS of 0.990 (i.e. the population after 35 years, would be 1.0% smaller than the CPS with a 50th percentile value of 49.6 (Table 5.138)). In terms of the population size, this means that the median of the impacted population fell within the 50th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which translates to a growth rate 0.0% smaller than the counterfactual (unimpacted) growth rate. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.272 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the razorbill population of the St Abb’s Head to Fast Castle SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

5.5.3.273 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the St Abb’s Head to Fast Castle SPA, there are a number of projects

that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.274 Table 5.137 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.275 The predicted in-combination impact on razorbill at the St Abb's Head to Fast Castle SPA is presented in Table 5.137 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the St Abb's Head to Fast Castle SPA is 23 to 45 birds/annum when applying NatureScot's approach and 9 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.276 PVA modelling for the razorbill population at the St Abb's Head to Fast Castle SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.654 to 0.802 (i.e. the population after 35 years, would be 19.8% to 34.7% smaller than the CPS with a 50th percentile value of 18.6 to 31.9 (Table 5.138)). In terms of the population size, this means that the median of the impacted population fell within the 19th or 32nd percentile of the unimpacted population (a value of 50 would indicate that they are the same). However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.988 to 0.994 which translates to a growth rate 0.6 to 1.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.277 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.919 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.1% smaller than the counterfactual population size). The 50th percentile value is 43.2, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.278 The current population at the SPA is above the population at designation (Table 5.8) however, the population of razorbill at the St Abb's Head to Fast Castle SPA has declined between the Seabird 2000 and Seabirds Count national censuses and has declined subsequently (BTO *et al.*, 2025).

5.5.3.279 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.

5.5.3.280 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.

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- 5.5.3.281 For the Berwick Bank project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.282 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. The PVA modelling predicts that the population growth rate will be negative corresponding with the current trend seen at the SPA where the population is declining and, as a result of the predicted in-combination impact, may decline below the designated population during the lifetime of Morven North.
- 5.5.3.283 Whilst the in-combination total is considered to be an over-estimate due to various factors discussed in paragraph 5.5.3.6, such over-estimation is unlikely to be of a magnitude that would reduce the predicted in-combination total to a level at which impacts that undermine the conservation objectives for the Forth Islands SPA can be ruled out as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.284 Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for an AEOL on the razorbill population at the St Abb's Head to Fast Castle SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.137: Mean-peak population estimates for razorbill at the St Abb's Head to Fast Castle Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen European Offshore Wind Deployment Centre				0.00	0.00	0.00		0	0	0
Aspen	0.00			0.00	0.00	0.00		0	0	0
Beatrice				0.00	0.00	0.00		0	7	0
Berwick Bank	0.23	0.57	0.93	0.00	0.00	0.00	496	36	5	31
Blyth Demonstration Project (Phase 1)				0.00	0.00	0.00		0	0	0
Buchan				0.00	0.00	0.00		0	0	1
Caledonia North	0.00			0.00	0.00	0.00		5	0	1
Caledonia South	0.00			0.00	0.00	0.00		3	1	1
Cenos	0.00			0.00	0.00	0.00				
Dogger Bank Creyke Beck A				0.00	0.00	0.00		13	7	25
Dogger Bank Creyke Beck B				0.00	0.00	0.00		16	9	31

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Dogger Bank South				0.00	0.00	0.00		26	19	26
Dogger Bank Teesside A				0.00	0.00	0.00		3	4	11
Sofia (Dogger Bank Teesside B)				0.00	0.00	0.00		6	6	17
Dudgeon				0.00	0.00	0.00		0	2	2
Dudgeon Extension				0.00	0.00	0.00		4	3	1
East Anglia One				0.00	0.00	0.00		0	1	3
East Anglia One North				0.00	0.00	0.00		0	0	1
East Anglia Three				0.00	0.00	0.00		5	5	6
East Anglia Two				0.00	0.00	0.00		0	0	1
Five Estuaries				0.00	0.00	0.00		1	3	3
Galloper				0.00	0.00	0.00		0	0	3
Green Volt	0.00			0.00	0.00	0.00		0	0	0
Hornsea Project One				0.00	0.00	0.00		36	7	9
Hornsea Project Two				0.00	0.00	0.00		17	2	7

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Hornsea Three				0.00	0.00	0.00		8	12	5
Hornsea Four				0.00	0.00	0.00		18	2	2
Humber Gateway				0.00	0.00	0.00		1	0	0
Inch Cape	0.07	0.57	0.93	0.00	0.00	0.00	167	31	2	3
Kincardine	0.00	0.57	0.93	0.00	0.00	0.00	0	0	0	0
Lincs				0.00	0.00	0.00		1	0	0
Moray East				0.00	0.00	0.00		0	5	0
Moray West				0.00	0.00	0.00		15	1	15
Morven North	0.05	0.57	0.93	0.00	0.00	0.00	9	27	2	0
Morven South	0.09	0.57	0.93	0.00	0.00	0.00	3	12	1	0
Muir Mhor				0.00	0.00	0.00		6	0	0
Na Gaoithe	0.14	0.57	0.93	0.00	0.00	0.00	91	0	10	0
Norfolk Boreas				0.00	0.00	0.00		1	4	1
Norfolk Vanguard				0.00	0.00	0.00		4	2	4
North Falls				0.00	0.00	0.00		1	6	7
Ossian	0.07	0.57	0.93	0.00	0.00	0.00	21	11	0	1
Outer Dowsing				0.00	0.00	0.00		9	6	21
Race Bank				0.00	0.00	0.00		1	0	0
Rampion				0.00	0.00	0.00		0	1	2

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Rampion 2				0.00	0.00	0.00		0	4	26
Salamander				0.00	0.00	0.00		0	2	0
Seagreen Bravo	0.05	0.57	0.93	0.00	0.00	0.00	98	5	1	3
Seagreen Alpha	0.05	0.57	0.93	0.00	0.00	0.00	149	6	3	4
Sheringham Shoal Extension				0.00	0.00	0.00		1	2	1
Teesside				0.00	0.00	0.00		0	0	0
Thanet				0.00	0.00	0.00		0	0	0
Triton Knoll				0.00	0.00	0.00		3	7	2
Total population estimates (all projects including Morven North and Morven South)							1,033	335	157	279
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				19	2	1	2	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				31	6	3	5	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				5	2	1	1	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				23				
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				45				

Project	Seasonal apportioning values					Apportioned population estimates				
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			9					
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.530					
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1.024					
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0.206					

Table 5.138: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the St Abb's Head to Fast Castle Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Morven Programme (Scenario 3)								
Baseline	-	-	1,187	0.976	-57.05	-	-	-
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	1.1	0.026	1,181	0.976	-57.63	1.000	0.990	49.6
In-combination (Scenario 4)								
Baseline	-	-	1,188	0.976	-57.14	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	23.2	0.530	956	0.970	-65.50	0.994	0.802	31.9
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	44.9	1.024	778	0.964	-71.96	0.988	0.654	18.6
Applicant	9.0	0.206	1,094	0.974	-60.62	0.998	0.919	43.2

Troup, Pennan and Lion's Heads Special Protection Area

- 5.5.3.285 There is no connectivity between Morven North and the Troup, Pennan and Lion's Heads SPA and therefore the impact predicted for the Morven Programme (Scenario 3) and the resulting assessment conclusions are identical to those reached for Morven North in section 5.4.4. For Morven North alone it was concluded that there will be no AEOI on the site integrity of the Troup, Pennan and Lion's Heads SPA as a result of displacement impacts on razorbill.
- 5.5.3.286 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of razorbill from the Troup, Pennan and Lion's Heads SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.3.287 Table 5.139 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.288 The predicted in-combination impact on razorbill at the Troup, Pennan and Lion's Heads SPA is presented in Table 5.139 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the razorbill population at the Troup, Pennan and Lion's Heads SPA is 16 to 35 birds/annum when applying NatureScot's approach and 8 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.289 PVA modelling for the razorbill population at the Troup, Pennan and Lion's Heads when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.806 to 0.910 (i.e. the population after 35 years, would be 9.0% to 19.4% smaller than the CPS with a 50th percentile value of 32.4 to 42.1 (Table 5.140)). In terms of the population size, this means that the median of the impacted population fell within the 32nd or 42nd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.997 which translates to a growth rate 0.3 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.290 When modelling the annual impact associated with the Applicant's approach for razorbill, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.952 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 4.8% smaller than the counterfactual population size). The 50th percentile value is 45.6, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.291 The current population at the SPA is above the population at designation (Table 5.8). The population of razorbill at the Troup, Pennan and Lion's Heads SPA declined between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025).

- 5.5.3.292 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.293 The populations of razorbill at projects considered in-combination have been estimated incorporating availability bias factors from Thaxter (2010). Dunn *et al.* (2024) presents updated monthly availability bias factors for razorbill for July to January. The correction factors provided in Dunn *et al.* (2024) are lower than those applied to calculate the population estimates used for projects considered in-combination in all months except January. It is therefore considered that these populations likely represent an over-estimate of the number of razorbill present at each project between July and December.
- 5.5.3.294 For the Salamander project, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result this project has been required to submit a derogation case which includes compensation measures. The proposed compensatory measures will compensate for the residual effects from this project that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with this project should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.295 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the razorbill population at the SPA. The population at the SPA is above the cited population (Table 5.8) however the population has declined between the two most recent national census but has remained stable since. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining. The in-combination impact is considered to be an over-estimate due to various factors discussed in paragraph 5.5.3.6 and when some of these are taken into account within the Applicant's approach, the predicted effect on the growth rate of the SPA population as predicted by the PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from recovering.
- 5.5.3.296 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of razorbill at the SPA would be maintained.
- 5.5.3.297 Impacts on razorbill that undermine the conservation objectives of the at the Troup, Pennan and Lion's Heads SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.298 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the razorbill population of the Troup, Pennan and Lion's Heads SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.139: Mean-peak population estimates for razorbill at the Troup, Pennan and Lion’s Heads Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Tier 1 (Scenario 4)										
Aberdeen European Offshore Wind Deployment Centre	0.09	0.57	0.93	0.01	0.00	0.01	8	0	0	0
Aspen	0.47	0.57	0.93	0.01	0.00	0.01	20	0	0	0
Beatrice	0.00	0.57	0.93	0.01	0.00	0.01	0	0	10	0
Berwick Bank	0.02			0.01	0.00	0.01		52	7	44
Blyth Demonstration Project (Phase 1)				0.01	0.00	0.01		1	0	0
Buchan	0.15	0.57	0.93	0.01	0.00	0.01	21	0	0	1
Caledonia North	0.07	0.57	0.93	0.01	0.00	0.01	32	8	1	2
Caledonia South	0.15	0.57	0.93	0.01	0.00	0.01	87	5	1	1
Cenos	0.00			0.01	0.00	0.01				
Dogger Bank Creyke Beck A				0.01	0.00	0.01		19	11	36
Dogger Bank Creyke Beck B				0.01	0.00	0.01		23	13	44

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Dogger Bank South				0.01	0.00	0.01		37	28	37
Dogger Bank Teesside A				0.01	0.00	0.01		5	6	16
Sofia (Dogger Bank Teesside B)				0.01	0.00	0.01		8	8	24
Dudgeon				0.01	0.00	0.01		1	3	3
Dudgeon Extension				0.01	0.00	0.01		5	4	2
East Anglia One				0.01	0.00	0.01		0	1	5
East Anglia One North				0.01	0.00	0.01		0	0	1
East Anglia Three				0.01	0.00	0.01		7	7	9
East Anglia Two				0.01	0.00	0.01		0	1	1
Five Estuaries				0.01	0.00	0.01		2	5	4
Galloper				0.01	0.00	0.01		0	1	5
Green Volt	0.16	0.57	0.93	0.01	0.00	0.01	39	0	0	0
Hornsea Project One				0.01	0.00	0.01		52	10	14
Hornsea Project Two				0.01	0.00	0.01		25	3	10

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Hornsea Three				0.01	0.00	0.01		12	17	7
Hornsea Four				0.01	0.00	0.01		25	2	3
Humber Gateway				0.01	0.00	0.01		1	0	0
Inch Cape				0.01	0.00	0.01		44	3	4
Kincardine	0.00	0.57	0.93	0.01	0.00	0.01	0	0	0	0
Lincs				0.01	0.00	0.01		1	0	0
Moray East	0.05	0.57	0.93	0.01	0.00	0.01	70	0	7	0
Moray West	0.03	0.57	0.93	0.01	0.00	0.01	45	21	1	21
Morven North	0.00	0.57	0.93	0.01	0.00	0.01	0	38	3	1
Morven South	0.00	0.57	0.93	0.01	0.00	0.01		17	2	1
Muir Mhor	0.17	0.57	0.93	0.01	0.00	0.01	143	8	0	1
Neart na Gaoithe				0.01	0.00	0.01		0	15	0
Norfolk Boreas				0.01	0.00	0.01		2	5	2
Norfolk Vanguard				0.01	0.00	0.01		5	3	5
North Falls				0.01	0.00	0.01		1	9	10
Ossian	0.06	0.57	0.93	0.01	0.00	0.01	16	15	1	1
Outer Dowsing				0.01	0.00	0.01		13	9	30
Race Bank				0.01	0.00	0.01		2	0	0
Rampion				0.01	0.00	0.01		0	1	3

Project	Seasonal apportioning values						Apportioned population estimates			
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding
	Colony	Immature	Sabbatical							
Rampion 2				0.01	0.00	0.01		0	6	37
Salamander	0.16	0.57	0.93	0.01	0.00	0.01	28	0	2	0
Seagreen Bravo	0.00	0.57	0.93	0.01	0.00	0.01	0	7	1	4
Seagreen Alpha	0.00	0.57	0.93	0.01	0.00	0.01	0	8	4	6
Sheringham Shoal Extension				0.01	0.00	0.01		2	3	1
Teesside				0.01	0.00	0.01		0	0	0
Thanet				0.01	0.00	0.01		0	0	0
Triton Knoll				0.01	0.00	0.01		4	11	3
Total population estimates (all projects including Morven North and Morven South)							509	479	224	399
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				9	3	1	2	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				15	9	4	7	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)				3	2	1	2	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)				16				
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)				35				

Project	Seasonal apportioning values					Apportioned population estimates					
	Breeding			Post-breeding	Non-breeding	Pre-breeding	Breeding	Post-breeding	Non-breeding	Pre-breeding	
	Colony	Immature	Sabbatical								
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						8			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)						0.234			
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)						0.521			
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)						0.119			

Table 5.140: Summary of population viability analysis results for in-combination displacement impacts on the razorbill feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	1,781	0.976	-57.06	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	15.8	0.234	1,610	0.973	-61.17	0.997	0.910	42.1
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	35.1	0.521	1,426	0.970	-65.49	0.994	0.806	32.4
Applicant	8.1	0.120	1,686	0.975	-59.2	0.999	0.952	45.6

Puffin

5.5.3.299 Mean-peak population estimates for puffin apportioned to each of the SPAs identified in paragraph 5.5.3.1 are presented on a seasonal basis in the following SPA-specific sections. Impacts predicted for each SPA using the displacement and mortality rates advocated by NatureScot and the Applicant are also provided. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance

5.5.3.300 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Coquet Island Special Protection Area

5.5.3.301 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.141 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.302 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Coquet Island SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.141: Predicted annual mortality of puffin at the Coquet Island Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Non-breeding	Annual
NatureScot’s approach			
Morven North	0.7 to 1.2	0.4 to 1.3	1.2 to 2.5
Morven South	0.1 to 0.2	0.1 to 0.4	0.3 to 0.6
Total annual mortality (birds/annum)			1.4 to 3.2
Change in baseline mortality (percentage point change)			0.003 to 0.006
Applicant’s approach			
Morven North	0.2	0.4	0.6
Morven South	0.0	0.1	0.2
Total annual mortality (birds/annum)			0.7
Change in baseline mortality (percentage point change)			0.001

5.5.3.303 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of puffin from the Coquet Island SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all

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- projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.
- 5.5.3.304 Table 5.142 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.305 The predicted in-combination impact on puffin at the Coquet Island SPA is presented in Table 5.142 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the puffin population at the Coquet Island SPA is 30 to 70 birds/annum when applying NatureScot's approach and 16 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.306 PVA modelling for the puffin population at the Coquet Island SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.976 to 0.945 (i.e. the population after 35 years, would be 2.4% to 5.5% smaller than the CPS with a 50th percentile value of 45.7 to 48.2 (Table 5.143)). In terms of the population size, this means that the median of the impacted population fell within the 46th or 48th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.307 When modelling the annual impact associated with the Applicant's approach for puffin, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.986 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.4% smaller than the counterfactual population size). The 50th percentile value is 49.1, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.308 The current population at the SPA is above the population at designation (Table 5.8). The population of puffin at the Coquet Island SPA increased between the Seabird 2000 and Seabirds Count national censuses and has increased subsequently (BTO *et al.*, 2025).
- 5.5.3.309 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.310 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population.
- 5.5.3.311 When the factors discussed in paragraphs 5.5.3.6 are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of puffin at the SPA would be maintained.
- 5.5.3.312 Impacts on puffin that undermine the conservation objectives of the at the Coquet Island SPA will not occur as a result of in-combination displacement impacts. The potential effect of this

impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.

5.5.3.313 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOf on the puffin population of the Coquet Island SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.142: Mean-peak population estimates for puffin at the Coquet Island Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values			Non-breeding	Apportioned population estimates	
	Breeding		Non-breeding		Breeding	Non-breeding
	Colony	Immature				
Tier 1 (Scenario 4)						
Aberdeen	0.09	0.49	0.93	0.05	3	3
Aspen	0.00			0.05		6
Beatrice				0.05		122
Berwick Bank	0.11	0.49	0.93	0.05	220	473
Blyth Demo	0.75	0.49	0.93	0.05	70	2
Buchan				0.05		28
Caledonia North	0.00			0.05		39
Caledonia South	0.00			0.05		41
Cenos	0.16			0.05		4
Dogger Bank A	0.00	0.49	0.93	0.05	0	23
Dogger Bank B	0.00	0.49	0.93	0.05	0	64
Dogger Bank South	0.35	0.49	0.93	0.05	23	20
Dogger Bank C				0.05		29
Sofia	0.00	0.49	0.93	0.05	0	31
Dudgeon				0.05		2
Dudgeon Extension				0.05		2
East Anglia One				0.05		2
East Anglia Three				0.05		16

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Green Volt	0.00			0.05		2
Hornsea Project One				0.05		82
Hornsea Project Two	0.00	0.49	0.93	0.05	0	109
Hornsea Project Three				0.05		7
Hornsea Four	0.00	0.49	0.93	0.05	0	24
Humber Gateway	0.42	0.49	0.93	0.05	0	2
Inch Cape	0.00	0.49	0.93	0.05	0	99
Kincardine	0.00	0.49	0.93	0.05	0	0
Lincs				0.05		0
Moray East				0.05		38
Moray West				0.05		211
Morven North	0.14	0.49	0.93	0.05	40	74
Morven South	0.16	0.49	0.93	0.05	8	23
Muir Mhor	0.15	0.49	0.93	0.05	125	96
Near na Gaoithe	0.00	0.49	0.93	0.05	0	195
Norfolk Vanguard				0.05		6
Ossian	0.17	0.49	0.93	0.05	150	63
Outer Dowsing	0.78	0.49	0.93	0.05	238	22
Pentland				0.05		0
Race Bank				0.05		1

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Rampion				0.05		0
Salamander	0.10	0.49	0.93	0.05	17	99
SeaGreen Bravo	0.00	0.49	0.93	0.05	0	206
SeaGreen Alpha	0.00	0.49	0.93	0.05	0	81
Sheringham Shoal Extension				0.05		1
Teesside	0.45	0.49	0.93	0.05	11	3
Triton Knoll	1.00	0.49	0.93	0.05	4	3
Total population estimates (all projects including Morven North and Morven South)					907	2,352
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)		16	14	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)		27	42	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		5	12	
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)		30		
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)		70		
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		16		
	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)		0.061		

Project	Seasonal apportioning values			Apportioned population estimates	
	Breeding		Non-breeding	Breeding	Non-breeding
	Colony	Immature			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)		0.139	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		0.033	

Table 5.143: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Coquet Island Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	11,188	0.972	-62.80	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	30.4	0.061	10,883	0.972	-63.60	0.999	0.976	48.2
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	69.6	0.139	10,523	0.971	-64.74	0.998	0.945	45.7
Applicant	16.3	0.031	11,027	0.972	-63.23	1.000	0.986	49.1

Farne Islands Special Protection Area

5.5.3.314 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.144 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.315 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Farne Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.144: Predicted annual mortality of puffin at the Farne Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Non-breeding	Annual
NatureScot's approach			
Morven North	1.9 to 3.1	1.4 to 4.3	3.3 to 7.4
Morven South	0.4 to 0.6	0.4 to 1.3	0.8 to 2.0
Total annual mortality (birds/annum)			4.1 to 9.4
Change in baseline mortality (percentage point change)			0.005 to 0.011
Applicant's approach			
Morven North	0.5	1.2	1.7
Morven South	0.1	0.4	0.5
Total annual mortality (birds/annum)			2.2
Change in baseline mortality (percentage point change)			0.003

5.5.3.316 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of puffin from the Farne Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.317 Table 5.145 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.318 The predicted in-combination impact on puffin at the Farne Islands SPA is presented in Table 5.145 when applying both NatureScot's advocated displacement and mortality rates and the Applicant's displacement and mortality rates. The total in-combination impact apportioned to the puffin population at the Farne Islands SPA is 71 to 179 birds/annum when applying NatureScot's approach and 45 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.319 PVA modelling for the puffin population at the Farne Islands SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median

CPS of 0.919 to 0.967 (i.e. the population after 35 years, would be 3.3% to 8.1% smaller than the CPS with a 50th percentile value of 44.2 to 47.9 (Table 5.146)). In terms of the population size, this means that the median of the impacted population fell within the 44th or 48th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

- 5.5.3.320 When modelling the annual impact associated with the Applicant's approach for puffin, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.979 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 2.1% smaller than the counterfactual population size). The 50th percentile value is 48.7, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.321 The current population at the SPA is above the population at designation (Table 5.8). The population of puffin at the Farne Islands SPA declined between the Seabird 2000 and Seabirds Count national censuses but has remained stable subsequently (BTO *et al.*, 2025; National Trust, 2024).
- 5.5.3.322 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.323 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Dogger Bank South, Five Estuaries, North Falls, Outer Dowsing and Rampion 2. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.324 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population.
- 5.5.3.325 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of puffin at the SPA would be maintained.
- 5.5.3.326 Impacts on puffin that undermine the conservation objectives of the at the Farne Islands SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.327 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEI on the puffin population of the Farne Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.145: Mean-peak population estimates for puffin at the Farne Islands Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values			Non-breeding	Apportioned population estimates	
	Breeding				Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Tier 1 (Scenario 4)						
Aberdeen	0.22	0.49	0.93	0.17	6	10
Aspen	0.31	0.49	0.93	0.17	49	19
Beatrice				0.17		394
Berwick Bank	0.38	0.49	0.93	0.17	786	1532
Blyth Demo	0.22	0.49	0.93	0.17	20	7
Buchan				0.17		90
Caledonia North	0.00			0.17		127
Caledonia South	0.00			0.17		132
Cenos	0.42	0.49	0.93	0.17	42	12
Dogger Bank A	0.00	0.49	0.93	0.17	0	73
Dogger Bank B	0.00	0.49	0.93	0.17	0	207
Dogger Bank South	0.52	0.49	0.93	0.17	35	64
Dogger Bank C				0.17		95
Sofia	0.00	0.49	0.93	0.17	0	100
Dudgeon				0.17		7
Dudgeon Extension				0.17		8
East Anglia One				0.17		6
East Anglia Three				0.17		53

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Green Volt	0.00	0.49	0.93	0.17	0	7
Hornsea Project One				0.17		264
Hornsea Project Two				0.17		351
Hornsea Project Three				0.17		22
Hornsea Four	0.00	0.49	0.93	0.17	0	76
Humber Gateway	0.58	0.49	0.93	0.17	0	7
Inch Cape	0.00	0.49	0.93	0.17	0	321
Kincardine	0.00	0.49	0.93	0.17	0	0
Lincs				0.17		1
Moray East				0.17		124
Moray West				0.17		683
Morven North	0.37	0.49	0.93	0.17	104	239
Morven South	0.43	0.49	0.93	0.17	21	75
Muir Mhor	0.34	0.49	0.93	0.17	281	312
Near na Gaoithe	0.00	0.49	0.93	0.17	0	630
Norfolk Vanguard				0.17		19
Ossian	0.41	0.49	0.93	0.17	364	203
Outer Dowsing				0.17		71
Pentland				0.17		1
Race Bank				0.17		2

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Rampion				0.17		0
Salamander	0.23	0.49	0.93	0.17	38	319
SeaGreen Bravo	0.00	0.49	0.93	0.17	0	666
SeaGreen Alpha	0.00	0.49	0.93	0.17	0	263
Sheringham Shoal Extension				0.17		2
Teesside	0.40	0.49	0.93	0.17	10	10
Triton Knoll				0.17	6	10
Total population estimates (all projects including Morven North and Morven South)					1,392	7,613
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			25	46
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			42	137
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			7	38
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			71	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			179	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			45	
	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.081	

Project	Seasonal apportioning values			Apportioned population estimates	
	Breeding		Non-breeding	Breeding	Non-breeding
	Colony	Immature			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)		0.204	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		0.051	

Table 5.146: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Farne Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	19,559	0.972	-62.71	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	70.7	0.081	18,941	0.971	-63.94	0.999	0.967	47.9
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	178.8	0.204	17,956	0.970	-65.71	0.998	0.919	44.2
Applicant	45.0	0.052	19,147	0.972	-63.48	0.999	0.979	48.7

Forth Islands Special Protection Area

5.5.3.328 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.147 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.329 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Forth Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.147: Predicted annual mortality of puffin at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Non-breeding	Annual
NatureScot’s approach			
Morven North	2.4 to 4.0	2.2 to 6.7	4.6 to 10.6
Morven South	0.3 to 0.6	0.7 to 2.1	1.0 to 2.7
Total annual mortality (birds/annum)			5.6 to 13.3
Change in baseline mortality (percentage point change)			0.007 to 0.015
Applicant’s approach			
Morven North	0.7	1.9	2.5
Morven South	0.1	0.6	0.7
Total annual mortality (birds/annum)			3.2
Change in baseline mortality (percentage point change)			0.004

5.5.3.330 For the in-combination assessment for Scenario 4, based on the mean-maximum foraging range of puffin from the Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.331 Table 5.148 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.332 The predicted in-combination impact on puffin at the Forth Islands SPA is presented in Table 5.148 when applying both NatureScot’s advocated displacement and mortality rates and the Applicant’s displacement and mortality rates. The total in-combination impact apportioned to the puffin population at the Forth Islands SPA is 236 to 488 birds/annum when applying NatureScot’s approach and 105 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.333 PVA modelling for the puffin population at the Forth Islands SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median

CPS of 0.792 to 0.893 (i.e. the population after 35 years, would be 10.7% to 20.8% smaller than the CPS with a 50th percentile value of 33.9 to 42.1 (Table 5.149)). In terms of the population size, this means that the median of the impacted population fell within the 34th or 42nd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.993 to 0.997 which translates to a growth rate 0.3 to 0.7% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

- 5.5.3.334 When modelling the annual impact associated with the Applicant's approach for puffin, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.951 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 4.9% smaller than the counterfactual population size). The 50th percentile value is 46.5, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.335 The current population at the SPA is above the population at designation (Table 5.8). The population of puffin at the Forth Islands SPA declined between the Seabird 2000 and Seabirds Count national censuses but has increased subsequently (BTO *et al.*, 2025).
- 5.5.3.336 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.337 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Green Volt, Muir Mhor and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.338 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population.
- 5.5.3.339 When the factors discussed in paragraphs 5.5.3.6 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered that the population of puffin at the SPA would be maintained.
- 5.5.3.340 Impacts on puffin that undermine the conservation objectives of the at the Forth Islands SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.341 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Forth Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.148: Mean-peak population estimates for puffin at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values			Non-breeding	Apportioned population estimates	
	Breeding				Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Tier 1 (Scenario 4)						
Aberdeen	0.52	0.49	0.93	0.27	15	16
Aspen	0.53	0.49	0.93	0.27	86	30
Beatrice	0.00	0.49	0.93	0.27	0	614
Berwick Bank	0.50	0.49	0.93	0.27	1028	2386
Blyth Demo	0.04	0.49	0.93	0.27	4	11
Buchan	0.24	0.49	0.93	0.27	103	141
Caledonia North	0.36	0.49	0.93	0.27	213	198
Caledonia South	0.45	0.49	0.93	0.27	246	206
Cenos	0.42	0.49	0.93	0.27	42	18
Dogger Bank A				0.27		114
Dogger Bank B				0.27		322
Dogger Bank South				0.27		100
Dogger Bank C				0.27		148
Sofia				0.27		156
Dudgeon				0.27		11
Dudgeon Extension				0.27		12
East Anglia One				0.27		9
East Anglia Three				0.27		82

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Green Volt	0.08	0.49	0.93	0.27	9	11
Hornsea Project One				0.27		412
Hornsea Project Two				0.27		547
Hornsea Project Three				0.27		34
Hornsea Four				0.27		119
Humber Gateway				0.27		10
Inch Cape	0.85	0.49	0.93	0.27	2189	500
Kincardine	1.00	0.49	0.93	0.27	41	0
Lincs				0.27		1
Moray East	0.00	0.49	0.93	0.27	0	192
Moray West	0.00	0.49	0.93	0.27	0	1064
Morven North	0.46	0.49	0.93	0.27	132	372
Morven South	0.39	0.49	0.93	0.27	19	116
Muir Mhor	0.41	0.49	0.93	0.27	341	486
Near na Gaoithe	0.93	0.49	0.93	0.27	2627	981
Norfolk Vanguard				0.27		30
Ossian	0.39	0.49	0.93	0.27	346	316
Outer Dowsing				0.27		111
Pentland				0.27		2
Race Bank				0.27		4
Rampion				0.27		0

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Salamander	0.36	0.49	0.93	0.27	58	497
SeaGreen Bravo	0.71	0.49	0.93	0.27	1154	1036
SeaGreen Alpha	0.71	0.49	0.93	0.27	829	409
Sheringham Shoal Extension				0.27		3
Teesside	0.15	0.49	0.93	0.27	4	15
Triton Knoll				0.27		15
Total population estimates (all projects including Morven North and Morven South)					9,136	11,857
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			164	71
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			274	213
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			46	59
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			236	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			488	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			105	
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.274	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.568	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0.122	

Table 5.149: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	19,762	0.972	-62.89	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	235.6	0.274	17,640	0.970	-66.84	0.997	0.893	42.1
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	487.5	0.568	15,668	0.966	-70.63	0.993	0.792	33.9
Applicant	105.0	0.122	18,839	0.971	-64.68	0.999	0.951	46.5

Foula Special Protection Area

5.5.3.342 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.150 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.343 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Foula SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.150: Predicted annual mortality of puffin at the Foula Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Non-breeding	Annual
NatureScot’s approach			
Morven North	n/a	0.2 to 0.7	0.2 to 0.7
Morven South	n/a	0.1 to 0.2	0.1 to 0.2
Total annual mortality (birds/annum)			0.3 to 1.0
Change in baseline mortality (percentage point change)			0.004 to 0.011
Applicant’s approach			
Morven North	n/a	0.2	0.2
Morven South	n/a	0.1	0.1
Total annual mortality (birds/annum)			0.3
Change in baseline mortality (percentage point change)			0.003

5.5.3.344 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of puffin from the Foula SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.345 Table 5.151 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.346 The predicted in-combination impact on puffin at the Foula SPA is presented in Table 5.151 when applying both NatureScot’s advocated displacement and mortality rates and the Applicant’s displacement and mortality rates. The total in-combination impact apportioned to the puffin population at the Foula SPA is 9 to 26 birds/annum when applying NatureScot’s approach and 7 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

5.5.3.347 PVA modelling for the puffin population at the Foula SPA when applying the annual impact calculated using NatureScot’s displacement and mortality rates indicates a median CPS of

0.884 to 0.959 (i.e. the population after 35 years, would be 4.1% to 11.6% smaller than the CPS with a 50th percentile value of 40.6 to 46.7 (Table 5.152)). In terms of the population size, this means that the median of the impacted population fell within the 40th or 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.348 When modelling the annual impact associated with the Applicant's approach for puffin, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.966 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.4% smaller than the counterfactual population size). The 50th percentile value is 47.3, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.3.349 The current population at the SPA is below the population at designation (Table 5.8). The population of puffin at the Foula SPA declined between the Seabird 2000 and Seabirds Count.

5.5.3.350 When considered against the current status of the puffin population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.

5.5.3.351 When the factors discussed in paragraph 5.5.3.6 are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the puffin population at the SPA would not be hindered.

5.5.3.352 Impacts on puffin that undermine the conservation objectives of the at the Foula SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.

5.5.3.353 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AE01 on the puffin population of the Foula SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.151: Mean-peak population estimates for puffin at the Foula Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values			Non-breeding	Apportioned population estimates	
	Breeding				Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Tier 1 (Scenario 4)						
Aberdeen				0.03		2
Aspen	0.00			0.03		3
Beatrice	0.00	0.49	0.93	0.03	0	67
Berwick Bank				0.03		259
Blyth Demo				0.03		1
Buchan	0.02	0.49	0.93	0.03	10	15
Caledonia North	0.02	0.49	0.93	0.03	14	22
Caledonia South	0.02	0.49	0.93	0.03	13	22
Cenos	0.00			0.03		2
Dogger Bank A				0.03		12
Dogger Bank B				0.03		35
Dogger Bank South				0.03		11
Dogger Bank C				0.03		16
Sofia				0.03		17
Dudgeon				0.03		1
Dudgeon Extension				0.03		1
East Anglia One				0.03		1
East Anglia Three				0.03		9

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Green Volt	0.01	0.49	0.93	0.03	1	1
Hornsea Project One				0.03		45
Hornsea Project Two				0.03		59
Hornsea Project Three				0.03		4
Hornsea Four				0.03		13
Humber Gateway				0.03		1
Inch Cape				0.03		54
Kincardine				0.03		0
Lincs				0.03		0
Moray East	0.00	0.49	0.93	0.03	0	21
Moray West	0.00	0.49	0.93	0.03	0	115
Morven North	0.00			0.03		40
Morven South	0.00			0.03		13
Muir Mhor				0.03		53
Near na Gaoithe				0.03		106
Norfolk Vanguard				0.03		3
Ossian				0.03		34
Outer Dowsing				0.03		12
Pentland	0.00	0.49	0.93	0.03	3	0
Race Bank				0.03		0
Rampion				0.03		0

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Salamander				0.03		54
SeaGreen Bravo				0.03		112
SeaGreen Alpha				0.03		44
Sheringham Shoal Extension				0.03		0
Teesside				0.03		2
Triton Knoll				0.03		2
West of Orkney	0.00	0.49	0.93	0.03	0	62
Total population estimates (all projects including Morven North and Morven South)					41	1,348
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			1	8
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			1	24
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0	7
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			9	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			26	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			7	
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.104	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.301	

Project	Seasonal apportioning values			Apportioned population estimates	
	Breeding		Non-breeding	Breeding	Non-breeding
	Colony	Immature			
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		0.082	

Table 5.152: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Foula Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	1,733	0.972	-62.77	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	8.8	0.104	1,659	0.971	-64.52	0.999	0.959	46.7
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	25.5	0.301	1,529	0.969	-67.12	0.997	0.884	40.6
Applicant	6.9	0.082	1,675	0.971	-64.21	0.999	0.966	47.3

Hermaness, Saxa Vord and Valla Field Special Protection Area

5.5.3.354 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.153 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.355 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Hermaness, Saxa Vord and Valla Field SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.153: Predicted annual mortality of puffin at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Non-breeding	Annual
NatureScot’s approach			
Morven North	n/a	0.3 to 0.8	0.3 to 0.8
Morven South	n/a	0.1 to 0.2	0.1 to 0.2
Total annual mortality (birds/annum)			0.3 to 1.0
Change in baseline mortality (percentage point change)			0.001 to 0.003
Applicant’s approach			
Morven North	n/a	0.2	0.2
Morven South	n/a	0.1	0.1
Total annual mortality (birds/annum)			0.3
Change in baseline mortality (percentage point change)			0.001

5.5.3.356 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of puffin from the Hermaness, Saxa Vord and Valla Field SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.357 Table 5.151 presents the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.358 The predicted in-combination impact on puffin at the Hermaness, Saxa Vord and Valla Field SPA is presented in Table 5.151 when applying both NatureScot’s advocated displacement and mortality rates and the Applicant’s displacement and mortality rates. The total in-combination impact apportioned to the puffin population at the Hermaness, Saxa Vord and Valla Field SPA is 9 to 26 birds/annum when applying NatureScot’s approach and 7 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.359 PVA modelling for the puffin population at the Hermaness, Saxa Vord and Valla Field SPA when applying the annual impact calculated using NatureScot's displacement and mortality rates indicates a median CPS of 0.964 to 0.988 (i.e. the population after 35 years, would be 1.2% to 3.6% smaller than the CPS with a 50th percentile value of 47.8 to 49.4 (Table 5.155)). In terms of the population size, this means that the median of the impacted population fell within the 48th or 50th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate 0.0 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.360 When modelling the annual impact associated with the Applicant's approach for puffin, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.990 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.0% smaller than the counterfactual population size). The 50th percentile value is 49.1, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.361 The current population at the SPA is below the population at designation (Table 5.8). The population of puffin at the Hermaness, Saxa Vord and Valla Field SPA declined between the Seabird 2000 and Seabirds Count.
- 5.5.3.362 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.363 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from recovering.
- 5.5.3.364 When the factors discussed in paragraph 5.5.3.6 are taken into account this would further improve the PVA metrics predicted above to a level at which it is considered the recovery of the puffin population at the SPA would also not be hindered.
- 5.5.3.365 Impacts on puffin that undermine the conservation objectives of the at the Hermaness, Saxa Vord and Valla Field SPA will not occur as a result of in-combination displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.3.366 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the puffin population of the Hermaness, Saxa Vord and Valla Field SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.154: Mean-peak population estimates for puffin at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Tier 1 (Scenario 4)						
Aberdeen				0.03		2
Aspen	0.00			0.03		3
Beatrice				0.03		70
Berwick Bank				0.03		272
Blyth Demo				0.03		1
Buchan	0.00	0.49	0.93	0.03	0	16
Caledonia North	0.00			0.03		23
Caledonia South	0.00			0.03		24
Cenos	0.00			0.03		2
Dogger Bank A				0.03		13
Dogger Bank B				0.03		37
Dogger Bank South				0.03		11
Dogger Bank C				0.03		17
Sofia				0.03		18
Dudgeon				0.03		1
Dudgeon Extension				0.03		1
East Anglia One				0.03		1
East Anglia Three				0.03		9

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Green Volt	0.00			0.03		1
Hornsea Project One				0.03		47
Hornsea Project Two				0.03		62
Hornsea Project Three				0.03		4
Hornsea Four				0.03		14
Humber Gateway				0.03		1
Inch Cape				0.03		57
Kincardine				0.03		0
Lincs				0.03		0
Moray East				0.03		22
Moray West				0.03		121
Morven North	0.00			0.03		42
Morven South	0.00			0.03		13
Muir Mhor				0.03		55
Neart na Gaoithe				0.03		112
Norfolk Vanguard				0.03		3
Ossian				0.03		36
Outer Dowsing				0.03		13
Pentland				0.03		0
Race Bank				0.03		0

Project	Seasonal apportioning values			Apportioned population estimates		
	Breeding			Non-breeding	Breeding	Non-breeding
	Colony	Immature	Sabbatical			
Rampion				0.03		0
Salamander				0.03		57
SeaGreen Bravo				0.03		118
SeaGreen Alpha				0.03		47
Sheringham Shoal Extension				0.03		0
Teesside				0.03		2
Triton Knoll				0.03		2
West of Orkney	0.00	0.49	0.93	0.03	0	65
Total population estimates (all projects including Morven North and Morven South)					0	1,418
Displacement mortality	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0	9
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0	26
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			0	7
Annual mortality (birds/annum)	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			9	
	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)			26	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)			7	
	NatureScot's approach	(60% displacement rate; 3% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.030	

Project	Seasonal apportioning values			Apportioned population estimates	
	Breeding		Non-breeding	Breeding	Non-breeding
	Colony	Immature			
Change in baseline mortality (percentage point change)	NatureScot's approach	(60% displacement rate; 5% breeding season mortality rate; 3% non-breeding seasons mortality rate)		0.089	
	Applicant's approach	(50% displacement rate; 1% mortality rate in all seasons)		0.025	

Table 5.155: Summary of population viability analysis results for in-combination displacement impacts on the puffin feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	6,438	0.972	-62.77	-	-	-
NatureScot (3% breeding season mortality rate; 1% non-breeding season mortality rate)	8.5	0.030	6,359	0.972	-63.27	1.000	0.988	49.4
NatureScot (5% breeding season mortality rate; 3% non-breeding season mortality rate)	25.5	0.089	6,205	0.971	-64.14	0.999	0.964	47.8
Applicant	7.1	0.025	6,335	0.972	-63.16	1.000	0.990	49.1

Gannet

5.5.3.367 Mean-peak population estimates for gannet apportioned to each of the SPAs identified in paragraph 5.5.3.1 are presented on a seasonal basis in the following SPA-specific sections. Impacts predicted for each SPA using the displacement and mortality rates advocated by NatureScot and the Applicant are also provided. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance

5.5.3.368 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Forth Islands Special Protection Area

5.5.3.369 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.156 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.370 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Forth Islands SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.156: Predicted annual mortality of gannet at the Forth Islands Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot’s approach				
Morven North	2.4 to 7.2	0.6 to 1.8	0.1 to 0.2	3.1 to 9.2
Morven South	1.1 to 3.3	0.2 to 0.5	0.1 to 0.3	1.4 to 4.1
Total annual mortality (birds/annum)				4.4 to 13.2
Change in baseline mortality (percentage point change)				0.003 to 0.009
Applicant’s approach				
Morven North	4.2	0.6	0.1	4.8
Morven South	1.9	0.2	0.1	2.1
Total annual mortality (birds/annum)				7.0
Change in baseline mortality (percentage point change)				0.005

5.5.3.371 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of gannet from the Forth Islands SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

- 5.5.3.372 Table 5.157 (NatureScot's apportioning approach) and Table 5.158 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.
- 5.5.3.373 The predicted in-combination impact on gannet at the Forth Islands SPA is presented in Table 5.157 (NatureScot's apportioning approach) and Table 5.158 (Applicant's approach). The total in-combination impact apportioned to the gannet population at the Forth Islands SPA is 118 to 355 birds/annum when applying NatureScot's approach and 152 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.
- 5.5.3.374 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.907 to 0.968; (i.e. the population after 35 years, would be 3.2 to 9.3% smaller than the CPS with a 50th percentile value of 35.5 to 44.9 (Table 5.159)). In terms of the population size, this means that the median of the impacted population fell within the 36th to 45th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.997 to 0.999 which translates to a growth rate 0.1 to 0.3% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.375 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.959 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 4.1% smaller than the counterfactual population size). The 50th percentile value is 43.6, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.376 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Forth Islands SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, primarily due to HPAI (BTO *et al*, 2025; Burton *et al*, 2025).
- 5.5.3.377 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.378 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhor, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.379 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA,

noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.

5.5.3.380 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Forth Islands SPA will therefore not occur as a result of in-combination displacement impacts.

5.5.3.381 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the gannet population of the Forth Islands SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.157: Mean-peak population estimates for gannet at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.63	0.55	0.90	0.24	0.31	126	44	63
Beatrice	0.38	0.55	0.90	0.24	0.31	55	48	61
Berwick Bank	0.97	0.55	0.90	0.24	0.31	2284	365	84
Blyth Demo	0.72	0.55	0.90	0.24	0.31	12	15	1
Buchan	0.35	0.55	0.90	0.24	0.31	41	45	17
Caledonia North	0.39	0.55	0.90	0.24	0.31	47	47	6
Caledonia South	0.38	0.55	0.90	0.24	0.31	133	45	5
Cenos	0.80	0.55	0.90	0.24	0.31	86	32	41
Dogger Bank A	0.59	0.55	0.90	0.24	0.31	152	223	60
Dogger Bank B	0.59	0.55	0.90	0.24	0.31	187	275	73
Dogger Bank South	0.00	0.55	0.90	0.24	0.31	0	383	42
Dogger Bank C	0.66	0.55	0.90	0.24	0.31	199	92	46
Sofia	0.66	0.55	0.90	0.24	0.31	233	123	46
Dudgeon	0.00	0.55	0.90	0.24	0.31	0	11	18
Dudgeon Extension	0.00	0.55	0.90	0.24	0.31	0	83	15
East Anglia One	0.00	0.55	0.90	0.24	0.31		650	29

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North	0.00	0.55	0.90	0.24	0.31		114	14
East Anglia Three	0.00	0.55	0.90	0.24	0.31		218	115
East Anglia Two	0.00	0.55	0.90	0.24	0.31		217	60
Five Estuaries	0.00	0.55	0.90	0.24	0.31		156	21
Galloper	0.00	0.55	0.90	0.24	0.31		113	68
Green Volt	0.56	0.55	0.90	0.24	0.31	55	6	32
Hornsea Project One	0.00	0.55	0.90	0.24	0.31	0	128	63
Hornsea Project Two	0.00	0.55	0.90	0.24	0.31	0	188	53
Hornsea Project Three	0.00	0.55	0.90	0.24	0.31	0	239	127
Hornsea Four	0.00	0.55	0.90	0.24	0.31	0	192	125
Humber Gateway	0.00	0.55	0.90	0.24	0.31	0	0	0
Inch Cape	1.00	0.55	0.90	0.24	0.31	613	78	26
Kincardine	0.38	0.55	0.90	0.24	0.31	23	0	0
Lincs	0.00	0.55	0.90	0.24	0.31	0	3	0
Moray East	0.00	0.55	0.90	0.24	0.31	0	4	6
Moray West	0.00	0.55	0.90	0.24	0.31	0	73	31
Morven North	0.87	0.55	0.90	0.24	0.31	343	85	12

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.87	0.55	0.90	0.24	0.31	158	22	14
Muir Mhor	0.62	0.55	0.90	0.24	0.31	184	144	23
Neart na Gaoithe	1.00	0.55	0.90	0.24	0.31	987	147	124
Norfolk Boreas	0.00	0.55	0.90	0.24	0.31	0	419	165
Norfolk Vanguard	0.00	0.55	0.90	0.24	0.31	0	599	137
North Falls	0.00	0.55	0.90	0.24	0.31		70	91
Ossian	0.80	0.55	0.90	0.24	0.31	552	188	13
Outer Dowsing	0.00	0.55	0.90	0.24	0.31	0	121	22
Pentland				0.24	0.31		6	3
Race Bank	0.00	0.55	0.90	0.24	0.31	0	14	6
Rampion				0.24	0.31		79	86
Rampion 2				0.24	0.31		25	38
Salamander	0.46	0.55	0.90	0.24	0.31	101	45	58
SeaGreen Bravo	0.99	0.55	0.90	0.24	0.31	476	86	46
SeaGreen Alpha	0.99	0.55	0.90	0.24	0.31	1134	73	31
Sheringham Shoal Extension	0.00	0.55	0.90	0.24	0.31	0	72	3
Teesside	0.36	0.55	0.90	0.24	0.31	8	0	0
Thanet				0.24	0.31		3	0
Triton Knoll	0.00	0.55	0.90	0.24	0.31	0	72	16

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Total population estimates (all projects including Morven North and Morven South)						8,190	6,479	2,236
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			57	45	16	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			172	136	47	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			118			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			355			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.079			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.236			

Table 5.158: Mean-peak population estimates for gannet at the Forth Islands Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.63	0.55	0.90	0.24	0.31	126	44	63
Beatrice	0.38	0.55	0.90	0.24	0.31	55	48	61
Berwick Bank	0.97	0.99	0.90	0.24	0.31	4097	365	84
Blyth Demo	0.72	0.55	0.90	0.24	0.31	12	15	1
Buchan	0.35	0.91	0.90	0.24	0.31	68	45	17
Caledonia North	0.39	0.55	0.90	0.24	0.31	47	47	6
Caledonia South	0.38	0.55	0.90	0.24	0.31	133	45	5
Cenos	0.80	0.98	0.90	0.24	0.31	152	32	41
Dogger Bank A	0.59	0.55	0.90	0.24	0.31	152	223	60
Dogger Bank B	0.59	0.55	0.90	0.24	0.31	187	275	73
Dogger Bank South	0.00	0.55	0.90	0.24	0.31	0	383	42
Dogger Bank C	0.66	0.55	0.90	0.24	0.31	199	92	46
Sofia	0.66	0.55	0.90	0.24	0.31	233	123	46
Dudgeon	0.00	0.55	0.90	0.24	0.31	0	11	18
Dudgeon Extension	0.00	0.55	0.90	0.24	0.31	0	83	15
East Anglia One	0.00	0.55	0.90	0.24	0.31		650	29

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North	0.00	0.55	0.90	0.24	0.31		114	14
East Anglia Three	0.00	0.55	0.90	0.24	0.31		218	115
East Anglia Two	0.00	0.55	0.90	0.24	0.31		217	60
Five Estuaries	0.00	0.55	0.90	0.24	0.31		156	21
Galloper	0.00	0.55	0.90	0.24	0.31		113	68
Green Volt	0.56	0.55	0.90	0.24	0.31	55	6	32
Hornsea Project One	0.00	0.62	0.90	0.24	0.31	0	128	63
Hornsea Project Two	0.00	0.72	0.90	0.24	0.31	0	188	53
Hornsea Project Three	0.00	0.73	0.90	0.24	0.31	0	239	127
Hornsea Four	0.00	0.55	0.90	0.24	0.31	0	192	125
Humber Gateway	0.00	0.55	0.90	0.24	0.31	0	0	0
Inch Cape	1.00	0.55	0.90	0.24	0.31	613	78	26
Kincardine	0.38	0.79	0.90	0.24	0.31	33	0	0
Lincs	0.00	0.55	0.90	0.24	0.31	0	3	0
Moray East	0.00	0.55	0.90	0.24	0.31	0	4	6
Moray West	0.00	0.55	0.90	0.24	0.31	0	73	31
Morven North	0.87	0.96	0.90	0.24	0.31	596	85	12

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.87	0.95	0.90	0.24	0.31	272	22	14
Muir Mhor	0.62	0.55	0.90	0.24	0.31	184	144	23
Neart na Gaoithe	1.00	0.98	0.90	0.24	0.31	1744	147	124
Norfolk Boreas	0.00	0.55	0.90	0.24	0.31	0	419	165
Norfolk Vanguard	0.00	0.55	0.90	0.24	0.31	0	599	137
North Falls	0.00	0.69	0.90	0.24	0.31		70	91
Ossian	0.80	0.98	0.90	0.24	0.31	980	188	13
Outer Dowsing	0.00	0.90	0.90	0.24	0.31	0	121	22
Pentland				0.24	0.31		6	3
Race Bank	0.00	0.55	0.90	0.24	0.31	0	14	6
Rampion				0.24	0.31		79	86
Rampion 2				0.24	0.31		25	38
Salamander	0.46	0.94	0.90	0.24	0.31	171	45	58
SeaGreen Bravo	0.99	0.97	0.90	0.24	0.31	839	86	46
SeaGreen Alpha	0.99	0.97	0.90	0.24	0.31	1999	73	31
Sheringham Shoal Extension	0.00	0.55	0.90	0.24	0.31	0	72	3
Teesside	0.36	0.55	0.90	0.24	0.31	8	0	0
Thanet				0.24	0.31		3	0
Triton Knoll	0.00	0.55	0.90	0.24	0.31	0	72	16

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Total population estimates (all projects including Morven North and Morven South)						12,957	6,479	2,236
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			91	45	16	
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			152			
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.101			

Table 5.159: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	304,843	1.012	53.73	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	118.3	0.079	295,381	1.011	48.78	0.999	0.968	44.9
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	355.0	0.236	276,985	1.010	39.47	0.997	0.907	35.5
Applicant	151.7	0.101	292,536	1.011	47.56	0.999	0.959	43.6

Flamborough and Filey Coast Special Protection Area

5.5.3.382 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.160 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.383 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.160: Predicted annual mortality of gannet at the Flamborough and Filey Coast Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	n/a	0.1 to 0.4	0.0 to 0.0	0.1 to 0.4
Morven South	n/a	0.0 to 0.1	0.0 to 0.1	0.0 to 0.1
Total annual mortality (birds/annum)				0.2 to 0.5
Change in baseline mortality (percentage point change)				0.001 to 0.002
Applicant's approach				
Morven North	n/a	0.1	0.0	0.1
Morven South	n/a	0.0	0.0	0.0
Total annual mortality (birds/annum)				0.2
Change in baseline mortality (percentage point change)				0.001

5.5.3.384 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of gannet from the Flamborough and Filey Coast SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPs as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.385 Table 5.161 (NatureScot's apportioning approach) and Table 5.162 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.386 The predicted in-combination impact on gannet at the Flamborough and Filey Coast SPA is presented in Table 5.161 (NatureScot's apportioning approach) and Table 5.162 (Applicant's approach). The total in-combination impact apportioned to the gannet population at the Flamborough and Filey Coast SPA is 43 to 131 birds/annum when applying NatureScot's approach and 47 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.387 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.816 to 0.935; (i.e. the population after 35 years, would be 6.5 to 18.4% smaller than the CPS with a 50th percentile value of 20.2 to 39.3 (Table 5.163)). In terms of the population size, this means that the median of the impacted population fell within the 20th to 40th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.998 which translates to a growth rate 0.2 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.388 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.930 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 7.0% smaller than the counterfactual population size). The 50th percentile value is 38.1, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.389 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Flamborough and Filey Coast SPA increased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.3.390 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.391 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the gannet population at the SPA from being maintained, noting that the population at the SPA is higher than at designation.
- 5.5.3.392 When the factors discussed in paragraph 5.5.3.6 are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Flamborough and Filey Coast SPA will therefore not occur as a result of in-combination displacement impacts.
- 5.5.3.393 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Flamborough and Filey Coast SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.161: Mean-peak population estimates for gannet at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.05	0.55	0.90	0.05	0.06	10	9	13
Beatrice	0.00	0.55	0.90	0.05	0.06	0	10	12
Berwick Bank	0.01	0.55	0.90	0.05	0.06	31	73	17
Blyth Demo	0.15	0.55	0.90	0.05	0.06	3	3	0
Buchan	0.02	0.55	0.90	0.05	0.06	3	9	3
Caledonia North	0.00	0.55	0.90	0.05	0.06	0	9	1
Caledonia South	0.00	0.55	0.90	0.05	0.06	0	9	1
Cenos	0.00	0.55	0.90	0.05	0.06	0	6	8
Dogger Bank A	0.41	0.55	0.90	0.05	0.06	105	44	12
Dogger Bank B	0.41	0.55	0.90	0.05	0.06	130	55	15
Dogger Bank South	1.00	0.55	0.90	0.05	0.06	663	76	8
Dogger Bank C	0.34	0.55	0.90	0.05	0.06	103	18	9
Sofia	0.34	0.55	0.90	0.05	0.06	120	25	9
Dudgeon	0.57	0.55	0.90	0.05	0.06	31	2	4
Dudgeon Extension	1.00	0.55	0.90	0.05	0.06	207	17	3
East Anglia One	1.00	0.55	0.90	0.05	0.06	27	130	6

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North	1.00	0.55	0.90	0.05	0.06	74	23	3
East Anglia Three	1.00	0.55	0.90	0.05	0.06	0	43	23
East Anglia Two	1.00	0.55	0.90	0.05	0.06	95	43	12
Five Estuaries	0.74	0.55	0.90	0.05	0.06	86	31	4
Galloper	0.00	0.55	0.90	0.05	0.06	0	23	14
Green Volt	0.04	0.55	0.90	0.05	0.06	3	1	6
Hornsea Project One	1.00	0.55	0.90	0.05	0.06	263	25	13
Hornsea Project Two	1.00	0.55	0.90	0.05	0.06	167	37	11
Hornsea Project Three	1.00	0.55	0.90	0.05	0.06	662	48	25
Hornsea Four	1.00	0.55	0.90	0.05	0.06	485	38	25
Humber Gateway	0.84	0.55	0.90	0.05	0.06	26	0	0
Inch Cape	0.00	0.55	0.90	0.05	0.06	0	16	5
Kincardine	0.00	0.55	0.90	0.05	0.06	0	0	0
Lincs	0.64	0.55	0.90	0.05	0.06	4	1	0
Moray East	0.00	0.55	0.90	0.05	0.06	0	1	1
Moray West	0.00	0.55	0.90	0.05	0.06	0	14	6
Morven North	0.00	0.55	0.90	0.05	0.06	0	17	2

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.00	0.55	0.90	0.05	0.06	0	4	3
Muir Mhor	0.04	0.55	0.90	0.05	0.06	12	29	5
Near na Gaoithe	0.00	0.55	0.90	0.05	0.06	0	29	25
Norfolk Boreas	1.00	0.55	0.90	0.05	0.06	671	84	33
Norfolk Vanguard	1.00	0.55	0.90	0.05	0.06	128	119	27
North Falls	1.00	0.55	0.90	0.05	0.06	34	14	18
Ossian	0.05	0.55	0.90	0.05	0.06	34	38	3
Outer Dowsing	0.64	0.55	0.90	0.05	0.06	175	24	4
Race Bank	0.64	0.55	0.90	0.05	0.06	37	3	1
Rampion	0.00	0.55	0.90	0.05	0.06	0	16	17
Rampion 2	0.00	0.55	0.90	0.05	0.06	0	5	8
Salamander	0.02	0.55	0.90	0.05	0.06	5	9	12
SeaGreen Bravo	0.00	0.55	0.90	0.05	0.06	0	17	9
SeaGreen Alpha	0.00	0.55	0.90	0.05	0.06	0	15	6
Sheringham Shoal Extension	1.00	0.55	0.90	0.05	0.06	11	14	1
Teesside	0.54	0.55	0.90	0.05	0.06	13	0	0
Thanet	1.00	0.55	0.90	0.05	0.06	18	1	0
Triton Knoll	0.72	0.55	0.90	0.05	0.06	74	14	3
Total population estimates (all projects including Morven North and Morven South)						4,510	1,291	445

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			32	9	3	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			95	27	9	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			44			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			131			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.163			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.490			

Table 5.162: Mean-peak population estimates for gannet at the Flamborough and Filey Coast Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.05	0.55	0.90	0.05	0.06	10	9	13
Beatrice	0.00	0.55	0.90	0.05	0.06	0	10	12
Berwick Bank	0.01	0.99	0.90	0.05	0.06	55	73	17
Blyth Demo	0.15	0.55	0.90	0.05	0.06	3	3	0
Buchan	0.02	0.91	0.90	0.05	0.06	5	9	3
Caledonia North	0.00	0.55	0.90	0.05	0.06	0	9	1
Caledonia South	0.00	0.55	0.90	0.05	0.06	0	9	1
Cenos	0.00	0.98	0.90	0.05	0.06	0	6	8
Dogger Bank A	0.41	0.55	0.90	0.05	0.06	105	44	12
Dogger Bank B	0.41	0.55	0.90	0.05	0.06	130	55	15
Dogger Bank South	1.00	0.55	0.90	0.05	0.06	663	76	8
Dogger Bank C	0.34	0.55	0.90	0.05	0.06	103	18	9
Sofia	0.34	0.55	0.90	0.05	0.06	120	25	9
Dudgeon	0.57	0.55	0.90	0.05	0.06	31	2	4
Dudgeon Extension	1.00	0.55	0.90	0.05	0.06	207	17	3
East Anglia One	1.00	0.55	0.90	0.05	0.06	27	130	6
East Anglia One North	1.00	0.55	0.90	0.05	0.06	74	23	3
East Anglia Three	1.00	0.55	0.90	0.05	0.06	0	43	23

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two	1.00	0.55	0.90	0.05	0.06	95	43	12
Five Estuaries	0.74	0.55	0.90	0.05	0.06	86	31	4
Galloper	0.00	0.55	0.90	0.05	0.06	0	23	14
Green Volt	0.04	0.55	0.90	0.05	0.06	3	1	6
Hornsea Project One	1.00	0.62	0.90	0.05	0.06	295	25	13
Hornsea Project Two	1.00	0.72	0.90	0.05	0.06	218	37	11
Hornsea Project Three	1.00	0.73	0.90	0.05	0.06	873	48	25
Hornsea Four	1.00	0.55	0.90	0.05	0.06	485	38	25
Humber Gateway	0.84	0.55	0.90	0.05	0.06	26	0	0
Inch Cape	0.00	0.55	0.90	0.05	0.06	0	16	5
Kincardine	0.00	0.79	0.90	0.05	0.06	0	0	0
Lincs	0.64	0.55	0.90	0.05	0.06	4	1	0
Moray East	0.00	0.55	0.90	0.05	0.06	0	1	1
Moray West	0.00	0.55	0.90	0.05	0.06	0	14	6
Morven North	0.00	0.96	0.90	0.05	0.06	0	17	2
Morven South	0.00	0.95	0.90	0.05	0.06	0	4	3
Muir Mhor	0.04	0.55	0.90	0.05	0.06	12	29	5
Neart na Gaoithe	0.00	0.98	0.90	0.05	0.06	0	29	25
Norfolk Boreas	1.00	0.55	0.90	0.05	0.06	671	84	33
Norfolk Vanguard	1.00	0.55	0.90	0.05	0.06	128	119	27

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
North Falls	1.00	0.69	0.90	0.05	0.06	43	14	18
Ossian	0.05	0.98	0.90	0.05	0.06	61	38	3
Outer Dowsing	0.64	0.90	0.90	0.05	0.06	286	24	4
Race Bank	0.64	0.55	0.90	0.05	0.06	37	3	1
Rampion	0.00	0.55	0.90	0.05	0.06	0	16	17
Rampion 2	0.00	0.55	0.90	0.05	0.06	0	5	8
Salamander	0.02	0.94	0.90	0.05	0.06	9	9	12
SeaGreen Bravo	0.00	0.97	0.90	0.05	0.06	0	17	9
SeaGreen Alpha	0.00	0.97	0.90	0.05	0.06	0	15	6
Sheringham Shoal Extension	1.00	0.55	0.90	0.05	0.06	11	14	1
Teesside	0.54	0.55	0.90	0.05	0.06	13	0	0
Thanet	1.00	0.55	0.90	0.05	0.06	18	1	0
Triton Knoll	0.72	0.55	0.90	0.05	0.06	74	14	3
Total population estimates (all projects including Morven North and Morven South)						4,980	1,291	445
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				35	9	3
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				47		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.176		

Table 5.163: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	52,153	1.012	53.82	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	43.7	0.163	48,752	1.010	43.51	0.998	0.935	39.3
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	131.2	0.490	42,562	1.007	25.41	0.994	0.816	20.2
Applicant	47.0	0.176	48,387	1.010	42.84	0.998	0.930	38.1

Noss Special Protection Area

5.5.3.394 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.164 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.395 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Noss SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.164: Predicted annual mortality of gannet at the Noss Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	n/a	0.1 to 0.3	0.0 to 0.0	0.1 to 0.3
Morven South	n/a	0.0 to 0.1	0.0 to 0.1	0.0 to 0.1
Total annual mortality (birds/annum)				0.1 to 0.4
Change in baseline mortality (percentage point change)				<0.001 to 0.001
Applicant's approach				
Morven North	n/a	0.1	0.0	0.1
Morven South	n/a	0.0	0.0	0.0
Total annual mortality (birds/annum)				0.1
Change in baseline mortality (percentage point change)				<0.001

5.5.3.396 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of gannet from the Noss SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.397 Table 5.165 (NatureScot's apportioning approach) and Table 5.166 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.398 The predicted in-combination impact on gannet at the Noss SPA is presented in Table 5.165 (NatureScot's apportioning approach) and Table 5.166 (Applicant's approach). The total in-combination impact apportioned to the gannet population at the Noss SPA is 10 to 31 birds/annum when applying NatureScot's approach and 11 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.399 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.955 to 0.985; (i.e. the population after 35 years, would be 1.5 to 4.5% smaller than the CPS with a 50th percentile value of 42.5 to 47.5 (Table 5.167)). In terms of the population size, this means that the median of the impacted population fell within the 43rd to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate 0.0 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.400 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.985 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.5% smaller than the counterfactual population size). The 50th percentile value is 47.3, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.401 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Noss SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, presumably due to HPAI (Lane *et al*, 2024, BTO *et al*, 2025).
- 5.5.3.402 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.403 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.
- 5.5.3.404 When the factors discussed in paragraph 5.5.3.6 it is considered that impacts on gannet that undermine the conservation objectives of the Noss SPA will therefore not occur as a result of in-combination displacement impacts.
- 5.5.3.405 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Noss SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.165: Mean-peak population estimates for gannet at the Noss Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.55	0.90	0.03	0.06	9	6	11
Beatrice	0.06	0.55	0.90	0.03	0.06	9	7	11
Berwick Bank	0.00	0.55	0.90	0.03	0.06	9	51	15
Blyth Demo				0.03	0.06		2	0
Buchan	0.10	0.55	0.90	0.03	0.06	12	6	3
Caledonia North	0.05	0.55	0.90	0.03	0.06	5	7	1
Caledonia South	0.04	0.55	0.90	0.03	0.06	12	6	1
Cenos	0.05	0.55	0.90	0.03	0.06	5	5	7
Dogger Bank A				0.03	0.06		31	10
Dogger Bank B				0.03	0.06		39	13
Dogger Bank South				0.03	0.06		54	7
Dogger Bank C				0.03	0.06		13	8
Sofia				0.03	0.06		17	8
Dudgeon				0.03	0.06		2	3
Dudgeon Extension				0.03	0.06		12	3
East Anglia One				0.03	0.06		92	5

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				0.03	0.06		16	2
East Anglia Three				0.03	0.06		31	20
East Anglia Two				0.03	0.06		31	11
Five Estuaries				0.03	0.06		22	4
Galloper				0.03	0.06		16	12
Green Volt	0.05	0.55	0.90	0.03	0.06	5	1	6
Hornsea Project One				0.03	0.06		18	11
Hornsea Project Two				0.03	0.06		26	9
Hornsea Project Three				0.03	0.06		34	22
Hornsea Four				0.03	0.06		27	22
Humber Gateway				0.03	0.06		0	0
Inch Cape	0.00	0.55	0.90	0.03	0.06	0	11	5
Kincardine	0.00	0.55	0.90	0.03	0.06	0	0	0
Lincs				0.03	0.06		0	0
Moray East	0.00	0.55	0.90	0.03	0.06	0	1	1
Moray West	0.00	0.55	0.90	0.03	0.06	0	10	5
Morven North	0.00	0.55	0.90	0.03	0.06	6	12	2

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.00	0.55	0.90	0.03	0.06	3	3	2
Muir Mhor	0.04	0.55	0.90	0.03	0.06	10	20	4
Neart na Gaoithe	0.00	0.55	0.90	0.03	0.06	0	21	22
Norfolk Boreas				0.03	0.06		59	29
Norfolk Vanguard				0.03	0.06		84	24
North Falls				0.03	0.06		10	16
Ossian	0.02	0.55	0.90	0.03	0.06	14	27	2
Outer Dowsing				0.03	0.06		17	4
Pentland				0.01	0.06		0	0
Race Bank				0.03	0.06		2	1
Rampion				0.03	0.06		11	15
Rampion 2				0.03	0.06		3	7
Salamander	0.03	0.55	0.90	0.03	0.06	7	6	10
SeaGreen Bravo	0.00	0.55	0.90	0.03	0.06	0	12	8
SeaGreen Alpha	0.00	0.55	0.90	0.03	0.06	0	10	6
Sheringham Shoal Extension				0.03	0.06		10	1
Teesside				0.03	0.06		0	0
Thanet				0.03	0.06		0	0
Triton Knoll				0.03	0.06		10	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
West of Orkney	0.00	0.55	0.90	0.03	0.06	0	47	8
Total population estimates (all projects including Morven North and Morven South)						99	959	401
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			1	7	3	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			2	20	8	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			10			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			31			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.037			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.112			

Table 5.166: Mean-peak population estimates for gannet at the Noss Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.55	0.90	0.03	0.06	9	6	11
Beatrice	0.06	0.55	0.90	0.03	0.06	9	7	11
Berwick Bank	0.00	0.99	0.90	0.03	0.06	17	51	15
Blyth Demo				0.03	0.06		2	0
Buchan	0.10	0.91	0.90	0.03	0.06	19	6	3
Caledonia North	0.05	0.55	0.90	0.03	0.06	5	7	1
Caledonia South	0.04	0.55	0.90	0.03	0.06	12	6	1
Cenos	0.05	0.98	0.90	0.03	0.06	10	5	7
Dogger Bank A				0.03	0.06		31	10
Dogger Bank B				0.03	0.06		39	13
Dogger Bank South				0.03	0.06		54	7
Dogger Bank C				0.03	0.06		13	8
Sofia				0.03	0.06		17	8
Dudgeon				0.03	0.06		2	3
Dudgeon Extension				0.03	0.06		12	3
East Anglia One				0.03	0.06		92	5

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				0.03	0.06		16	2
East Anglia Three				0.03	0.06		31	20
East Anglia Two				0.03	0.06		31	11
Five Estuaries				0.03	0.06		22	4
Galloper				0.03	0.06		16	12
Green Volt	0.05	0.55	0.90	0.03	0.06	5	1	6
Hornsea Project One		0.62		0.03	0.06		18	11
Hornsea Project Two		0.72		0.03	0.06		26	9
Hornsea Project Three		0.73		0.03	0.06		34	22
Hornsea Four				0.03	0.06		27	22
Humber Gateway				0.03	0.06		0	0
Inch Cape	0.00	0.55	0.90	0.03	0.06	0	11	5
Kincardine	0.00	0.79	0.90	0.03	0.06	0	0	0
Lincs				0.03	0.06		0	0
Moray East	0.00	0.55	0.90	0.03	0.06	0	1	1
Moray West	0.00	0.55	0.90	0.03	0.06	0	10	5
Morven North	0.00	0.96	0.90	0.03	0.06	0	12	2

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.00	0.95	0.90	0.03	0.06	0	3	2
Muir Mhor	0.04	0.55	0.90	0.03	0.06	10	20	4
Neart na Gaoithe	0.00	0.98	0.90	0.03	0.06	0	21	22
Norfolk Boreas				0.03	0.06		59	29
Norfolk Vanguard				0.03	0.06		84	24
North Falls		0.69		0.03	0.06		10	16
Ossian	0.02	0.98	0.90	0.03	0.06	25	27	2
Outer Dowsing		0.90		0.03	0.06		17	4
Pentland				0.01	0.06		0	0
Race Bank				0.03	0.06		2	1
Rampion				0.03	0.06		11	15
Rampion 2				0.03	0.06		3	7
Salamander	0.03	0.94	0.90	0.03	0.06	13	6	10
SeaGreen Bravo	0.00	0.97	0.90	0.03	0.06	0	12	8
SeaGreen Alpha	0.00	0.97	0.90	0.03	0.06	0	10	6
Sheringham Shoal Extension				0.03	0.06		10	1
Teesside				0.03	0.06		0	0
Thanet				0.03	0.06		0	0
Triton Knoll				0.03	0.06		10	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
West of Orkney	0.00	0.55	0.90	0.03	0.06	0	47	8
Total population estimates (all projects including Morven North and Morven South)						134	959	401
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				1	7	3
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				10		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.038		

Table 5.167: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Noss Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50% impacted
Baseline	-	-	52,536	1.012	53.81	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	10.3	0.037	51,724	1.012	51.56	1.000	0.985	47.5
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	30.8	0.111	50,179	1.011	47.09	0.999	0.955	42.5
Applicant	10.5	0.038	51,683	1.012	51.27	1.000	0.985	47.3

Hermaness, Saxa Vord and Valla Field Special Protection Area

5.5.3.406 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.168 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.3.407 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Hermaness, Saxa Vord and Valla Field SPA in relation to displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.168: Predicted annual mortality of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from displacement impacts associated with the Morven Programme (Scenario 3)

Project	Breeding	Post-breeding	Pre-breeding	Annual
NatureScot's approach				
Morven North	n/a	0.2 to 0.6	0.0 to 0.1	0.2 to 0.7
Morven South	n/a	0.1 to 0.2	0.0 to 0.1	0.1 to 0.3
Total annual mortality (birds/annum)				0.3 to 1.0
Change in baseline mortality (percentage point change)				0.001 to 0.002
Applicant's approach				
Morven North	n/a	0.2	0.0	0.2
Morven South	n/a	0.1	0.0	0.1
Total annual mortality (birds/annum)				0.3
Change in baseline mortality (percentage point change)				0.001

5.5.3.408 For the in-combination assessment (Scenario 4), based on the mean-maximum foraging range of gannet from the Hermaness, Saxa Vord and Valla Field SPA, there are a number of projects that require consideration in the breeding season. In the post-breeding and pre-breeding seasons all projects within the UK North Sea BDMPS as defined by Furness (2015) are included in the in-combination assessment.

5.5.3.409 Table 5.169 (NatureScot's apportioning approach) and Table 5.170 (Applicant's approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.3.410 The predicted in-combination impact on gannet at the Hermaness, Saxa Vord and Valla Field SPA is presented in Table 5.169 (NatureScot's apportioning approach) and Table 5.170 (Applicant's approach). The total in-combination impact apportioned to the gannet population at the Hermaness, Saxa Vord and Valla Field SPA is 24 to 71 birds/annum when applying NatureScot's approach and 24 birds/annum when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

- 5.5.3.411 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.952 to 0.984; (i.e. the population after 35 years, would be 1.6 to 4.8% smaller than the CPS with a 50th percentile value of 41.9 to 47.5 (Table 5.171)). In terms of the population size, this means that the median of the impacted population fell within the 42nd to 47th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 1.000 which translates to a growth rate 0.0 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.3.412 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 1.000 and a median CPS of 0.983 (i.e. the population growth rate would be 0.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 1.7% smaller than the counterfactual population size). The 50th percentile value is 47.3, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.3.413 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Hermaness, Saxa Vord and Valla Field SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, presumably due to HPAI (Lane *et al*, 2024, BTO *et al*, 2025).
- 5.5.3.414 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.3.6.
- 5.5.3.415 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.3.416 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.
- 5.5.3.417 When the factors discussed in paragraph 5.5.3.6 and the compensation required at other projects are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Hermaness, Saxa Vord and Valla Field SPA will therefore not occur as a result of in-combination displacement impacts.
- 5.5.3.418 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Hermaness, Saxa Vord and Valla Field SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.169: Mean-peak population estimates for gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.55	0.90	0.09	0.14	8	16	28
Beatrice	0.06	0.55	0.90	0.09	0.14	9	17	27
Berwick Bank	0.01	0.55	0.90	0.09	0.14	12	128	37
Blyth Demo				0.09	0.14		5	0
Buchan	0.07	0.55	0.90	0.09	0.14	8	16	7
Caledonia North	0.04	0.55	0.90	0.09	0.14	5	17	3
Caledonia South	0.03	0.55	0.90	0.09	0.14	11	16	2
Cenos	0.06	0.55	0.90	0.09	0.14	6	11	18
Dogger Bank A				0.09	0.14		78	26
Dogger Bank B				0.09	0.14		97	32
Dogger Bank South				0.09	0.14		134	18
Dogger Bank C				0.09	0.14		32	20
Sofia				0.09	0.14		43	20
Dudgeon				0.09	0.14		4	8
Dudgeon Extension				0.09	0.14		29	6
East Anglia One				0.09	0.14		228	13

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				0.09	0.14		40	6
East Anglia Three				0.09	0.14		76	51
East Anglia Two				0.09	0.14		76	26
Five Estuaries				0.09	0.14		55	9
Galloper				0.09	0.14		40	30
Green Volt	0.05	0.55	0.90	0.09	0.14	5	2	14
Hornsea Project One				0.09	0.14		45	28
Hornsea Project Two				0.09	0.14		66	23
Hornsea Project Three				0.09	0.14		84	56
Hornsea Four				0.09	0.14		67	55
Humber Gateway				0.09	0.14		0	0
Inch Cape	0.00	0.55	0.90	0.09	0.14	0	28	11
Kincardine	0.00	0.55	0.90	0.09	0.14	0	0	0
Lincs				0.09	0.14		1	0
Moray East	0.00	0.55	0.90	0.09	0.14	0	2	3
Moray West	0.00	0.55	0.90	0.09	0.14	0	25	13
Morven North	0.00	0.55	0.90	0.09	0.14	8	30	5

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.00	0.55	0.90	0.09	0.14	4	8	6
Muir Mhor	0.05	0.55	0.90	0.09	0.14	15	51	10
Near na Gaoithe	0.00	0.55	0.90	0.09	0.14	0	52	54
Norfolk Boreas				0.09	0.14		147	72
Norfolk Vanguard				0.09	0.14		210	60
North Falls				0.09	0.14		25	40
Ossian	0.03	0.55	0.90	0.09	0.14	18	66	6
Outer Dowsing				0.09	0.14		42	9
Pentland		0.55	0.90	0.02	0.02	0	0	0
Race Bank				0.09	0.14		5	3
Rampion				0.09	0.14		28	38
Rampion 2				0.09	0.14		9	17
Salamander	0.04	0.55	0.90	0.09	0.14	10	16	25
SeaGreen Bravo	0.00	0.55	0.90	0.09	0.14	0	30	20
SeaGreen Alpha	0.00	0.55	0.90	0.09	0.14	0	26	14
Sheringham Shoal Extension				0.09	0.14		25	2
Teesside				0.09	0.14		0	0
Thanet				0.09	0.14		1	0
Triton Knoll				0.09	0.14		25	7

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
West of Orkney	0.00	0.55	0.90	0.02	0.02	0	24	3
Total population estimates (all projects including Morven North and Morven South)						107	2,298	984
Displacement mortality	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			1	16	7	
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			2	48	21	
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			24			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			71			
Change in baseline mortality (percentage point change)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)			0.040			
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)			0.121			

Table 5.170: Mean-peak population estimates for gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.55	0.90	0.09	0.14	8	16	28
Beatrice	0.06	0.55	0.90	0.09	0.14	9	17	27
Berwick Bank	0.01	0.99	0.90	0.09	0.14	21	128	37
Blyth Demo				0.09	0.14		5	0
Buchan	0.07	0.91	0.90	0.09	0.14	14	16	7
Caledonia North	0.04	0.55	0.90	0.09	0.14	5	17	3
Caledonia South	0.03	0.55	0.90	0.09	0.14	11	16	2
Cenos	0.06	0.98	0.90	0.09	0.14	11	11	18
Dogger Bank A				0.09	0.14		78	26
Dogger Bank B				0.09	0.14		97	32
Dogger Bank South				0.09	0.14		134	18
Dogger Bank C				0.09	0.14		32	20
Sofia				0.09	0.14		43	20
Dudgeon				0.09	0.14		4	8
Dudgeon Extension				0.09	0.14		29	6
East Anglia One				0.09	0.14		228	13

Project	Seasonal apportioning values				Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North				0.09	0.14		40	6
East Anglia Three				0.09	0.14		76	51
East Anglia Two				0.09	0.14		76	26
Five Estuaries				0.09	0.14		55	9
Galloper				0.09	0.14		40	30
Green Volt	0.05	0.55	0.90	0.09	0.14	5	2	14
Hornsea Project One		0.62		0.09	0.14		45	28
Hornsea Project Two		0.72		0.09	0.14		66	23
Hornsea Project Three		0.73		0.09	0.14		84	56
Hornsea Four				0.09	0.14		67	55
Humber Gateway				0.09	0.14		0	0
Inch Cape	0.00	0.55	0.90	0.09	0.14	0	28	11
Kincardine	0.00	0.79	0.90	0.09	0.14	0	0	0
Lincs				0.09	0.14		1	0
Moray East	0.00	0.55	0.90	0.09	0.14	0	2	3
Moray West	0.00	0.55	0.90	0.09	0.14	0	25	13
Morven North	0.00	0.96	0.90	0.09	0.14	0	30	5

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Morven South	0.00	0.95	0.90	0.09	0.14	0	8	6
Muir Mhor	0.05	0.55	0.90	0.09	0.14	15	51	10
Neart na Gaoithe	0.00	0.98	0.90	0.09	0.14	0	52	54
Norfolk Boreas				0.09	0.14		147	72
Norfolk Vanguard				0.09	0.14		210	60
North Falls		0.69		0.09	0.14		25	40
Ossian	0.03	0.98	0.90	0.09	0.14	33	66	6
Outer Dowsing		0.90		0.09	0.14		42	9
Pentland		0.55	0.90	0.02	0.02	0	0	0
Race Bank				0.09	0.14		5	3
Rampion				0.09	0.14		28	38
Rampion 2				0.09	0.14		9	17
Salamander	0.04	0.94	0.90	0.09	0.14	16	16	25
SeaGreen Bravo	0.00	0.97	0.90	0.09	0.14	0	30	20
SeaGreen Alpha	0.00	0.97	0.90	0.09	0.14	0	26	14
Sheringham Shoal Extension				0.09	0.14		25	2
Teesside				0.09	0.14		0	0
Thanet				0.09	0.14		1	0
Triton Knoll				0.09	0.14		25	7

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
West of Orkney	0.00	0.55	0.90	0.02	0.02	0	24	3
Total population estimates (all projects including Morven North and Morven South)						148	2,298	984
Displacement mortality	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				1	16	7
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				24		
Change in baseline mortality (percentage point change)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				0.041		

Table 5.171: Summary of population viability analysis results for in-combination displacement impacts on the gannet feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	109,323	1.012	53.17	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	23.8	0.040	107,556	1.012	50.67	1.000	0.984	47.5
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	71.4	0.121	103,937	1.011	45.74	0.999	0.952	41.9
Applicant	24.0	0.041	107,470	1.012	50.57	1.000	0.983	47.3

Outer Firth of Forth and St Andrew's Bay Complex SPA

5.5.3.419 Of those SPAs for which in-combination displacement impacts have been assessed, the Outer Firth of Forth and St Andrew's Bay Complex SPA supports kittiwake from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA, guillemot from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA and the Buchan Ness to Collieston Coast SPA, razorbill at the Forth Islands SPA, puffin at the Forth Islands SPA and gannet from the Forth Islands SPA.

5.5.3.420 Conclusions of no AEIOI have been reached for all of the SPAs for which in-combination displacement impacts have been considered for kittiwake, guillemot, razorbill, puffin and gannet from SPAs from which birds are supported by the Outer Firth of Forth and St Andrew's Bay Complex SPA with the exception of guillemot at the Forth Islands SPA

5.5.3.421 As the Outer Firth of Forth and St Andrew's Bay Complex SPA supports guillemot from the Forth Islands SPA an AEIOI is also concluded for the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to in-combination displacement impacts on guillemot.

5.5.3.422 It is therefore concluded that there is the potential for an AEIOI on the guillemot populations of the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Northumberland Marine SPA

5.5.3.423 Of those SPAs for which in-combination displacement impacts have been assessed, the Northumberland Marine SPA is designated to support kittiwake from the Farne Islands SPA and puffin from the Coquet Island SPA and the Farne Islands SPA.

5.5.3.424 A conclusion of no AEIOI has been reached for the kittiwake feature of the Farne Islands SPA and the puffin feature of the Coquet Island SPA and the Farne Islands SPA. A conclusion of no AEIOI has been reached for the kittiwake and puffin features of these SPAs. The conclusion reached for the kittiwake and puffin qualifying features these SPAs is considered applicable to the kittiwake and puffin qualifying features of the Northumberland Marine SPA. Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI on the kittiwake and puffin populations of the Northumberland Marine SPA in relation to displacement impacts associated with Morven North in-combination with other plans and projects.

Conclusion

5.5.3.425 Potential effects from in-combination displacement risk impacts on the relevant conservation objectives of each SPA (as presented in Table 5.9) are discussed in Appendix A. Impacts that undermine the conservation objectives will not occur as a result of in-combination displacement impacts for the following SPAs and relevant offshore ornithological qualifying features:

- Kittiwake at the Buchan Ness to Collieston Coast SPA;
- Kittiwake at the East Caithness Cliffs SPA;
- Kittiwake at the Farne Islands SPA;
- Kittiwake at the Flamborough and Filey Coast SPA;
- Kittiwake at the Fowlsheugh SPA;
- Kittiwake at the Forth Islands SPA;
- Kittiwake at the St Abb's Head to Fast Castle SPA;
- Kittiwake at the Troup, Pennan and Lion's Heads SPA;
- Kittiwake at the Northumberland Marine SPA;
- Guillemot at the Buchan Ness to Collieston Coast SPA;

- Guillemot at the Fowlsheugh SPA;
- Guillemot at the St Abb's Head to Fast Castle SPA;
- Razorbill at the East Caithness Cliffs SPA;
- Razorbill at the Flamborough and Filey Coast SPA;
- Razorbill at the Forth Islands SPA;
- Razorbill at the Fowlsheugh SPA;
- Razorbill at the Troup, Pennan and Lion's Heads SPA;
- Puffin at the Coquet Island SPA;
- Puffin at the Farne Islands SPA;
- Puffin at the Forth Islands SPA;
- Puffin at the Foula SPA;
- Puffin at the Hermaness, Saxa Vord and Valla Field SPA;
- Puffin at the Northumberland Marine SPA;
- Gannet at the Forth Islands SPA;
- Gannet at the Flamborough and Filey Coast SPA;
- Gannet at the Noss SPA;
- Gannet at the Hermaness, Saxa Vord and Valla Field SPA.

5.5.3.426 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL of any of these SPAs in relation to in-combination displacement impacts associated with Morven North in-combination with other plans and projects. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.

5.5.3.427 Impacts that undermine the conservation objectives are considered likely to occur as a result of in-combination displacement impacts for the following SPA and qualifying feature combinations:

- Guillemot at the Forth Islands SPA;
- Guillemot at the Troup, Pennan and Lion's Heads SPA;
- Razorbill at the St Abb's Head to Fast Castle SPA.

5.5.3.428 As the features identified above form part of the breeding seabird assemblage at the relevant SPA an AEOL is also identified for the breeding seabird assemblage at these SPAs. In addition, the potential for AEOL has also been identified for the Outer Firth of Forth and St Andrew's Bay Complex SPA as this SPA supports guillemot from the Forth Islands SPA.

5.5.3.429 Therefore, it can be concluded beyond reasonable scientific doubt that there will be an AEOL on the SPA and feature combinations identified above in relation to in-combination displacement impacts associated with Morven North in-combination with other plans and projects.

5.5.4 Combined collision and displacement

Operation and maintenance phase

5.5.4.1 Two species are known to be adversely affected by both displacement and collision during the operations and maintenance phase: kittiwake and gannet. For these species, impacts must be combined in order for the true magnitude of impact to be understood.

5.5.4.2 The LSE² assessment during the HRA Stage 1 screening process (Morven Site HRA Screening Report and Section 5 of RIAA Part 1) identified that during the operations and maintenance phase, the potential for LSE² could not be ruled out for potential in-combination collision combined with displacement. This relates to the following site(s) and relevant offshore ornithological features and therefore they are progressed to in-combination assessments:

- Kittiwake at the Buchan Ness to Collieston Coast SPA;
- Kittiwake at the East Caithness Cliffs SPA;

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- Kittiwake at the Farne Islands SPA;
 - Kittiwake at the Flamborough and Filey Coast SPA;
 - Kittiwake at the Forth Islands SPA;
 - Kittiwake at the Fowlsheugh SPA;
 - Kittiwake at the North Caithness Cliffs SPA;
 - Kittiwake at the St Abb's Head to Fast Castle SPA;
 - Kittiwake at the Troup, Pennan and Lion's Heads SPA;
 - Gannet at the Flamborough and Filey Coast SPA;
 - Gannet at the Forth Islands SPA;
 - Gannet at the Hermaness, Saxa Vord and Valla Field SPA;
 - Gannet at the Noss SPA;
 - Gannet at the St Kilda SPA.
- 5.5.4.3 The predicted impact for all other SPA and qualifying features combinations included in Table 5.35 and Table 5.36 is considered to be undetectable against the existing baseline mortality of each population and therefore Morven North will make no measurable contribution to any existing in-combination impact.
- 5.5.4.4 This list includes additional SPAs to those considered in the assessments for collision risk and displacement independently (gannet at the St Kilda SPA and kittiwake at the North Caithness Cliffs SPA) as the combined impact exceeds the 0.2 birds/annum impact recommended by NatureScot as the threshold for when in-combination impacts should be considered. Whilst the MDS for kittiwake at the North Caithness Cliffs SPA is the same as the MDS considered for other SPAs in Sections 5.5.2 and 5.5.3, due to the location of the St Kilda SPA, the in-combination assessment needs to consider other projects, namely those on the west coast of the UK. The MDS for gannet at the St Kilda SPA is presented in Table 5.172.
- 5.5.4.5 In addition, a number of SPAs that support the breeding populations of features from SPAs included in the list above are also included in the in-combination assessment. This is applicable to the Outer Firth of Forth and St Andrew's Bay Complex SPA which supports kittiwake from the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA and gannet from the Forth Islands SPA. Consideration is also given to the Northumberland Marine SPA which supports kittiwake from the Farne Islands SPA.
- 5.5.4.6 Throughout the following assessment sections it is important to take account of the following uncertainties associated with the PVA modelling used to inform the assessment:
- Over-estimation of in-combination impacts. The PVA modelling does not account for changes in the predicted in-combination total due to the decommissioning of projects considered in-combination. Over the lifetime of Morven North the in-combination impact will reduce significantly when licences for current projects expire and decommissioning occurs. The PVA metrics are therefore highly precautionary.
 - No consideration has been made for density dependent compensation of demographic parameters within the modelled population, nor immigration, both of which could reduce the magnitude of any population change.
- 5.5.4.7 In addition, the in-combination collision risk estimates calculated under both the Applicant's and NatureScot's approaches are considered to be over-estimates due to the following factors:
- The use of flight speeds that do not provide a robust representation of the behaviour of kittiwake in the modelling conducted for projects considered in-combination. For kittiwake an approximate 27% reduction would be expected if more robust flight speeds are used (Ørsted, 2018). For gannet, an approximate 7% reduction would be expected if more robust flight speeds are used (see Volume 3, Annex 11.2 Offshore Ornithology Collision Risk Modelling Report of the EIA Report for more information).

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- Collision risk estimates for projects considered in-combination are calculated using the assessed turbine scenario. The assessed turbine scenario often doesn't represent the final design for a project with these as-built turbine scenarios often having a much lower associated collision risk. This can lead to a significant over-estimation of in-combination effects.

Table 5.172: Maximum Design Scenario considered for the assessment of potential impacts to gannet at the St Kilda Special Protection Area due to combined collision and displacement in the operations and maintenance phase of Morven North in-combination with other plans and projects

Project phase	MDS	Justification
Operation and maintenance	<p>There are no collision risk or displacement impacts associated with the MHPGC Project and MBAGC Project and therefore only Scenarios 3 and 4 are relevant to the in-combination assessment of combined collision and displacement.</p> <p>Scenario 3 MDS as described for Morven North (Table 5.21 and Table 5.28), assessed in-combination with Morven South.</p> <p>Scenario 4 MDS as described for Morven North (Table 5.21 and Table 5.28), assessed in-combination with Morven South, and the following other projects and plans:</p> <p>Tier 1</p> <ul style="list-style-type: none"> • Aberdeen; • Aspen; • Awel y Mor¹¹; • Beatrice; • Berwick Bank; • Blyth Demo; • Buchan; • Burbo Bank Extension¹²; • Caledonia; 	<p>There is potential for an in-combination effect from operations and maintenance activities and so a quantitative in-combination assessment is required.</p>

¹¹ Of relevance to gannet at the St Kilda SPA only

¹² Of relevance to gannet at the St Kilda SPA only

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • Cenos; • Dogger Bank A + B; • Dogger Bank C + Sofia; • Dogger Bank South; • Dudgeon; • East Anglia One; • East Anglia One North; • East Anglia Three; • East Anglia Two; • Erebus¹³; • Five Estuaries ; • Galloper; • Green Volt; • Gunfleet Sands 3; • Gwynt y Môr¹²; • Hornsea Four; • Hornsea Project One; • Hornsea Project Three; • Hornsea Project Two; • Hywind; • Inch Cape; • Kentish Flats; • Kentish Flats Extension; 	

¹³ Of relevance to gannet at the St Kilda SPA only

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • Kincardine; • Lincs; • Llŷr 1¹⁴; • Mona Offshore Wind Farm¹²; • Moray East; • Moray West; • Morecambe Generation Assets¹²; • Morgan Generation Assets¹²; • Muir Mhor; • Neart na Gaoithe; • Norfolk Boreas; • Norfolk Vanguard; • North Falls; • Ormonde¹⁵; • Ossian; • Outer Dowsing; • Pentland; • Race Bank; • Rampion; • Rampion 2; • Salamander; • SeaGreen (Alpha & Bravo); 	

¹⁴ Of relevance to gannet at the St Kilda SPA only

¹⁵ Of relevance to gannet at the St Kilda SPA only

Project phase	MDS	Justification
	<ul style="list-style-type: none"> • Sheringham Shoal and Dudgeon Extensions; • Thanet; • Triton Knoll; • Walney Extension¹²; • West of Duddon Sands¹²; • West of Orkney; • Westermost Rough; • White Cross¹⁶; 	

¹⁶ Of relevance to gannet at the St Kilda SPA only

Kittiwake

5.5.4.8 Collision risk estimates and displacement mortalities for kittiwake apportioned to each of the SPAs identified above are presented on an annual basis in the following SPA-specific section. These values are taken from the relevant SPA sections in Section 5.5.2 (collision risk) and Section 5.5.3 (displacement) where these values are already presented. Where such values are not presented they are presented in the relevant SPA section below. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance

5.5.4.9 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Buchan Ness to Collieston Coast Special Protection Area

5.5.4.10 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.173 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.11 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.173: Predicted annual mortality of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven South	Collision	0.4
	Displacement	0.1 to 0.3
Morven North	Collision	1.5
	Displacement	0.6 to 1.7
Total annual mortality (birds/annum)		2.6 to 3.9
Change in baseline mortality (percentage point change)		0.011 to 0.017
Applicant’s approach		
Morven South	Collision	0.1
	Displacement	0.1
Morven North	Collision	0.5
	Displacement	0.9
Total annual mortality (birds/annum)		1.7
Change in baseline mortality (percentage point change)		0.007

5.5.4.12 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Buchan Ness to Collieston Coast SPA is presented in Table 5.48 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the Buchan Ness to Collieston Coast SPA is 87 to 120 birds when applying NatureScot’s approach and 46 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.174: Predicted in-combination annual mortality rate of kittiwake at the Buchan Ness to Collieston Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	71.1
	Applicant	26.8
Displacement	NatureScot	16.4 to 49.2
	Applicant	19.3
Total annual mortality (birds/annum)	NatureScot	87.5 to 120.3
	Applicant	46.1
Change in baseline mortality (percentage point change)	NatureScot	0.387 to 0.532
	Applicant	0.204

5.5.4.13 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.802 to 0.852; (i.e. the population after 35 years, would be 14.8 to 19.8% smaller than the CPS with a 50th percentile value of 36.5 to 31.2 (Table 5.175)). In terms of the population size, this means that the median of the impacted population fell within the 37th to 31st percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.995 which translates to a growth rate 0.5 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.14 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.919 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.1% smaller than the counterfactual population size). The 50th percentile value is 42.5, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.15 The population of kittiwake at the Buchan Ness to Collieston Coast SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Buchan Ness to Collieston Coast SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased slightly since Seabirds Count (BTO *et al*, 2025).

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- 5.5.4.16 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.17 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhor, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.4.18 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.4.19 Impacts on kittiwake that undermine the conservation objectives of the at the Buchan Ness to Collieston Coast SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.20 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Buchan Ness to Collieston Coast SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.175: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Buchan Ness to Collieston Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	25,588	1.003	9.16	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	87.5	0.387	21,812	0.998	-7.04	0.995	0.852	36.5
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	120.3	0.532	20,481	0.996	-12.42	0.994	0.802	31.2
Applicant	46.1	0.204	23,448	1.000	0.55	0.998	0.919	42.5

East Caithness Cliffs Special Protection Area

5.5.4.21 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.176 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.22 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.176: Predicted annual mortality of kittiwake at the East Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.8
	Displacement	0.3 to 0.8
Morven South	Collision	0.4
	Displacement	0.1 to 0.3
Total annual mortality (birds/annum)		1.6 to 2.4
Change in baseline mortality (percentage point change)		0.003 to 0.005
Applicant’s approach		
Morven North	Collision	0.2
	Displacement	0.4
Morven South	Collision	0.1
	Displacement	0.1
Total annual mortality (birds/annum)		0.9
Change in baseline mortality (percentage point change)		0.002

5.5.4.23 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the East Caithness Cliffs SPA is presented in Table 5.177 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the East Caithness Cliffs SPA is 273 to 384 birds when applying NatureScot’s approach and 153 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.177: Predicted in-combination annual mortality rate of kittiwake at the East Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	217.2
	Applicant	88.1
Displacement	NatureScot	55.4 to 166.3
	Applicant	64.6
Total annual mortality (birds/annum)	NatureScot	272.7 to 383.6
	Applicant	152.7
Change in baseline mortality (percentage point change)	NatureScot	0.557 to 0.783
	Applicant	0.312

- 5.5.4.24 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.721 to 0.794; (i.e. the population after 35 years, would be 20.6 to 27.9% smaller than the CPS with a 50th percentile value of 23.6 to 30.1 (Table 5.178)). In terms of the population size, this means that the median of the impacted population fell within the 24th to 30th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.991 to 0.993 which translates to a growth rate 0.7 to 0.9% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.4.25 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.879 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 12.1% smaller than the counterfactual population size). The 50th percentile value is 38.5, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.26 The population of kittiwake at the East Caithness Cliffs SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the East Caithness Cliffs SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025). Despite this the population is currently considered to be in favourable condition.
- 5.5.4.27 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot’s approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.

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- 5.5.4.28 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhor, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.4.29 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.4.30 Impacts on kittiwake that undermine the conservation objectives of the at the East Caithness Cliffs SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.31 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the East Caithness Cliffs SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.178: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the East Caithness Cliffs Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	55,109	1.002	8.26	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	272.7	0.557	43,635	0.996	-14.25	0.993	0.794	30.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	383.6	0.783	39,795	0.993	-21.86	0.991	0.721	23.6
Applicant	152.7	0.312	48,303	0.999	-4.75	0.996	0.879	38.5

Farne Islands Special Protection Area

5.5.4.32 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.179 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.33 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.179: Predicted annual mortality of kittiwake at the Farne Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.4
	Displacement	0.1 to 0.4
Morven South	Collision	0.1
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		0.7 to 1.0
Change in baseline mortality (percentage point change)		0.008 to 0.011
Applicant’s approach		
Morven North	Collision	0.1
	Displacement	0.2
Morven South	Collision	0.0
	Displacement	0.0
Total annual mortality (birds/annum)		0.4
Change in baseline mortality (percentage point change)		0.005

5.5.4.34 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Farne Islands SPA is presented in Table 5.180 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the Farne Islands SPA is 31 to 43 birds when applying NatureScot’s approach and 18 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.180: Predicted in-combination annual mortality rate of kittiwake at the Farne Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects..

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	25.4
	Applicant	10.5
Displacement	NatureScot	5.8 to 17.4
	Applicant	7.0
Total annual mortality (birds/annum)	NatureScot	31.2 to 42.9
	Applicant	17.6
Change in baseline mortality (percentage point change)	NatureScot	0.355 to 0.487
	Applicant	0.200

- 5.5.4.35 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.816 to 0.862; (i.e. the population after 35 years, would be 13.8 to 18.4% smaller than the CPS with a 50th percentile value of 32.6 to 37.1 (Table 5.181)). In terms of the population size, this means that the median of the impacted population fell within the 33rd to 37th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.996 which translates to a growth rate 0.3 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.4.36 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.920 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.0% smaller than the counterfactual population size). The 50th percentile value is 42.7, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.37 The population of kittiwake at the Farne Islands SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Farne Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has decreased further since Seabirds Count (BTO *et al*, 2025).
- 5.5.4.38 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.39 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses.

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- 5.5.4.40 In addition, consideration should be given to other factors discussed in paragraph 5.5.4.6. It is also important to note that the Farne Islands SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake.
- 5.5.4.41 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.4.42 Impacts on kittiwake that undermine the conservation objectives of the at the Farne Islands SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.43 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Farne Islands SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.181: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Farne Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	9,997	1.003	9.07	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	31.2	0.355	8,577	0.998	-6.00	0.996	0.862	37.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	42.9	0.487	8,133	0.997	-10.52	0.994	0.816	32.6
Applicant	17.6	0.200	9,143	1.000	0.52	0.998	0.920	42.7

Flamborough and Filey Coast Special Protection Area

5.5.4.44 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.182 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.45 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Flamborough and Filey Coast SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.182: Predicted annual mortality of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot's approach		
Morven North	Collision	1.1
	Displacement	0.4 to 1.2
Morven South	Collision	0.7
	Displacement	0.1 to 0.4
Total annual mortality (birds/annum)		2.3 to 3.4
Change in baseline mortality (percentage point change)		0.002 to 0.003
Applicant's approach		
Morven North	Collision	0.4
	Displacement	0.6
Morven South	Collision	0.2
	Displacement	0.2
Total annual mortality (birds/annum)		1.3
Change in baseline mortality (percentage point change)		0.001

5.5.4.46 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Flamborough and Filey Coast SPA is presented in Table 5.183 for NatureScot's and the Applicant's approaches. The total in-combination impact apportioned to the kittiwake population at the Flamborough and Filey Coast SPA is 381 to 544 birds when applying NatureScot's approach and 208 birds when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.183: Predicted in-combination annual mortality rate of kittiwake at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	299.6
	Applicant	111.9
Displacement	NatureScot	81.5 to 244.3
	Applicant	95.7
Total annual mortality (birds/annum)	NatureScot	381.1 to 543.9
	Applicant	207.6
Change in baseline mortality (percentage point change)	NatureScot	0.370 to 0.528
	Applicant	0.201

- 5.5.4.47 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.798 to 0.854; (i.e. the population after 35 years, would be 14.6 to 20.2% smaller than the CPS with a 50th percentile value of 31.7 to 36.9 (Table 5.184)). In terms of the population size, this means that the median of the impacted population fell within the 32nd to 37th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.996 which translates to a growth rate 0.4 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.4.48 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.918 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.2% smaller than the counterfactual population size). The 50th percentile value is 42.6, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.49 The population of kittiwake at the Flamborough and Filey Coast SPA is currently above the population at designation (Table 5.8). The population of kittiwake at the Flamborough and Filey Coast SPA slightly increased (by 7%) between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count (BTO *et al*, 2025).
- 5.5.4.50 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.51 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Dogger Bank South, East Anglia One North, East Anglia Two, Five

Estuaries, Hornsea Three, Hornsea Four, Norfolk Boreas, Norfolk Vanguard, North Falls, Ossian, Outer Dowsing, Rampion 2, Sheringham Shoal Extension and Dudgeon Extension. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.4.52 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. In addition consideration should be given to other factors discussed in paragraph 5.5.4.6 in relation to over-estimation of impacts, the uncertainties associated with PVA modelling and the compensation required at other projects. It is also important to note that the Flamborough and Filey Coast SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake.
- 5.5.4.53 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account it is considered that impacts on kittiwake that undermine the conservation objectives of the at the Flamborough and Filey Coast SPA will therefore not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.54 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Flamborough and Filey Coast SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.184: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	117,660	1.002	8.97	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	381.1	0.370	100,253	0.998	-7.20	0.996	0.854	36.9
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	543.9	0.528	93,843	0.996	-13.27	0.994	0.798	31.7
Applicant	207.6	0.201	107,858	1.000	0.15	0.998	0.918	42.6

Forth Islands Special Protection Area

5.5.4.55 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.185 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.56 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Forth Islands SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.185: Predicted annual mortality of kittiwake at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.4
	Displacement	0.2 to 0.5
Morven South	Collision	0.2
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		0.8 to 1.2
Change in baseline mortality (percentage point change)		0.009 to 0.013
Applicant’s approach		
Morven North	Collision	0.2
	Displacement	0.3
Morven South	Collision	0.1
	Displacement	0.0
Total annual mortality (birds/annum)		0.5
Change in baseline mortality (percentage point change)		0.002

5.5.4.57 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Forth Islands SPA is presented in Table 5.186 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the Forth Islands SPA is 38 to 54 birds when applying NatureScot’s approach and 24 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.186: Predicted in-combination annual mortality rate of kittiwake at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	30.1
	Applicant	13.5
Displacement	NatureScot	8.0 to 23.9
	Applicant	10.9
Total annual mortality (birds/annum)	NatureScot	38.0 to 53.9
	Applicant	24.4
Change in baseline mortality (percentage point change)	NatureScot	0.419 to 0.594
	Applicant	0.268

- 5.5.4.58 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.781 to 0.840; (i.e. the population after 35 years, would be 16.0 to 21.9% smaller than the CPS with a 50th percentile value of 29.5 to 35.0 (Table 5.187)). In terms of the population size, this means that the median of the impacted population fell within the 30th to 35th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.993 to 0.995 which translates to a growth rate 0.5 to 0.7% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.4.59 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.894 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 10.6% smaller than the counterfactual population size). The 50th percentile value is 39.9, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.60 The population of kittiwake at the Forth Islands SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Forth Islands SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).
- 5.5.4.61 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot’s approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.62 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have

been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Muir Mhor, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.4.63 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.4.64 Impacts on kittiwake that undermine the conservation objectives of the at the Forth Islands SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.65 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Forth Islands SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.187: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	10,318	1.003	9.47	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	38.0	0.419	8,647	0.998	-8.15	0.995	0.840	35.0
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	53.9	0.594	8,056	0.996	-14.23	0.993	0.781	29.5
Applicant	24.4	0.268	9,172	0.999	-2.10	0.997	0.894	39.9

Fowlsheugh Special Protection Area

5.5.4.66 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.188 for both NatureScot’s and the Applicant’s approach. The predicted impact under the upper NatureScot displacement and mortality rate scenario exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore PVA modelling has been undertaken.

Table 5.188: Predicted annual mortality of kittiwake at the Fowlsheugh Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	2.9
	Displacement	1.1 to 3.3
Morven South	Collision	0.8
	Displacement	0.1 to 0.4
Total annual mortality (birds/annum)		5.0 to 7.5
Change in baseline mortality (percentage point change)		0.018 to 0.027
Applicant’s approach		
Morven North	Collision	1.1
	Displacement	1.8
Morven South	Collision	0.3
	Displacement	0.2
Total annual mortality (birds/annum)		3.3
Change in baseline mortality (percentage point change)		0.007

5.5.4.67 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s upper parameters indicates a median CPS of 0.990; (i.e. the population after 35 years, would be 1.1% smaller than the CPS with a 50th percentile value of 48.9 (Table 5.190)). In terms of the population size, this means that the median of the impacted population fell within the 49th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which translates to a growth rate 0.0 % smaller than the counterfactual (unimpacted) growth rate. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.68 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Fowlsheugh SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

5.5.4.69 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Fowlsheugh SPA is presented in Table 5.189 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the Fowlsheugh SPA is 129 to 178 birds when applying NatureScot’s approach and 83 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.189: Predicted in-combination annual mortality rate of kittiwake at the Fowlsheugh Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	104.6
	Applicant	48.5
Displacement	NatureScot	24.4 to 73.2
	Applicant	35.0
Total annual mortality (birds/annum)	NatureScot	128.9 to 177.7
	Applicant	83.5
Change in baseline mortality (percentage point change)	NatureScot	0.459 to 0.633
	Applicant	0.297

5.5.4.70 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.769 to 0.826; (i.e. the population after 35 years, would be 17.4 to 23.10% smaller than the CPS with a 50th percentile value of 27.7 to 33.1 (Table 5.190)). In terms of the population size, this means that the median of the impacted population fell within the 28th to 33rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.993 to 0.995 which translates to a growth rate 0.6 to 0.8% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.71 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.883 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 11.7% smaller than the counterfactual population size). The 50th percentile value is 39.1, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.72 The population of kittiwake at the Fowlsheugh SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Fowlsheugh SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).

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- 5.5.4.73 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.74 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Cenos, Green Volt, Muir Mhor, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.4.75 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered.
- 5.5.4.76 Impacts on kittiwake that undermine the conservation objectives of the at the Fowlsheugh SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.77 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the kittiwake population of the Fowlsheugh SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.190: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Fowlsheugh Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Morven Programme (Scenario 3)								
Baseline	-	-	31,588	1.002	8.33	-	-	-
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	7.5	0.027	31,192	1.002	7.23	1.000	0.990	48.9
In-combination (Scenario 4)								
Baseline	-	-	31,491	1.002	8.23	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	128.9	0.459	26,075	0.997	-10.45	0.995	0.826	33.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	177.7	0.633	24,235	0.995	-16.81	0.993	0.769	27.7
Applicant	83.5	0.309	27,876	0.999	-4.39	0.997	0.883	39.1

North Caithness Cliffs Special Protection Area

5.5.4.78 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.191 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.79 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the North Caithness Cliffs SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.191: Predicted annual mortality of kittiwake at the North Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.1
	Displacement	0.0 to 0.1
Morven South	Collision	0.1
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		0.3 to 0.4
Change in baseline mortality (percentage point change)		0.002 to 0.004
Applicant’s approach		
Morven North	Collision	0.0
	Displacement	0.1
Morven South	Collision	0.0
	Displacement	0.0
Total annual mortality (birds/annum)		0.1
Change in baseline mortality (percentage point change)		0.001

5.5.4.80 The project alone collision risk and displacement impacts predicted for kittiwake at the North Caithness Cliffs SPA for Morven North did not surpass the 0.2 birds/annum threshold, as defined by NatureScot to identify those features to progress to an in-combination assessment as isolated impacts. This SPA was therefore not included in sections 5.5.2 and 5.5.3 which assess collision and displacement in isolation for kittiwake. The predicted in-combination collision impact on kittiwake at the North Caithness Cliffs SPA is presented in Table 5.193 for NatureScot’s approach and Table 5.194 for the Applicant’s approach.

5.5.4.81 Table 5.195 (NatureScot’s apportioning approach) and Table 5.196 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12.

5.5.4.82 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the North Caithness Cliffs SPA is presented in Table 5.192 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the kittiwake population at the North Caithness Cliffs SPA is 55 to 75 birds when applying NatureScot’s approach and 28 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.192: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	45.5
	Applicant	17.2
Displacement	NatureScot	9.9 to 29.6
	Applicant	10.8
Total annual mortality (birds/annum)	NatureScot	55.4 to 75.1
	Applicant	27.9
Change in baseline mortality (percentage point change)	NatureScot	0.497 to 0.674
	Applicant	0.251

5.5.4.83 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.755 to 0.812; (i.e. the population after 35 years, would be 18.8 to 24.5% smaller than the CPS with a 50th percentile value of 27.2 to 33.1 (Table 5.197)). In terms of the population size, this means that the median of the impacted population fell within the 27th to 33rd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.992 to 0.994 which translates to a growth rate 0.6 to 0.8% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.84 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.901 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 9.9% smaller than the counterfactual population size). The 50th percentile value is 41.2, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.85 The population of kittiwake at the North Caithness Cliffs SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the North Caithness Cliffs SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).

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- 5.5.4.86 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.87 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Cenos, Ossian, Salamander and West of Orkney. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.
- 5.5.4.88 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact.
- 5.5.4.89 Impacts on kittiwake that undermine the conservation objectives of the at the North Caithness Cliffs SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.90 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the North Caithness Cliffs SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.193: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from collision risk impacts (NatureScot’s approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Aspen	0.04	0.53	0.90	0.01	0.02	0.1	0.0	0.0	0.2
Beatrice	0.03	0.53	0.90	0.01	0.02	1.2	0.1	0.4	1.7
Berwick Bank	0.00	0.53	0.90	0.01	0.02	0.0	1.7	2.4	4.1
Blyth Demo		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Buchan	0.06	0.53	0.90	0.01	0.02	0.1	0.0	0.1	0.2
Caledonia North	0.08	0.53	0.90	0.01	0.02	0.7	0.1	0.0	0.8
Caledonia South	0.05	0.53	0.90	0.01	0.02	1.1	0.0	0.1	1.2
Cenos	0.04	0.53	0.90	0.01	0.02	0.2	0.0	0.0	0.2
Dogger Bank A + B		0.53	0.90	0.01	0.02		1.1	4.5	5.6
Dogger Bank South		0.53	0.90	0.01	0.02		1.2	2.0	3.1
Dogger Bank C + Sofia		0.53	0.90	0.01	0.02		0.8	3.2	4.0
Dudgeon Extension		0.53	0.90	0.01	0.02		0.0	0.1	0.1
East Anglia One		0.53	0.90	0.01	0.02		1.7	0.6	2.3
East Anglia One North		0.53	0.90	0.01	0.02		0.1	0.2	0.3
East Anglia Three		0.53	0.90	0.01	0.02		0.7	0.5	1.2
East Anglia Two		0.53	0.90	0.01	0.02		0.1	0.2	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Five Estuaries		0.53	0.90	0.01	0.02		0.1	0.2	0.4
Galloper		0.53	0.90	0.01	0.02		0.3	0.4	0.7
Green Volt	0.03	0.53	0.90	0.01	0.02	0.1	0.1	0.1	0.2
Hornsea Project One		0.53	0.90	0.01	0.02		0.1	0.1	0.1
Hornsea Project Two		0.53	0.90	0.01	0.02		0.1	0.1	0.1
Hornsea Project Three		0.53	0.90	0.01	0.02		0.4	0.4	0.8
Hornsea Four		0.53	0.90	0.01	0.02		0.1	0.2	0.3
Humber Gateway		0.53	0.90	0.01	0.02		0.0	0.0	0.1
Inch Cape		0.53	0.90	0.01	0.02		0.3	0.1	0.4
Kentish Flats Extension		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Kincardine	0.00	0.53	0.90	0.01	0.02	0.0	0.1	0.0	0.1
Lincs		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Moray East	0.30	0.53	0.90	0.01	0.02	2.2	0.0	0.1	2.3
Moray West	0.03	0.53	0.90	0.01	0.02	0.8	0.2	0.1	1.1
Morven North	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.1	0.1
Morven South	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.1
Muir Mhor	0.02	0.53	0.90	0.01	0.02	0.6	0.0	0.2	0.8
Neart na Gaoithe	0.00	0.53	0.90	0.01	0.02	0.0	0.2	0.0	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas		0.53	0.90	0.01	0.02		0.3	0.2	0.5
Norfolk Vanguard		0.53	0.90	0.01	0.02		0.2	0.4	0.6
North Falls		0.53	0.90	0.01	0.02		0.1	0.2	0.3
Ossian	0.01	0.53	0.90	0.01	0.02	0.1	0.1	0.1	0.3
Outer Dowsing		0.53	0.90	0.01	0.02		0.0	0.3	0.3
Pentland	0.72	0.53	0.90	0.01	0.02	1.7	0.0	0.0	1.7
Race Bank		0.53	0.90	0.01	0.02		0.2	0.1	0.2
Salamander	0.01	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.53	0.90	0.01	0.02	0.0	1.5	1.0	2.6
Sheringham Shoal Extension		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Teesside		0.53	0.90	0.01	0.02		0.1	0.1	0.3
Thanet		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Triton Knoll		0.53	0.90	0.01	0.02		1.0	0.9	2.0
West of Orkney	0.34	0.53	0.90	0.01	0.02	2.8	0.2	0.4	3.5
Westermost Rough		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum)									45.7

Table 5.194: Predicted in-combination annual mortality rate of kittiwake at the North Caithness Cliffs Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Aspen	0.04	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.1
Beatrice	0.03	0.53	0.90	0.01	0.02	0.5	0.0	0.1	0.6
Berwick Bank	0.00	0.92	0.90	0.01	0.02	0.0	0.5	0.7	1.2
Blyth Demo		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Buchan	0.06	0.82	0.90	0.01	0.02	0.0	0.0	0.0	0.1
Caledonia North	0.08	0.53	0.90	0.01	0.02	0.2	0.0	0.0	0.2
Caledonia South	0.05	0.53	0.90	0.01	0.02	0.3	0.0	0.0	0.3
Cenos	0.04	0.87	0.90	0.01	0.02	0.1	0.0	0.0	0.1
Dogger Bank A + B		0.53	0.90	0.01	0.02		0.4	1.7	2.2
Dogger Bank South		0.53	0.90	0.01	0.02		0.3	0.6	0.9
Dogger Bank C + Sofia		0.53	0.90	0.01	0.02		0.3	1.3	1.6
Dudgeon Extension		0.53	0.90	0.01	0.02		0.0	0.0	0.0
East Anglia One		0.53	0.90	0.01	0.02		0.6	0.2	0.9
East Anglia One North		0.53	0.90	0.01	0.02		0.0	0.1	0.1
East Anglia Three		0.53	0.90	0.01	0.02		0.3	0.2	0.5
East Anglia Two		0.53	0.90	0.01	0.02		0.0	0.1	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Five Estuaries		0.53	0.90	0.01	0.02		0.0	0.1	0.1
Galloper		0.53	0.90	0.01	0.02		0.1	0.2	0.3
Green Volt	0.03	0.53	0.90	0.01	0.02	0.0	0.0	0.0	0.1
Hornsea Project One		0.74	0.90	0.01	0.02		0.0	0.0	0.1
Hornsea Project Two		0.86	0.90	0.01	0.02		0.0	0.0	0.0
Hornsea Project Three		0.88	0.90	0.01	0.02		0.2	0.2	0.3
Hornsea Four		0.53	0.90	0.01	0.02		0.0	0.0	0.1
Humber Gateway		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Inch Cape		0.53	0.90	0.01	0.02		0.1	0.0	0.1
Kentish Flats Extension		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Kincardine	0.00	0.95	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Lincs		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Moray East	0.30	0.92	0.90	0.01	0.02	1.5	0.0	0.0	1.5
Moray West	0.03	0.97	0.90	0.01	0.02	0.6	0.1	0.0	0.7
Morven North	0.00	0.87	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Morven South	0.00	0.78	0.90	0.01	0.02	0.0	0.0	0.0	0.0
Muir Mhor	0.02	0.53	0.90	0.01	0.02	0.2	0.0	0.0	0.2
Neart na Gaoithe	0.00	0.82	0.90	0.01	0.02	0.0	0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Norfolk Boreas		0.53	0.90	0.01	0.02		0.1	0.1	0.2
Norfolk Vanguard		0.53	0.90	0.01	0.02		0.1	0.2	0.2
North Falls		0.59	0.90	0.01	0.02		0.0	0.1	0.1
Ossian	0.01	0.84	0.90	0.01	0.02	0.1	0.0	0.0	0.1
Outer Dowsing		0.77	0.90	0.01	0.02		0.0	0.1	0.1
Pentland	0.72	0.53	0.90	0.01	0.02	0.7	0.0	0.0	0.7
Race Bank		0.53	0.90	0.01	0.02		0.1	0.0	0.1
Salamander	0.01	0.69	0.90	0.01	0.02	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.94	0.90	0.01	0.02	0.0	0.6	0.4	1.0
Sheringham Shoal Extension		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Teesside		0.53	0.90	0.01	0.02		0.1	0.0	0.1
Thanet		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Triton Knoll		0.53	0.90	0.01	0.02		0.4	0.4	0.8
West of Orkney	0.34	0.53	0.90	0.01	0.02	0.8	0.1	0.1	1.0
Westermost Rough		0.53	0.90	0.01	0.02		0.0	0.0	0.0
Total annual mortality (birds/annum)									17.2

Table 5.195: Mean-peak population estimates for kittiwake at the North Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.53	0.90	0.01	0.02	2	1	2
Beatrice	0.03	0.53	0.90	0.01	0.02	14	10	14
Berwick Bank	0.00	0.53	0.90	0.01	0.02	0	164	267
Blyth Demo				0.01	0.02		6	0
Buchan	0.06	0.53	0.90	0.01	0.02	6	2	7
Caledonia North	0.08	0.53	0.90	0.01	0.02	25	5	1
Caledonia South	0.05	0.53	0.90	0.01	0.02	37	6	1
Cenos	0.04	0.53	0.90	0.01	0.02	4	1	1
Dogger Bank A				0.01	0.02		22	135
Dogger Bank B				0.01	0.02		28	166
Dogger Bank South				0.01	0.02		77	53
Dogger Bank C				0.01	0.02		14	94
Sofia				0.01	0.02		18	130
Dudgeon				0.01	0.02		0	2
Dudgeon Extension				0.01	0.02		21	3
East Anglia One				0.01	0.02		11	5
East Anglia One North				0.01	0.02		3	4

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Three				0.01	0.02		22	14
East Anglia Two				0.01	0.02		3	7
Five Estuaries				0.01	0.02		3	11
Galloper				0.01	0.02		6	13
Green Volt	0.03	0.53	0.90	0.01	0.02	2	2	2
Hornsea Project One				0.01	0.02		314	23
Hornsea Project Two				0.01	0.02		21	41
Hornsea Project Three				0.01	0.02		35	42
Hornsea Four				0.01	0.02		17	9
Humber Gateway				0.01	0.02		0	0
Inch Cape	0.00			0.01	0.02		31	16
Kincardine	0.00	0.53	0.90	0.01	0.02	0	9	1
Lincs				0.01	0.02		0	0
Moray East	0.30	0.53	0.90	0.01	0.02	282	2	3
Moray West	0.03	0.53	0.90	0.01	0.02	99	22	21
Morven North	0.00	0.53	0.90	0.01	0.02	5	6	3
Morven South	0.00	0.53	0.90	0.01	0.02	1	4	2
Muir Mhor	0.02	0.53	0.90	0.01	0.02	32	1	15
Neart na Gaoithe	0.00	0.53	0.90	0.01	0.02	0	30	3

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Boreas				0.01	0.02		38	20
Norfolk Vanguard				0.01	0.02		13	32
North Falls				0.01	0.02		7	16
Ossian	0.01	0.53	0.90	0.01	0.02	16	8	11
Outer Dowsing				0.01	0.02		15	22
Pentland	0.72	0.53	0.90	0.01	0.02	187	2	1
Race Bank				0.01	0.02		1	1
Salamander	0.01	0.53	0.90	0.01	0.02	19	2	2
SeaGreen Bravo	0.00	0.53	0.90	0.01	0.02	0	20	18
SeaGreen Alpha	0.00	0.53	0.90	0.01	0.02	0	47	22
Sheringham Shoal Extension				0.01	0.02		2	1
Teesside				0.01	0.02		0	0
Thanet				0.01	0.02		0	0
Triton Knoll				0.01	0.02		4	6
West of Orkney	0.34	0.53	0.90	0.01	0.02	179	12	24
Total population estimates						917	1,100	1,291
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				3	3	4
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				8	10	12

Table 5.196: Mean-peak population estimates for kittiwake at the North Caithness Cliffs Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.04	0.53	0.90	0.01	0.02	2	1	2
Beatrice	0.03	0.53	0.90	0.01	0.02	14	10	14
Berwick Bank	0.00	0.92	0.90	0.01	0.02	0	164	267
Blyth Demo				0.01	0.02		6	0
Buchan	0.06	0.82	0.90	0.01	0.02	9	2	7
Caledonia North	0.08	0.53	0.90	0.01	0.02	25	5	1
Caledonia South	0.05	0.53	0.90	0.01	0.02	37	6	1
Cenos	0.04	0.87	0.90	0.01	0.02	7	1	1
Dogger Bank A				0.01	0.02		22	135
Dogger Bank B				0.01	0.02		28	166
Dogger Bank South				0.01	0.02		77	53
Dogger Bank C				0.01	0.02		14	94
Sofia				0.01	0.02		18	130
Dudgeon				0.01	0.02		0	2
Dudgeon Extension				0.01	0.02		21	3
East Anglia One				0.01	0.02		11	5
East Anglia One North				0.01	0.02		3	4
East Anglia Three				0.01	0.02		22	14

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia Two				0.01	0.02		3	7
Five Estuaries				0.01	0.02		3	11
Galloper				0.01	0.02		6	13
Green Volt	0.03	0.53	0.90	0.01	0.02	2	2	2
Hornsea Project One		0.74		0.01	0.02		314	23
Hornsea Project Two		0.86		0.01	0.02		21	41
Hornsea Project Three		0.88		0.01	0.02		35	42
Hornsea Four				0.01	0.02		17	9
Humber Gateway				0.01	0.02		0	0
Inch Cape	0.00			0.01	0.02		31	16
Kincardine	0.00	0.95	0.90	0.01	0.02	0	9	1
Lincs				0.01	0.02		0	0
Moray East	0.30	0.92	0.90	0.01	0.02	485	2	3
Moray West	0.03	0.97	0.90	0.01	0.02	182	22	21
Morven North	0.00	0.87	0.90	0.01	0.02	8	6	3
Morven South	0.00	0.78	0.90	0.01	0.02	1	4	2
Muir Mhor	0.02	0.53	0.90	0.01	0.02	32	1	15
Near na Gaoithe	0.00	0.82	0.90	0.01	0.02	0	30	3
Norfolk Boreas				0.01	0.02		38	20

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Norfolk Vanguard				0.01	0.02		13	32
North Falls		0.59		0.01	0.02		7	16
Ossian	0.01	0.84	0.90	0.01	0.02	25	8	11
Outer Dowsing		0.77		0.01	0.02		15	22
Pentland	0.72	0.53	0.90	0.01	0.02	187	2	1
Race Bank				0.01	0.02		1	1
Salamander	0.01	0.69	0.90	0.01	0.02	25	2	2
SeaGreen Bravo	0.00	0.94	0.90	0.01	0.02	0	20	18
SeaGreen Alpha	0.00	0.94	0.90	0.01	0.02	0	47	22
Sheringham Shoal Extension				0.01	0.02		2	1
Teesside				0.01	0.02		0	0
Thanet				0.01	0.02		0	0
Triton Knoll				0.01	0.02		4	6
West of Orkney	0.34	0.53	0.90	0.01	0.02	179	12	24
Total population estimates						1,230	1,100	1,291
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				4	3	4

Table 5.197: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the North Caithness Cliffs Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	12,826	1.003	9.67	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	55.4	0.497	10,435	0.997	-11.00	0.994	0.812	33.1
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	75.1	0.674	9,684	0.995	-17.11	0.992	0.755	27.2
Applicant	27.9	0.251	11,549	1.000	-1.39	0.997	0.901	41.2

St Abb's Head to Fast Castle Special Protection Area

5.5.4.91 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.198 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.92 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.198: Predicted annual mortality of kittiwake at the St Abb's Head to Fast Castle Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot's approach		
Morven North	Collision	0.5
	Displacement	0.2 to 0.6
Morven South	Collision	0.3
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		1.0 to 1.5
Change in baseline mortality (percentage point change)		0.010 to 0.015
Applicant's approach		
Morven North	Collision	0.2
	Displacement	0.3
Morven South	Collision	0.1
	Displacement	0.1
Total annual mortality (birds/annum)		0.7
Change in baseline mortality (percentage point change)		0.006

5.5.4.93 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the St Abb's Head to Fast Castle SPA is presented in Table 5.199 for NatureScot's and the Applicant's approaches. The total in-combination impact apportioned to the kittiwake population at the St Abb's Head to Fast Castle SPA is 134 to 168 birds when applying NatureScot's approach and 91 birds when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.199: Predicted in-combination annual mortality rate of kittiwake at the St Abb’s Head to Fast Castle Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	117.2
	Applicant	57.8
Displacement	NatureScot	17.0 to 51.1
	Applicant	32.7
Total annual mortality (birds/annum)	NatureScot	134.3 to 168.3
	Applicant	90.5
Change in baseline mortality (percentage point change)	NatureScot	1.304 to 1.634
	Applicant	0.879

- 5.5.4.94 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.504 to 0.580; (i.e. the population after 35 years, would be 42.0 to 59.6% smaller than the CPS with a 50th percentile value of 6.8 to 11.8 (Table 5.200)). In terms of the population size, this means that the median of the impacted population fell within the 7th to 12th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.981 to 0.985 which translates to a growth rate 1.5 to 1.9% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.
- 5.5.4.95 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.990 and a median CPS of 0.694 (i.e. the population growth rate would be 1.0% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 30.6% smaller than the counterfactual population size). The 50th percentile value is 21.1, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.96 The population of kittiwake at the St Abb’s Head to Fast Castle SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the St Abb’s Head to Fast Castle SPA decreased between the Seabird 2000 and Seabirds Count national censuses but has stayed stable since Seabirds Count (BTO *et al*, 2025).
- 5.5.4.97 When considered against the current status of the kittiwake population at the SPA, the CGR associated with both the Applicant’s and NatureScot’s approach is at a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.98 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have

been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.4.99 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to recover. The population of kittiwake at the SPA has decreased between the two most recent national censuses but has shown signs of recovery since however, it remains below the designated population. The in-combination impact is considered to be an over-estimate due to various factors discussed in paragraphs 5.5.4.6 and 5.5.4.6. Whilst taking account of these factors improves the PVA metrics it is considered that this may not be to a level at which the potential for an adverse effect can confidently be ruled out.
- 5.5.4.100 The predicted in-combination combined collision and displacement impact for kittiwake at the St Abb's Head to Fast Castle SPA has the potential to undermine the conservation objectives for the SPA. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.101 Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for an AEOL on the kittiwake population of the St Abb's Head to Fast Castle SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.200: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the St Abb's Head to Fast Castle Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	11,660	1.003	9.61	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	134.3	1.304	6,766	0.987	-36.35	0.985	0.580	11.8
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	168.3	1.634	5,879	0.983	-44.61	0.981	0.504	6.8
Applicant	90.5	0.879	8,092	0.992	-23.87	0.990	0.694	21.1

Troup, Pennan and Lion's Heads Special Protection Area

5.5.4.102 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.201 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.103 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.201: Predicted annual mortality of kittiwake at the Troup, Pennan and Lion's Heads Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot's approach		
Morven North	Collision	0.6
	Displacement	0.2 to 0.7
Morven South	Collision	0.3
	Displacement	0.1 to 0.2
Total annual mortality (birds/annum)		1.2 to 1.8
Change in baseline mortality (percentage point change)		0.006 to 0.009
Applicant's approach		
Morven North	Collision	0.2
	Displacement	0.4
Morven South	Collision	0.1
	Displacement	0.1
Total annual mortality (birds/annum)		0.7
Change in baseline mortality (percentage point change)		0.004

5.5.4.104 The predicted impact of Morven North in-combination with other plans and projects on kittiwake at the Troup, Pennan and Lion's Heads SPA is presented in Table 5.202 for NatureScot's and the Applicant's approaches. The total in-combination impact apportioned to the kittiwake population at the Troup, Pennan and Lion's Heads SPA is 87 to 117 birds when applying NatureScot's approach and 44 birds when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.202: Predicted in-combination annual mortality rate of kittiwake at the Troup, Pennan and Lion’s Heads Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	71.7
	Applicant	26.7
Displacement	NatureScot	15.2 to 45.5
	Applicant	17.0
Total annual mortality (birds/annum)	NatureScot	86.9 to 117.3
	Applicant	43.7
Change in baseline mortality (percentage point change)	NatureScot	0.409 to 0.552
	Applicant	0.206

5.5.4.105 The PVA model conducted for kittiwake when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.794 to 0.844; (i.e. the population after 35 years, would be 15.7 to 20.6% smaller than the CPS with a 50th percentile value of 30.7 to 35.5 (Table 5.203)). In terms of the population size, this means that the median of the impacted population fell within the 31st to 36th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.994 to 0.995 which translates to a growth rate 0.5 to 0.6% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.106 When modelling the annual impact associated with the Applicant’s approach for kittiwake, the comparable metrics are a median CGR of 0.998 and a median CPS of 0.918 (i.e. the population growth rate would be 0.2% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.2% smaller than the counterfactual population size). The 50th percentile value is 42.5, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.107 The population of kittiwake at Troup, Pennan and Lion’s Heads SPA is currently below the population at designation (Table 5.8). The population of kittiwake at the Troup, Pennan and Lion’s Heads SPA decreased between the Seabird 2000 and Seabirds Count national censuses and has continued to decrease since Seabirds Count (BTO *et al*, 2025).

5.5.4.108 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhor, Ossian and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

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- 5.5.4.109 When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for an adverse effect. However, it should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.110 When the factors discussed in paragraphs 5.5.4.6 and 5.5.4.7 and the compensation required at other projects are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the recovery of the kittiwake population at the SPA would not be hindered. Impacts on kittiwake that undermine the conservation objectives of the at the Troup, Pennan and Lion's Heads SPA will not occur as a result of in-combination combined collision and displacement impacts. The potential effect of this impact on the relevant conservation objectives (as presented in Table 5.9) are discussed in Appendix A.
- 5.5.4.111 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AE01 on the kittiwake population of the Troup, Pennan and Lion's Heads SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.203: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the kittiwake feature of the Troup, Pennan and Lion’s Heads Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	24,166	1.002	8.75	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	86.9	0.409	20,399	0.998	-8.15	0.995	0.844	35.5
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	117.3	0.552	19,211	0.996	-13.41	0.994	0.794	30.7
Applicant	43.9	0.206	22,216	1.000	0.22	0.998	0.918	42.5

Gannet

5.5.4.112 Collision risk estimates and displacement mortalities for gannet apportioned to each of the SPAs identified in paragraph 5.5.4.2 are presented on an annual basis in the following SPA-specific section. These values are taken from the relevant SPA sections in Section 5.5.2 (collision risk) and Section 5.5.3 (displacement) where these values are already presented. Where such values are not presented they are presented in the relevant SPA section below. The annual apportioned impact predicted for each SPA is considered against the baseline mortality of the most recent SPA population (as provided in Table 5.8) with this expressed as a percentage point increase following NatureScot guidance.

5.5.4.113 Where the apportioned impact is estimated to increase baseline mortality to the population of a SPA by greater than 0.02 percentage points further assessment, including where relevant PVA, is subsequently carried out to further investigate the potential effect on the population of the relevant qualifying feature (NatureScot, 2023h). Details of the PVA methodology are presented in Volume 2, Annex 3.2: RIAA: Population Viability Analysis.

Flamborough and Filey Coast Special Protection Area

5.5.4.114 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.212 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.115 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the gannet population of the Flamborough and Filey Coast SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.204: Predicted annual mortality of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot's approach		
Morven North	Collision	0.0
	Displacement	0.1 to 0.4
Morven South	Collision	0.0
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		0.2 to 0.6
Change in baseline mortality (percentage point change)		0.001 to 0.002
Applicant's approach		
Morven North	Collision	0.0
	Displacement	0.1
Morven South	Collision	0.0
	Displacement	0.0
Total annual mortality (birds/annum)		0.2
Change in baseline mortality (percentage point change)		0.001

5.5.4.116 The project alone collision risk impact predicted for gannet at the Flamborough and Filey Coast SPA for Morven North did not surpass the 0.2 birds/annum threshold, as defined by NatureScot to identify those features to progress to an in-combination assessment and therefore this SPA was not included in sections 5.5.2 which assessed the in-combination collision impact in isolation for gannet. The predicted in-combination collision impact on gannet at the Flamborough and Filey Coast SPA is therefore presented in Table 5.206 for NatureScot’s approach and Table 5.207 for the Applicant’s approach.

5.5.4.117 The predicted impact of Morven North in-combination with other plans and projects on gannet at the Flamborough and Filey Coast SPA is presented in Table 5.213 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the gannet population at the Flamborough and Filey Coast SPA is 139 to 226 birds when applying NatureScot’s approach and 95 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.205: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	95.0
	Applicant	47.9
Displacement	NatureScot	43.7 to 131.2
	Applicant	47.0
Total annual mortality (birds/annum)	NatureScot	138.7 to 226.1
	Applicant	94.9
Change in baseline mortality (percentage point change)	NatureScot	0.518 to 0.844
	Applicant	0.354

5.5.4.118 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Flamborough and Filey Coast SPA increased between the Seabird 2000 and Seabirds Count national censuses but has increased since Seabirds Count (BTO *et al*, 2025).

5.5.4.119 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.705 to 0.807; (i.e. the population after 35 years, would be 19.3 to 29.6% smaller than the CPS with a 50th percentile value of 7.6 to 19.0 (Table 5.208). In terms of the population size, this means that the median of the impacted population fell within the 8th to 19th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.990 to 0.994 which translates to a growth rate 0.6 to 1.0% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

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- 5.5.4.120 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 0.996 and a median CPS of 0.863 (i.e. the population growth rate would be 0.4% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 13.7% smaller than the counterfactual population size). The 50th percentile value is 27.5, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.
- 5.5.4.121 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.
- 5.5.4.122 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the gannet population at the SPA from being maintained, noting that the population at the SPA is higher than at designation.
- 5.5.4.123 When considered alongside other factors discussed in paragraphs 5.5.4.6 and 5.5.4.6 are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Flamborough and Filey Coast SPA will therefore not occur as a result of in-combination combined collision and displacement impacts.
- 5.5.4.124 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Flamborough and Filey Coast SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.206: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Aspen	0.05	0.55	0.90	0.05	0.06	0.4	0.0	0.1	0.5
Beatrice	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.1	0.4
Berwick Bank	0.01	0.55	0.90	0.05	0.06	0.7	0.2	0.0	0.9
Blyth Demo	0.15	0.55	0.90	0.05	0.06	0.2	0.0	0.0	0.3
Buchan	0.02	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Caledonia North	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Cenos	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Dogger Bank A + B	0.41	0.55	0.90	0.05	0.06	1.1	0.1	0.0	1.2
Dogger Bank South	1.00	0.55	0.90	0.05	0.06	13.3	0.6	0.1	14.1
Dogger Bank C + Sofia	0.34	0.55	0.90	0.05	0.06	2.5	0.1	0.1	2.7
Dudgeon	0.57	0.55	0.90	0.05	0.06	7.6	0.3	0.1	8.1
Dudgeon Extension	1.00	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
East Anglia One	1.00	0.55	0.90	0.05	0.06	2.6	1.3	0.1	4.0
East Anglia One North	1.00	0.55	0.90	0.05	0.06	4.0	0.1	0.0	4.1
East Anglia Three	1.00	0.55	0.90	0.05	0.06	2.7	0.3	0.1	3.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
East Anglia Two	1.00	0.55	0.90	0.05	0.06	3.3	0.3	0.1	3.7
Five Estuaries	0.74	0.55	0.90	0.05	0.06	0.7	0.1	0.0	0.9
Galloper	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.1	0.4
Green Volt	0.04	0.55	0.90	0.05	0.06	0.2	0.0	0.0	0.2
Hornsea Project One	1.00	0.55	0.90	0.05	0.06	2.2	0.1	0.1	2.3
Hornsea Project Two	1.00	0.55	0.90	0.05	0.06	3.9	0.1	0.1	4.1
Hornsea Project Three	1.00	0.55	0.90	0.05	0.06	3.4	0.0	0.1	3.5
Hornsea Four	1.00	0.55	0.90	0.05	0.06	4.8	0.0	0.0	4.9
Humber Gateway	0.84	0.55	0.90	0.05	0.06	0.6	0.0	0.0	0.7
Inch Cape	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.1	0.1
Kentish Flats Extension	1.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Kincardine	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Lincs	0.64	0.55	0.90	0.05	0.06	0.6	0.0	0.0	0.6
Moray East	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.0	0.1
Moray West	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Morven North	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Morven South	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Muir Mhor	0.04	0.55	0.90	0.05	0.06	0.2	0.1	0.0	0.2
Neart na Gaoithe	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.1	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Norfolk Boreas	1.00	0.55	0.90	0.05	0.06	4.8	0.1	0.1	5.0
Norfolk Vanguard	1.00	0.55	0.90	0.05	0.06	2.7	0.2	0.1	3.0
North Falls	1.00	0.55	0.90	0.05	0.06	0.3	0.0	0.0	0.3
Ossian	0.05	0.55	0.90	0.05	0.06	0.7	0.1	0.0	0.8
Outer Dowsing	0.64	0.55	0.90	0.05	0.06	0.4	0.0	0.0	0.4
Race Bank	0.64	0.55	0.90	0.05	0.06	8.9	0.1	0.1	9.0
Rampion	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.0	0.1
Rampion 2	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Salamander	0.02	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
SeaGreen (Alpha & Bravo)	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.3	0.5
Sheringham Shoal Extension	1.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Teesside	0.54	0.55	0.90	0.05	0.06	1.2	0.0	0.0	1.2
Thanet	1.00	0.55	0.90	0.05	0.06	0.3	0.0	0.0	0.3
Triton Knoll	0.72	0.55	0.90	0.05	0.06	11.5	0.5	0.3	12.3
Westermost Rough	0.93	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									95.0

Table 5.207: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Aspen	0.05	0.55	0.90	0.05	0.06	0.4	0.0	0.1	0.5
Beatrice	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.1	0.4
Berwick Bank	0.01	0.55	0.90	0.05	0.06	0.7	0.2	0.0	0.9
Blyth Demo	0.15	0.55	0.90	0.05	0.06	0.2	0.0	0.0	0.3
Buchan	0.02	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Caledonia North	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Cenos	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Dogger Bank A + B	0.41	0.55	0.90	0.05	0.06	1.1	0.1	0.0	1.2
Dogger Bank South	1.00	0.55	0.90	0.05	0.06	13.3	0.6	0.1	14.1
Dogger Bank C + Sofia	0.34	0.55	0.90	0.05	0.06	2.5	0.1	0.1	2.7
Dudgeon	0.57	0.55	0.90	0.05	0.06	7.6	0.3	0.1	8.1
Dudgeon Extension	1.00	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
East Anglia One	1.00	0.55	0.90	0.05	0.06	2.6	1.3	0.1	4.0
East Anglia One North	1.00	0.55	0.90	0.05	0.06	4.0	0.1	0.0	4.1
East Anglia Three	1.00	0.55	0.90	0.05	0.06	2.7	0.3	0.1	3.2
East Anglia Two	1.00	0.55	0.90	0.05	0.06	3.3	0.3	0.1	3.7

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Five Estuaries	0.74	0.55	0.90	0.05	0.06	0.7	0.1	0.0	0.9
Galloper	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.1	0.4
Green Volt	0.04	0.55	0.90	0.05	0.06	0.2	0.0	0.0	0.2
Hornsea Project One	1.00	0.55	0.90	0.05	0.06	2.2	0.1	0.1	2.3
Hornsea Project Two	1.00	0.55	0.90	0.05	0.06	3.9	0.1	0.1	4.1
Hornsea Project Three	1.00	0.55	0.90	0.05	0.06	3.4	0.0	0.1	3.5
Hornsea Four	1.00	0.55	0.90	0.05	0.06	4.8	0.0	0.0	4.9
Humber Gateway	0.84	0.55	0.90	0.05	0.06	0.6	0.0	0.0	0.7
Inch Cape	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.1	0.1
Kentish Flats Extension	1.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Kincardine	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Lincs	0.64	0.55	0.90	0.05	0.06	0.6	0.0	0.0	0.6
Moray East	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.0	0.1
Moray West	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Morven North	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Morven South	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Muir Mhor	0.04	0.55	0.90	0.05	0.06	0.2	0.1	0.0	0.2
Near na Gaoithe	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.1	0.2
Norfolk Boreas	1.00	0.55	0.90	0.05	0.06	4.8	0.1	0.1	5.0
Norfolk Vanguard	1.00	0.55	0.90	0.05	0.06	2.7	0.2	0.1	3.0
North Falls	1.00	0.55	0.90	0.05	0.06	0.3	0.0	0.0	0.3

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Ossian	0.05	0.55	0.90	0.05	0.06	0.7	0.1	0.0	0.8
Outer Dowsing	0.64	0.55	0.90	0.05	0.06	0.4	0.0	0.0	0.4
Race Bank	0.64	0.55	0.90	0.05	0.06	8.9	0.1	0.1	9.0
Rampion	0.00	0.55	0.90	0.05	0.06	0.0	0.1	0.0	0.1
Rampion 2	0.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.1
Salamander	0.02	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
SeaGreen (Alpha & Bravo)	0.00	0.55	0.90	0.05	0.06	0.0	0.2	0.3	0.5
Sheringham Shoal Extension	1.00	0.55	0.90	0.05	0.06	0.0	0.0	0.0	0.0
Teesside	0.54	0.55	0.90	0.05	0.06	1.2	0.0	0.0	1.2
Thanet	1.00	0.55	0.90	0.05	0.06	0.3	0.0	0.0	0.3
Triton Knoll	0.72	0.55	0.90	0.05	0.06	11.5	0.5	0.3	12.3
Westermost Rough	0.93	0.55	0.90	0.05	0.06	0.1	0.0	0.0	0.1
Total annual mortality (birds/annum)									47.9

Table 5.208: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Flamborough and Filey Coast Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	52,153	1.012	53.82	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	138.7	0.518	42,115	1.006	23.81	0.994	0.807	19.0
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	226.1	0.844	36,660	1.002	8.31	0.990	0.705	7.6
Applicant	94.9	0.354	45,062	1.008	32.78	0.996	0.863	27.5

Forth Islands Special Protection Area

5.5.4.125 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.209 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.126 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Forth Islands SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.209: Predicted annual mortality of gannet at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	4.4
	Displacement	3.1 to 9.2
Morven South	Collision	5.6
	Displacement	1.4 to 4.1
Total annual mortality (birds/annum)		14.4 to 23.2
Change in baseline mortality (percentage point change)		0.010 to 0.015
Applicant’s approach		
Morven North	Collision	2.3
	Displacement	4.8
Morven South	Collision	2.6
	Displacement	2.1
Total annual mortality (birds/annum)		11.9
Change in baseline mortality (percentage point change)		0.008

5.5.4.127 The predicted impact of Morven North in-combination with other plans and projects on gannet at the Forth Islands SPA is presented in Table 5.110 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the gannet population at the Forth Islands SPA is 439 to 676 birds when applying NatureScot’s approach and 332 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.210: Predicted in-combination annual mortality rate of gannet at the Forth Islands Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	320.5
	Applicant	180.2
Displacement	NatureScot	118.3 to 355.0
	Applicant	151.7
Total annual mortality (birds/annum)	NatureScot	438.8 to 675.5
	Applicant	331.9
Change in baseline mortality (percentage point change)	NatureScot	0.292 to 0.449
	Applicant	0.221

5.5.4.128 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Forth Islands SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, primarily due to HPAI (BTO *et al*, 2025; Burton *et al*, 2025).

5.5.4.129 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot’s parameters indicates a median CPS of 0.831 to 0.886; (i.e. the population after 35 years, would be 11.4 to 16.9% smaller than the CPS with a 50th percentile value of 23.6 to 32.0 (Table 5.211)). In terms of the population size, this means that the median of the impacted population fell within the 24th to 32nd percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.995 to 0.997 which translates to a growth rate 0.3 to 0.5% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.130 When modelling the annual impact associated with the Applicant’s approach for gannet, the comparable metrics are a median CGR of 0.997 and a median CPS of 0.913 (i.e. the population growth rate would be 0.3% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 8.7% smaller than the counterfactual population size). The 50th percentile value is 36.7, within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.131 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.

5.5.4.132 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOI of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank, Caledonia North, Caledonia South, Cenos, Green Volt, Muir Mhor, Ossian, Salamander and West of Orkney. The proposed compensatory measures will

compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

- 5.5.4.133 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.
- 5.5.4.134 When considered alongside other factors discussed in paragraphs 5.5.4.6 and 5.5.4.6 and the compensation required at other projects are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Forth Islands SPA will therefore not occur as a result of in-combination combined collision and displacement impacts.
- 5.5.4.135 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the gannet population of the Forth Islands SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.211: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Forth Islands Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
In-combination (Scenario 4)								
Baseline	-	-	304,843	1.012	53.73	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	438.8	0.292	270,234	1.009	36.29	0.997	0.886	32.0
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	675.5	0.449	253,315	1.007	27.71	0.995	0.831	23.6
Applicant	331.9	0.221	278,798	1.010	40.31	0.997	0.913	36.7

Hermaness, Saxa Vord and Valla Field Special Protection Area

5.5.4.136 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.212 for both NatureScot's and the Applicant's approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.137 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Hermaness, Saxa Vord and Valla Field SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.212: Predicted annual mortality of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot's approach		
Morven North	Collision	0.1
	Displacement	0.2 to 0.7
Morven South	Collision	0.0
	Displacement	0.1 to 0.3
Total annual mortality (birds/annum)		0.5 to 1.1
Change in baseline mortality (percentage point change)		0.001 to 0.002
Applicant's approach		
Morven North	Collision	0.1
	Displacement	0.2
Morven South	Collision	0.0
	Displacement	0.1
Total annual mortality (birds/annum)		0.4
Change in baseline mortality (percentage point change)		0.001

5.5.4.138 The project alone collision risk impact predicted for gannet at the Hermaness, Saxa Vord and Valla Field SPA for Morven North did not surpass the 0.2 birds/annum threshold, as defined by NatureScot to identify those features to progress to an in-combination assessment. This SPA was therefore not included in sections 5.5.2 which assessed the in-combination collision impact in isolation for gannet. The predicted in-combination collision impact on gannet at the Hermaness, Saxa Vord and Valla Field SPA is therefore presented in Table 5.217 for NatureScot's approach and Table 5.218 for the Applicant's approach.

5.5.4.139 The predicted impact of Morven North in-combination with other plans and projects on gannet at the Hermaness, Saxa Vord and Valla Field SPA is presented in Table 5.213 for NatureScot's and the Applicant's approaches. The total in-combination impact apportioned to the gannet population at the Hermaness, Saxa Vord and Valla Field SPA is 48 to 96 birds when applying

NatureScot's approach and 44 birds when applying the Applicant's approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.213: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	24.1
	Applicant	19.5
Displacement	NatureScot	23.8 to 71.4
	Applicant	24.0
Total annual mortality (birds/annum)	NatureScot	47.9 to 95.5
	Applicant	43.5
Change in baseline mortality (percentage point change)	NatureScot	0.081 to 0.162
	Applicant	0.074

5.5.4.140 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.935 to 0.967; (i.e. the population after 35 years, would be 3.3 to 6.5% smaller than the CPS with a 50th percentile value of 38.9 to 44.9 (Table 5.216)). In terms of the population size, this means that the median of the impacted population fell within the 38th to 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.999 to 0.999 which translates to a growth rate 0.1 to 0.1% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.141 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.970 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 3.0% smaller than the counterfactual population size). The 50th percentile value is 45.0, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.142 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Hermaness, Saxa Vord and Valla Field SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, presumably due to HPAI (Lane *et al*, 2024, BTO *et al*, 2025).

5.5.4.143 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph

5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.

5.5.4.144 For a number of recent projects, it has been concluded that the predicted in-combination impact is at a magnitude that represents an AEOL of the SPA. As a result these projects have been required to submit derogation cases which include compensation measures. This is applicable to Berwick Bank and Salamander. The proposed compensatory measures will compensate for the residual effects from these projects that would otherwise contribute to an in-combination effect with Morven North. The impacts associated with these projects should theoretically be excluded from the assessments presented above, leading to reduced impact magnitudes and improved PVA metrics.

5.5.4.145 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.

5.5.4.146 When considered alongside other factors discussed in paragraphs 5.5.4.6 and 5.5.4.6 and the compensation required at other projects are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Hermaness, Saxa Vord and Valla Field SPA will therefore not occur as a result of in-combination combined collision and displacement impacts.

5.5.4.147 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the gannet population of the Hermaness, Saxa Vord and Valla Field SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.214: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.0	0.1
Aspen	0.04	0.55	0.90	0.09	0.14	0.6	0.1	0.1	0.8
Beatrice	0.06	0.55	0.90	0.09	0.14	2.5	0.4	0.3	3.3
Berwick Bank	0.01	0.55	0.90	0.09	0.14	0.5	0.3	0.1	0.9
Blyth Demo				0.09	0.14		0.0	0.1	0.1
Buchan	0.07	0.55	0.90	0.09	0.14	0.2	0.0	0.0	0.2
Caledonia North	0.04	0.55	0.90	0.09	0.14	0.2	0.0	0.0	0.2
Caledonia South	0.03	0.55	0.90	0.09	0.14	0.3	0.0	0.0	0.4
Cenos	0.06	0.55	0.90	0.09	0.14	1.0	0.1	0.0	1.1
Dogger Bank A + B				0.09	0.14		0.1	0.1	0.2
Dogger Bank South				0.09	0.14		1.1	0.3	1.3
Dogger Bank C + Sofia				0.09	0.14		0.1	0.2	0.3
Dudgeon				0.09	0.14		0.5	0.3	0.9
Dudgeon Extension				0.09	0.14		0.0	0.0	0.0
East Anglia One				0.09	0.14		2.3	0.2	2.5
East Anglia One North				0.09	0.14		0.2	0.1	0.3
East Anglia Three				0.09	0.14		0.6	0.3	0.8

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
East Anglia Two				0.09	0.14		0.5	0.1	0.6
Five Estuaries				0.09	0.14		0.2	0.0	0.2
Galloper		0.55	0.90	0.09	0.14		0.4	0.3	0.7
Green Volt	0.05	0.55	0.90	0.09	0.14	0.5	0.0	0.1	0.6
Hornsea Project One				0.09	0.14		0.1	0.1	0.2
Hornsea Project Two				0.09	0.14		0.2	0.1	0.3
Hornsea Project Three				0.09	0.14		0.1	0.1	0.2
Hornsea Four				0.09	0.14		0.1	0.1	0.1
Humber Gateway				0.09	0.14		0.0	0.1	0.1
Inch Cape	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.1	0.3
Kentish Flats Extension				0.09	0.14		0.0	0.0	0.0
Kincardine	0.00	0.55	0.90	0.09	0.14	0.0	0.0	0.0	0.0
Lincs				0.09	0.14		0.0	0.0	0.1
Moray East	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.1	0.2
Moray West	0.00	0.55	0.90	0.09	0.14	0.0	0.0	0.0	0.0
Morven North	0.00	0.55	0.90	0.09	0.14	0.1	0.1	0.0	0.2
Morven South	0.00	0.55	0.90	0.09	0.14	0.1	0.0	0.0	0.2
Muir Mhor	0.05	0.55	0.90	0.09	0.14	0.4	0.1	0.0	0.5

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Neart na Gaoithe	0.00	0.55	0.90	0.09	0.14	0.0	0.2	0.3	0.4
Norfolk Boreas				0.09	0.14		0.2	0.1	0.3
Norfolk Vanguard				0.09	0.14		0.3	0.2	0.5
North Falls				0.09	0.14		0.1	0.1	0.2
Ossian	0.03	0.55	0.90	0.09	0.14	0.8	0.1	0.0	0.9
Outer Dowsing				0.09	0.14		0.0	0.0	0.1
Pentland	0.04	0.55	0.90	0.02	0.02	0.1	0.0	0.0	0.1
Race Bank				0.09	0.14		0.1	0.1	0.2
Rampion		0.55	0.90	0.09	0.14		0.2	0.1	0.2
Rampion 2				0.09	0.14		0.1	0.1	0.1
Salamander	0.04	0.55	0.90	0.09	0.14	0.2	0.0	0.0	0.2
SeaGreen (Alpha & Bravo)	0.00	0.55	0.90	0.09	0.14	0.0	0.4	0.7	1.1
Sheringham Shoal Extension				0.09	0.14		0.0	0.0	0.0
Teesside				0.09	0.14		0.0	0.0	0.0
Thanet				0.09	0.14		0.0	0.0	0.0
Triton Knoll				0.09	0.14		0.9	0.7	1.6
West of Orkney	0.00	0.55	0.90	0.02	0.02	0.0	0.0	0.0	0.0
Westermost Rough				0.09	0.14		0.0	0.0	0.0
Total annual mortality (birds/annum)									24.1

Table 5.215: Predicted in-combination annual mortality rate of gannet at the Hermaness, Saxa Vord and Valla Field Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values						Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding		Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals							
Tier 1 (Scenario 4)										
Aberdeen	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.0	0.1	
Aspen	0.04	0.55	0.90	0.09	0.14	0.6	0.1	0.1	0.8	
Beatrice	0.06	0.55	0.90	0.09	0.14	0.8	0.4	0.3	1.5	
Berwick Bank	0.01	0.99	0.90	0.09	0.14	0.2	0.3	0.1	0.6	
Blyth Demo				0.09	0.14		0.0	0.1	0.1	
Buchan	0.07	0.91	0.90	0.09	0.14	0.1	0.0	0.0	0.1	
Caledonia North	0.04	0.55	0.90	0.09	0.14	0.2	0.0	0.0	0.2	
Caledonia South	0.03	0.55	0.90	0.09	0.14	0.3	0.0	0.0	0.4	
Cenos	0.06	0.98	0.90	0.09	0.14	0.3	0.1	0.0	0.4	
Dogger Bank A + B				0.09	0.14		0.1	0.1	0.2	
Dogger Bank South				0.09	0.14		1.1	0.3	1.3	
Dogger Bank C + Sofia				0.09	0.14		0.1	0.2	0.3	
Dudgeon				0.09	0.14		0.5	0.3	0.9	
Dudgeon Extension				0.09	0.14		0.0	0.0	0.0	
East Anglia One				0.09	0.14		2.3	0.2	2.5	
East Anglia One North				0.09	0.14		0.2	0.1	0.3	

Project	Seasonal apportioning values						Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding		Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals							
East Anglia Three				0.09	0.14		0.6	0.3	0.8	
East Anglia Two				0.09	0.14		0.5	0.1	0.6	
Five Estuaries				0.09	0.14		0.2	0.0	0.2	
Galloper				0.09	0.14		0.4	0.3	0.7	
Green Volt	0.05	0.55	0.90	0.09	0.14	0.2	0.0	0.1	0.2	
Hornsea Project One				0.09	0.14		0.1	0.1	0.2	
Hornsea Project Two				0.09	0.14		0.2	0.1	0.3	
Hornsea Project Three				0.09	0.14		0.1	0.1	0.2	
Hornsea Four				0.09	0.14		0.1	0.1	0.1	
Humber Gateway				0.09	0.14		0.0	0.1	0.1	
Inch Cape	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.1	0.3	
Kentish Flats Extension				0.09	0.14		0.0	0.0	0.0	
Kincardine	0.00	0.79	0.90	0.09	0.14	0.0	0.0	0.0	0.0	
Lincs				0.09	0.14		0.0	0.0	0.1	
Moray East	0.00	0.55	0.90	0.09	0.14	0.0	0.1	0.1	0.2	
Moray West	0.00	0.55	0.90	0.09	0.14	0.0	0.0	0.0	0.0	
Morven North	0.00	0.96	0.90	0.09	0.14	0.0	0.1	0.0	0.1	
Morven South	0.00	0.95	0.90	0.09	0.14	0.0	0.0	0.0	0.0	
Muir Mhor	0.05	0.55	0.90	0.09	0.14	0.1	0.1	0.0	0.2	

Project	Seasonal apportioning values						Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding		Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals							
Neart na Gaoithe	0.00	0.98	0.90	0.09	0.14	0.0	0.2	0.3	0.4	
Norfolk Boreas				0.09	0.14		0.2	0.1	0.3	
Norfolk Vanguard				0.09	0.14		0.3	0.2	0.5	
North Falls				0.09	0.14		0.1	0.1	0.2	
Ossian	0.03	0.98	0.90	0.09	0.14	0.2	0.1	0.0	0.3	
Outer Dowsing				0.09	0.14		0.0	0.0	0.1	
Pentland	0.04	0.55	0.90	0.02	0.02	0.0	0.0	0.0	0.0	
Race Bank				0.09	0.14		0.1	0.1	0.2	
Rampion				0.09	0.14		0.2	0.1	0.2	
Rampion 2				0.09	0.14		0.1	0.1	0.1	
Salamander	0.04	0.94	0.90	0.09	0.14	0.1	0.0	0.0	0.1	
SeaGreen (Alpha & Bravo)	0.00	0.97	0.90	0.09	0.14	0.0	0.4	0.7	1.1	
Sheringham Shoal Extension				0.09	0.14		0.0	0.0	0.0	
Teesside				0.09	0.14		0.0	0.0	0.0	
Thanet				0.09	0.14		0.0	0.0	0.0	
Triton Knoll				0.09	0.14		0.9	0.7	1.6	
West of Orkney	0.00	0.55	0.90	0.02	0.02	0.0	0.0	0.0	0.0	
Westermost Rough				0.09	0.14		0.0	0.0	0.0	
Total annual mortality (birds/annum)									19.5	

Table 5.216: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Hermaness, Saxa Vord and Valla Field Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	109,323	1.012	53.17	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	47.9	0.081	105,815	1.011	48.17	0.999	0.963	44.9
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	95.5	0.162	102,324	1.010	43.19	0.998	0.935	38.9
Applicant	43.5	0.074	105,920	1.011	48.44	0.999	0.970	45.0

Noss Special Protection Area

5.5.4.148 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.217 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.149 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the Noss SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.217: Predicted annual mortality of gannet at the Noss Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.0
	Displacement	0.1 to 0.3
Morven South	Collision	0.0
	Displacement	0.0 to 0.1
Total annual mortality (birds/annum)		0.2 to 0.4
Change in baseline mortality (percentage point change)		0.001 to 0.002
Applicant’s approach		
Morven North	Collision	0.0
	Displacement	0.1
Morven South	Collision	0.0
	Displacement	0.0
Total annual mortality (birds/annum)		0.2
Change in baseline mortality (percentage point change)		0.001

5.5.4.150 The project alone collision risk impact predicted for gannet at the Noss SPA for Morven North did not surpass the 0.2 birds/annum threshold, as defined by NatureScot to identify those features to progress to an in-combination assessment. This SPA was therefore not included in sections 5.5.2 which assessed the in-combination collision impact in isolation for gannet. The predicted in-combination collision impact on gannet at Noss SPA is therefore presented in Table 5.219 for NatureScot’s approach and Table 5.220 for the Applicant’s approach.

5.5.4.151 The predicted impact of Morven North in-combination with other plans and projects on gannet at the Noss SPA is presented in Table 5.218 for NatureScot’s and the Applicant’s approaches. The total in-combination impact apportioned to the gannet population at the Noss SPA is 24 to 44 birds when applying NatureScot’s approach and 20 birds when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.218: Predicted in-combination annual mortality rate of gannet at the Flamborough and Filey Coast Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects.

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	13.8
	Applicant	9.6
Displacement	NatureScot	10.3 to 30.8
	Applicant	10.5
Total annual mortality (birds/annum)	NatureScot	24.1 to 44.6
	Applicant	20.1
Change in baseline mortality (percentage point change)	NatureScot	0.088 to 0.162
	Applicant	0.073

5.5.4.152 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the Noss SPA increased between the Seabird 2000 and Seabirds Count national censuses but has decreased since Seabirds Count, presumably due to HPAI (Lane *et al*, 2024, BTO *et al*, 2025).

5.5.4.153 The PVA model conducted for gannet when applying the annual season impact calculated using NatureScot's parameters indicates a median CPS of 0.936 to 0.964; (i.e. the population after 35 years, would be 3.6 to 6.4% smaller than the CPS with a 50th percentile value of 39.2 to 44.3 (Table 5.221)). In terms of the population size, this means that the median of the impacted population fell within the 39th to 44th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 0.998 to 0.999 which translates to a growth rate 0.1 to 0.2% smaller than the counterfactual (unimpacted) growth rate. Such a decrease would be undetectable against natural fluctuations in the growth rate currently seen in the regional population.

5.5.4.154 When modelling the annual impact associated with the Applicant's approach for gannet, the comparable metrics are a median CGR of 0.999 and a median CPS of 0.971 (i.e. the population growth rate would be 0.1% smaller than the counterfactual (unimpacted) growth rate leading to a population that is, after 35 years, 2.9% smaller than the counterfactual population size). The 50th percentile value is 44.8, well within the margin of error of the non-impacted scenario. As concluded above, such a decrease would only result in a slight reduction in the growth rate currently seen in the regional population and would therefore be undetectable against natural population fluctuations.

5.5.4.155 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.

5.5.4.156 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA,

noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI.

5.5.4.157 When considered alongside other factors discussed in paragraphs 5.5.4.6 and 5.5.4.6 are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the Noss SPA will therefore not occur as a result of in-combination combined collision and displacement impacts.

5.5.4.158 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOL on the gannet population of the Noss SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.219: Predicted in-combination annual mortality rate of gannet at the Noss Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Aspen	0.04	0.55	0.90	0.03	0.06	0.7	0.0	0.1	0.8
Beatrice	0.06	0.55	0.90	0.03	0.06	2.6	0.2	0.1	2.9
Berwick Bank	0.00	0.55	0.90	0.03	0.06	0.4	0.1	0.0	0.6
Blyth Demo				0.03	0.06		0.0	0.0	0.0
Buchan	0.10	0.55	0.90	0.03	0.06	0.3	0.0	0.0	0.3
Caledonia North	0.05	0.55	0.90	0.03	0.06	0.2	0.0	0.0	0.2
Caledonia South	0.04	0.55	0.90	0.03	0.06	0.4	0.0	0.0	0.4
Cenos	0.05	0.55	0.90	0.03	0.06	0.9	0.0	0.0	0.9
Dogger Bank A + B				0.03	0.06		0.0	0.0	0.1
Dogger Bank South				0.03	0.06		0.4	0.1	0.5
Dogger Bank C + Sofia				0.03	0.06		0.1	0.1	0.1
Dudgeon				0.03	0.06		0.2	0.1	0.3
Dudgeon Extension				0.03	0.06		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
East Anglia One				0.03	0.06		0.9	0.1	1.0
East Anglia One North				0.03	0.06		0.1	0.0	0.1
East Anglia Three				0.03	0.06		0.2	0.1	0.3
East Anglia Two				0.03	0.06		0.2	0.1	0.2
Five Estuaries				0.03	0.06		0.1	0.0	0.1
Galloper				0.03	0.06		0.2	0.1	0.3
Green Volt	0.05	0.55	0.90	0.03	0.06	0.5	0.0	0.0	0.5
Hornsea Project One				0.03	0.06		0.0	0.0	0.1
Hornsea Project Two				0.03	0.06		0.1	0.1	0.1
Hornsea Project Three				0.03	0.06		0.0	0.1	0.1
Hornsea Four				0.03	0.06		0.0	0.0	0.1
Humber Gateway				0.03	0.06		0.0	0.0	0.1
Inch Cape	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.1	0.1
Kentish Flats Extension				0.03	0.06		0.0	0.0	0.0
Kincardine	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Lincs				0.03	0.06		0.0	0.0	0.0
Moray East	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.1
Moray West	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Morven North	0.00	0.55	0.90	0.03	0.06	0.1	0.0	0.0	0.1
Morven South	0.00	0.55	0.90	0.03	0.06	0.1	0.0	0.0	0.1
Muir Mhor	0.04	0.55	0.90	0.03	0.06	0.3	0.0	0.0	0.3
Neart na Gaoithe	0.00	0.55	0.90	0.03	0.06	0.0	0.1	0.1	0.2
Norfolk Boreas				0.03	0.06		0.1	0.0	0.1
Norfolk Vanguard				0.03	0.06		0.1	0.1	0.2
North Falls				0.03	0.06		0.0	0.0	0.1
Ossian	0.02	0.55	0.90	0.03	0.06	0.6	0.0	0.0	0.6
Outer Dowsing				0.03	0.06		0.0	0.0	0.0
Pentland	0.04	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Race Bank				0.03	0.06		0.0	0.0	0.1
Rampion				0.03	0.06		0.1	0.0	0.1
Rampion 2				0.03	0.06		0.0	0.0	0.1
Salamander	0.03	0.55	0.90	0.03	0.06	0.2	0.0	0.0	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
SeaGreen (Alpha & Bravo)	0.00	0.55	0.90	0.03	0.06	0.0	0.2	0.3	0.4
Sheringham Shoal Extension				0.03	0.06		0.0	0.0	0.0
Teesside				0.03	0.06		0.0	0.0	0.0
Thanet				0.03	0.06		0.0	0.0	0.0
Triton Knoll				0.03	0.06		0.4	0.3	0.7
West of Orkney	0.00	0.55	0.90	0.03	0.06	0.0	0.1	0.0	0.1
Westermost Rough				0.03	0.06		0.0	0.0	0.0
Total annual mortality (birds/annum)									13.8

Table 5.220: : Predicted in-combination annual mortality rate of gannet at the Noss Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Aspen	0.04	0.55	0.90	0.03	0.06	0.7	0.0	0.1	0.8
Beatrice	0.06	0.55	0.90	0.03	0.06	0.8	0.2	0.1	1.1
Berwick Bank	0.00	0.99	0.90	0.03	0.06	0.1	0.1	0.0	0.3
Blyth Demo				0.03	0.06		0.0	0.0	0.0
Buchan	0.10	0.91	0.90	0.03	0.06	0.1	0.0	0.0	0.1
Caledonia North	0.05	0.55	0.90	0.03	0.06	0.2	0.0	0.0	0.2
Caledonia South	0.04	0.55	0.90	0.03	0.06	0.4	0.0	0.0	0.4
Cenos	0.05	0.98	0.90	0.03	0.06	0.3	0.0	0.0	0.3
Dogger Bank A + B				0.03	0.06		0.0	0.0	0.1
Dogger Bank South				0.03	0.06		0.4	0.1	0.5
Dogger Bank C + Sofia				0.03	0.06		0.1	0.1	0.1
Dudgeon				0.03	0.06		0.2	0.1	0.3
Dudgeon Extension				0.03	0.06		0.0	0.0	0.0
East Anglia One				0.03	0.06		0.9	0.1	1.0
East Anglia One North				0.03	0.06		0.1	0.0	0.1
East Anglia Three				0.03	0.06		0.2	0.1	0.3
East Anglia Two				0.03	0.06		0.2	0.1	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Five Estuaries				0.03	0.06		0.1	0.0	0.1
Galloper				0.03	0.06		0.2	0.1	0.3
Green Volt	0.05	0.55	0.90	0.03	0.06	0.2	0.0	0.0	0.2
Hornsea Project One		0.62		0.03	0.06		0.0	0.0	0.1
Hornsea Project Two		0.72		0.03	0.06		0.1	0.1	0.1
Hornsea Project Three		0.73		0.03	0.06		0.0	0.1	0.1
Hornsea Four				0.03	0.06		0.0	0.0	0.1
Humber Gateway				0.03	0.06		0.0	0.0	0.1
Inch Cape	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.1	0.1
Kentish Flats Extension				0.03	0.06		0.0	0.0	0.0
Kincardine	0.00	0.79	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Lincs				0.03	0.06		0.0	0.0	0.0
Moray East	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.1
Moray West	0.00	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Morven North	0.00	0.96	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Morven South	0.00	0.95	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Muir Mhor	0.04	0.55	0.90	0.03	0.06	0.1	0.0	0.0	0.1
Near na Gaoithe	0.00	0.98	0.90	0.03	0.06	0.0	0.1	0.1	0.2
Norfolk Boreas				0.03	0.06		0.1	0.0	0.1

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immatures	Sabbaticals						
Norfolk Vanguard				0.03	0.06		0.1	0.1	0.2
North Falls		0.69		0.03	0.06		0.0	0.0	0.1
Ossian	0.02	0.98	0.90	0.03	0.06	0.2	0.0	0.0	0.2
Outer Dowsing		0.90		0.03	0.06		0.0	0.0	0.0
Pentland	0.04	0.55	0.90	0.03	0.06	0.0	0.0	0.0	0.0
Race Bank				0.03	0.06		0.0	0.0	0.1
Rampion				0.03	0.06		0.1	0.0	0.1
Rampion 2				0.03	0.06		0.0	0.0	0.1
Salamander	0.03	0.94	0.90	0.03	0.06	0.1	0.0	0.0	0.1
SeaGreen (Alpha & Bravo)	0.00	0.97	0.90	0.03	0.06	0.0	0.2	0.3	0.4
Sheringham Shoal Extension				0.03	0.06		0.0	0.0	0.0
Teesside				0.03	0.06		0.0	0.0	0.0
Thanet				0.03	0.06		0.0	0.0	0.0
Triton Knoll				0.03	0.06		0.4	0.3	0.7
West of Orkney	0.00	0.55	0.90	0.03	0.06	0.0	0.1	0.0	0.1
Westermost Rough				0.03	0.06		0.0	0.0	0.0
Total annual mortality (birds/annum)									9.6

Table 5.221: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the Noss Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	52,536	1.012	53.78	-	-	-
NatureScot (1% breeding season mortality rate; 1% non-breeding season mortality rate)	24.1	0.088	50,673	1.011	48.43	0.999	0.964	44.2
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	44.6	0.162	49,170	1.010	43.83	0.998	0.936	39.2
Applicant	20.1	0.073	50,940	1.012	49.19	0.999	0.971	44.8

St Kilda Special Protection Area

5.5.4.159 The predicted impact from the Morven Programme (Scenario 3) is presented in Table 5.222 for both NatureScot’s and the Applicant’s approach. The predicted impact under both approaches remains below the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h). Additional analysis including PVA modelling is therefore not required. It can therefore be concluded that the total combined collision and displacement impact associated with the Morven Programme (Scenario 3) will not undermine the conservation objectives for the SPA.

5.5.4.160 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the St Kilda SPA in relation to combined collision and displacement impacts associated with the Morven Programme (Scenario 3).

Table 5.222: Predicted annual mortality of gannet at the St Kilda Special Protection Area resulting from combined collision and displacement impacts associated with the Morven Programme (Scenario 3)

Project	Impact	Annual impact (no. of birds)
NatureScot’s approach		
Morven North	Collision	0.0
	Displacement	0.1 to 0.2
Morven South	Collision	0.0
	Displacement	0.0 to 0.0
Total annual mortality (birds/annum)		0.1 to 0.3
Change in baseline mortality (percentage point change)		<0.001 to <0.001
Applicant’s approach		
Morven North	Collision	0.0
	Displacement	0.1
Morven South	Collision	0.0
	Displacement	0.0
Total annual mortality (birds/annum)		0.1
Change in baseline mortality (percentage point change)		<0.001

5.5.4.161 The project alone collision risk and displacement impacts predicted for gannet at the St Kilda SPA for Morven North did not surpass the 0.2 birds/annum threshold, as defined by NatureScot to identify those features to progress to an in-combination assessment as isolated impacts. This SPA was therefore not included in Sections 5.5.2 and 5.5.3 which assess in-combination collision and displacement in isolation for gannet. The predicted in-combination collision impact on gannet at the St Kilda SPA is presented in Table 5.224 for NatureScot’s approach and Table 5.225 for the Applicant’s approach.

5.5.4.162 Table 5.226 (NatureScot’s apportioning approach) and Table 5.227 (Applicant’s approach) present the seasonal population estimates for those projects considered in-combination. These values have been apportioned following the approach described in paragraphs 5.5.3.11 and 5.5.3.12. The predicted in-combination impact on gannet at the St Kilda SPA is presented in Table 5.226 when applying both NatureScot’s advocated displacement and mortality rates and Table 5.227 when applying the Applicant’s displacement and mortality rates.

5.5.4.163 The predicted impact of Morven North in-combination with other plans and projects on gannet at the St Kilda SPA is presented in Table 5.223 for NatureScot’s and the Applicant’s approaches. The total in-combination combined collision and displacement impact apportioned to the gannet population at the St Kilda SPA is 17 to 32 birds/annum when applying NatureScot’s approach and 16 birds/annum when applying the Applicant’s approach. This magnitude of impact exceeds the 0.02 percentage point increase threshold as defined by NatureScot (NatureScot, 2023h) and therefore additional assessment is required.

Table 5.223: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from combined collision and displacement impacts of Morven North in-combination with other plans and projects

Impact	Scenario	Annual impact (no. of birds)
Collision	NatureScot	9.1
	Applicant	8.4
Displacement	NatureScot	7.6 to 22.8
	Applicant	7.6
Total annual mortality (birds/annum)	NatureScot	16.7 to 31.6
	Applicant	16.0
Change in baseline mortality (percentage point change)	NatureScot	0.014 to 0.026
	Applicant	0.013

5.5.4.164 The current population at the SPA is above the population at designation (Table 5.8). The population of gannet at the St Kilda SPA was stable between the Seabird 2000 and Seabirds Count national censuses and has remained stable since Seabirds Count (BTO *et al*, 2025; Nisbet *et al*, 2025).

5.5.4.165 The PVA model conducted for gannet when applying the annual season impact calculated using the upper of NatureScot’s parameter indicates a median CPS of 0.989; (i.e. the population after 35 years, would be 1.1% smaller than the CPS with a 50th percentile value of 48.1 (Table 5.228)). In terms of the population size, this means that the median of the impacted population fell within the 48th percentile of the unimpacted population (a value of 50 would indicate that they are the same). This suggests that the impacted scenario is still well within the margin of error of the non-impacted scenario. However, as stated the CGR is considered a more robust metric compared to the CPS in this analysis due to the models being conducted with density independence, in line with NatureScot (2023h) guidance. The PVA model predicted a median CGR of 1.000 which translates to a growth rate 0.0% smaller than the counterfactual (unimpacted) growth rate. As there is no material change in the growth rate of the population this level of impact would not adversely affect the population would therefore be undetectable against natural population fluctuations.

5.5.4.166 It should be noted that there are a number of uncertainties associated with the PVA modelling that result in an over-estimation of the associated impact. These are discussed in paragraph 5.5.4.6. In addition, collision risk estimates under both scenarios are considered to be over-estimates due to the factors outlined in paragraph 5.5.4.7.

5.5.4.167 The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that the population of gannet at the SPA has remained stable between the two most recent national censuses.

5.5.4.168 When considered alongside other factors discussed in paragraphs 5.5.4.6 and 5.5.4.6 are taken into account it is considered that impacts on gannet that undermine the conservation objectives of the St Kilda SPA will therefore not occur as a result of in-combination combined collision and displacement impacts.

5.5.4.169 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOI on the gannet population of the St Kilda SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Table 5.224: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from collision risk impacts (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Aspen	0.06	0.55	0.90	0.03	0.00	0.4	0.0	0.0	0.5
Awel y Môr		0.55	0.90	0.20	0.18		0.5	0.0	0.5
Beatrice	0.00	0.55	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Berwick Bank	0.00	0.55	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Blyth Demo		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Buchan	0.09	0.55	0.90	0.03	0.00	0.1	0.0	0.0	0.1
Burbo Bank Extension		0.55	0.90	0.20	0.18		0.0	0.0	0.1
Caledonia North	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Cenos		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dogger Bank A + B		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dogger Bank South		0.55	0.90	0.03	0.00		0.3	0.0	0.3
Dogger Bank C + Sofia		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dudgeon		0.55	0.90	0.03	0.00		0.2	0.0	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Dudgeon Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0
East Anglia One		0.55	0.90	0.03	0.00		0.7	0.0	0.7
East Anglia One North		0.55	0.90	0.03	0.00		0.1	0.0	0.1
East Anglia Three		0.55	0.90	0.03	0.00		0.2	0.0	0.2
East Anglia Two		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Erebus		0.55	0.90	0.20	0.18		0.0	0.1	0.1
Five Estuaries		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Galloper		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Green Volt	0.06	0.55	0.90	0.03	0.00	0.3	0.0	0.0	0.3
Hornsea Project One		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Hornsea Project Two		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Hornsea Project Three		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Hornsea Four		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Humber Gateway		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Inch Cape	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Kentish Flats Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Kincardine	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Lincs		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Llŷr 1		0.55	0.90	0.20	0.18		0.1	0.0	0.1
Mona		0.55	0.90	0.20	0.18		0.0	0.0	0.1
Moray East	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Moray West	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Morecambe		0.55	0.90	0.20	0.18		0.0	0.0	0.0
Morgan	0.00	0.55	0.90	0.20	0.18	0.0	0.0	0.0	0.0
Morven North	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Morven South	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Muir Mhor	0.06	0.55	0.90	0.03	0.00	0.2	0.0	0.0	0.3
Nearr na Gaoithe	0.00	0.55	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Norfolk Boreas		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Norfolk Vanguard		0.55	0.90	0.03	0.00		0.1	0.0	0.1
North Falls		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Ormonde		0.55	0.90	0.20	0.18		0.0	0.0	0.0
Ossian	0.03	0.55	0.90	0.03	0.00	0.4	0.0	0.0	0.5
Outer Dowsing		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Pentland	0.11	0.55	0.90	0.20	0.18	0.1	0.0	0.0	0.1
Race Bank		0.55	0.90	0.03	0.00		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Rampion		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Rampion 2		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Salamander	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.55	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Sheringham Shoal Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Teesside		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Thanet		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Triton Knoll		0.55	0.90	0.03	0.00		0.3	0.0	0.3
Walney Extension	0.00	0.55	0.90	0.20	0.18	0.0	2.6	0.2	2.8
West of Orkney	0.00	0.55	0.90	0.20	0.18	0.0	0.4	0.1	0.5
Westermost Rough		0.55	0.90	0.03	0.00		0.0	0.0	0.0
White Cross		0.55	0.90	0.20	0.18		0.1	0.0	0.1
Total annual mortality (birds/annum)									9.1

Table 5.225: Predicted in-combination annual mortality rate of gannet at the St Kilda Special Protection Area resulting from collision risk impacts (Applicant's approach)

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Tier 1 (Scenario 4)									
Aberdeen	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Aspen	0.06	0.55	0.90	0.03	0.00	0.4	0.0	0.0	0.5
Awel y Môr		0.55	0.90	0.20	0.18		0.5	0.0	0.5
Beatrice	0.00	0.55	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Berwick Bank	0.00	0.99	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Blyth Demo		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Buchan	0.09	0.91	0.90	0.03	0.00	0.1	0.0	0.0	0.1
Burbo Bank Extension		0.55	0.90	0.20	0.18		0.0	0.0	0.1
Caledonia North	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Caledonia South	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Cenos		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dogger Bank A + B		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dogger Bank South		0.55	0.90	0.03	0.00		0.3	0.0	0.3
Dogger Bank C + Sofia		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Dudgeon		0.55	0.90	0.03	0.00		0.2	0.0	0.2
Dudgeon Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0
East Anglia One		0.55	0.90	0.03	0.00		0.7	0.0	0.7
East Anglia One North		0.55	0.90	0.03	0.00		0.1	0.0	0.1
East Anglia Three		0.55	0.90	0.03	0.00		0.2	0.0	0.2

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
East Anglia Two		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Erebus		0.55	0.90	0.20	0.18		0.0	0.1	0.1
Five Estuaries		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Galloper		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Green Volt	0.06	0.55	0.90	0.03	0.00	0.1	0.0	0.0	0.1
Hornsea Project One		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Hornsea Project Two		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Hornsea Project Three		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Hornsea Four		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Humber Gateway		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Inch Cape	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Kentish Flats Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Kincardine	0.00	0.79	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Lincs		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Llŷr 1		0.55	0.90	0.20	0.18		0.1	0.0	0.1
Mona		0.55	0.90	0.20	0.18		0.0	0.0	0.1
Moray East	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Moray West	0.00	0.55	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Morecambe		0.55	0.90	0.20	0.18		0.0	0.0	0.0
Morgan	0.00	0.55	0.90	0.20	0.18	0.0	0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Morven North	0.00	0.96	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Morven South	0.00	0.95	0.90	0.03	0.00	0.0	0.0	0.0	0.0
Muir Mhor	0.06	0.55	0.90	0.03	0.00	0.1	0.0	0.0	0.1
Neart na Gaoithe	0.00	0.98	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Norfolk Boreas		0.55	0.90	0.03	0.00		0.1	0.0	0.1
Norfolk Vanguard		0.55	0.90	0.03	0.00		0.1	0.0	0.1
North Falls		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Ormonde		0.55	0.90	0.20	0.18		0.0	0.0	0.0
Ossian	0.03	0.98	0.90	0.03	0.00	0.2	0.0	0.0	0.3
Outer Dowsing		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Pentland	0.11	0.55	0.90	0.20	0.18	0.0	0.0	0.0	0.0
Race Bank		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Rampion		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Rampion 2		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Salamander	0.00	0.94	0.90	0.03	0.00	0.0	0.0	0.0	0.0
SeaGreen (Alpha & Bravo)	0.00	0.97	0.90	0.03	0.00	0.0	0.1	0.0	0.1
Sheringham Shoal Extension		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Teesside		0.55	0.90	0.03	0.00		0.0	0.0	0.0
Thanet		0.55	0.90	0.03	0.00		0.0	0.0	0.0

Project	Seasonal apportioning values					Apportioned collision risk estimates			Annual
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Triton Knoll		0.55	0.90	0.03	0.00		0.3	0.0	0.3
Walney Extension	0.00	0.55	0.90	0.20	0.18	0.0	2.6	0.2	2.8
West of Orkney	0.00	0.55	0.90	0.20	0.18	0.0	0.4	0.1	0.5
Westermost Rough		0.55	0.90	0.03	0.00		0.0	0.0	0.0
White Cross		0.55	0.90	0.20	0.18		0.1	0.0	0.1
Total annual mortality (birds/annum)									8.4

Table 5.226: Mean-peak population estimates for gannet at the St Kilda Special Protection Area for projects considered in-combination in relation to displacement (NatureScot's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.06	0.55	0.90	0.03	0.00	12	5	0
Awel ŷ Mor				0.20	0.18		0	0
Beatrice	0.00	0.55	0.90	0.03	0.00	0	5	0
Berwick Bank	0.00	0.55	0.90	0.03	0.00	0	39	0
Blyth Demo		0.55	0.90	0.03	0.00		2	0
Buchan	0.09	0.55	0.90	0.03	0.00	10	5	0
Burbo Bank Extension				0.20	0.18		0	0
Caledonia North	0.00	0.55	0.90	0.03	0.00	0	5	0
Caledonia South	0.00	0.55	0.90	0.03	0.00	0	5	0
Cenos		0.55	0.90	0.03	0.00		3	0
Dogger Bank A		0.55	0.90	0.03	0.00		24	0
Dogger Bank B		0.55	0.90	0.03	0.00		30	0
Dogger Bank South		0.55	0.90	0.03	0.00		41	0
Dogger Bank C		0.55	0.90	0.03	0.00		10	0
Sofia		0.55	0.90	0.03	0.00		13	0
Dudgeon		0.55	0.90	0.03	0.00		1	0
Dudgeon Extension		0.55	0.90	0.03	0.00		9	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One		0.55	0.90	0.03	0.00		70	0
East Anglia One North		0.55	0.90	0.03	0.00		12	0
East Anglia Three		0.55	0.90	0.03	0.00		23	0
East Anglia Two		0.55	0.90	0.03	0.00		23	0
Erebus				0.20	0.18		0	0
Five Estuaries		0.55	0.90	0.03	0.00		17	0
Galloper		0.55	0.90	0.03	0.00		12	0
Green Volt	0.06	0.55	0.90	0.03	0.00	6	1	0
Hornsea Project One		0.55	0.90	0.03	0.00		14	0
Hornsea Project Two		0.55	0.90	0.03	0.00		20	0
Hornsea Project Three		0.55	0.90	0.03	0.00		26	0
Hornsea Four		0.55	0.90	0.03	0.00		21	0
Humber Gateway		0.55	0.90	0.03	0.00		0	0
Inch Cape	0.00	0.55	0.90	0.03	0.00	0	8	0
Kincardine	0.00	0.55	0.90	0.03	0.00	0	0	0
Lincs		0.55	0.90	0.03	0.00		0	0
Llŷr 1				0.20	0.18		0	0
Mona				0.20	0.18		0	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Moray East	0.00	0.55	0.90	0.03	0.00	0	0	0
Moray West	0.00	0.55	0.90	0.03	0.00	0	8	0
Morecambe				0.20	0.18		0	0
Morgan				0.20	0.18		0	0
Morven North	0.00	0.55	0.90	0.03	0.00		9	0
Morven South	0.00	0.55	0.90	0.03	0.00		2	0
Muir Mhor	0.06	0.55	0.90	0.03	0.00	17	15	0
Near na Gaoithe	0.00	0.55	0.90	0.03	0.00	0	16	0
Norfolk Boreas		0.55	0.90	0.03	0.00		45	0
Norfolk Vanguard		0.55	0.90	0.03	0.00		64	0
North Falls		0.55	0.90	0.03	0.00		7	0
Ormonde				0.20	0.18		0	0
Ossian	0.03	0.55	0.90	0.03	0.00	21	20	0
Outer Dowsing		0.55	0.90	0.03	0.00		13	0
Pentland	0.11	0.55	0.90	0.20	0.18	9	5	1
Race Bank		0.55	0.90	0.03	0.00		1	0
Rampion		0.55	0.90	0.03	0.00		9	0
Rampion 2		0.55	0.90	0.03	0.00		3	0
Salamander	0.00	0.55	0.90	0.03	0.00	0	5	0
SeaGreen Bravo	0.00	0.55	0.90	0.03	0.00	0	9	0
SeaGreen Alpha	0.00	0.55	0.90	0.03	0.00	0	8	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Sheringham Shoal Extension		0.55	0.90	0.03	0.00		8	0
Teesside		0.55	0.90	0.03	0.00		0	0
Thanet		0.55	0.90	0.03	0.00		0	0
Triton Knoll		0.55	0.90	0.03	0.00		8	0
Twinhub				0.20	0.18		0	0
Walney Extension				0.20	0.18		0	0
West of Orkney	0.00	0.55	0.90	0.20	0.18	0	269	25
White Cross				0.20	0.18		0	0
Total population estimates						75	969	27
Annual mortality (birds/annum)	NatureScot's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)				1	7	0
	NatureScot's approach	(3% breeding season mortality rate; 3% non-breeding seasons mortality rate)				2	20	1

Table 5.227: Mean-peak population estimates for gannet at the St Kilda Special Protection Area for projects considered in-combination in relation to displacement (Applicant's approach)

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Tier 1 (Scenario 4)								
Aspen	0.06	0.55	0.90	0.03	0.00	12	5	0
Awel y Mor				0.20	0.18		0	0
Beatrice	0.00	0.55	0.90	0.03	0.00	0	5	0
Berwick Bank	0.00	0.99	0.90	0.03	0.00	0	39	0
Blyth Demo		0.55	0.90	0.03	0.00		2	0
Buchan	0.09	0.91	0.90	0.03	0.00	17	5	0
Burbo Bank Extension				0.20	0.18		0	0
Caledonia North	0.00	0.55	0.90	0.03	0.00	0	0	0
Caledonia South	0.00	0.55	0.90	0.03	0.00	0	0	0
Cenos	0.00	0.98	0.90	0.03	0.00		3	0
Dogger Bank A	0.00	0.55	0.90	0.03	0.00		24	0
Dogger Bank B	0.00	0.55	0.90	0.03	0.00		30	0
Dogger Bank South	0.00	0.55	0.90	0.03	0.00		41	0
Dogger Bank C	0.00	0.55	0.90	0.03	0.00		10	0
Sofia	0.00	0.55	0.90	0.03	0.00		13	0
Dudgeon		0.55	0.90	0.03	0.00		1	0
Dudgeon Extension		0.55	0.90	0.03	0.00		9	0
East Anglia One	0.00	0.55	0.90	0.03	0.00		70	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
East Anglia One North		0.55	0.90	0.03	0.00		12	0
East Anglia Three		0.55	0.90	0.03	0.00		23	0
East Anglia Two		0.55	0.90	0.03	0.00		23	0
Erebus				0.20	0.18		0	0
Five Estuaries		0.55	0.90	0.03	0.00		17	0
Galloper		0.55	0.90	0.03	0.00		12	0
Green Volt	0.06	0.55	0.90	0.03	0.00	6	1	0
Hornsea Project One		0.62	0.90	0.03	0.00		14	0
Hornsea Project Two		0.72	0.90	0.03	0.00		20	0
Hornsea Project Three		0.73	0.90	0.03	0.00		26	0
Hornsea Four	0.00	0.55	0.90	0.03	0.00		21	0
Humber Gateway		0.55	0.90	0.03	0.00		0	0
Inch Cape	0.00	0.55	0.90	0.03	0.00	0	8	0
Kincardine	0.00	0.79	0.90	0.03	0.00	0	0	0
Lincs		0.55	0.90	0.03	0.00		0	0
Llŷr 1				0.20	0.18		0	0
Mona				0.20	0.18		0	0
Moray East	0.00	0.55	0.90	0.03	0.00	0	0	0

Project	Seasonal apportioning values					Apportioned population estimates		
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding
	Colony	Immature	Sabbatical					
Moray West	0.00	0.55	0.90	0.03	0.00	0	8	0
Morecambe				0.20	0.18		0	0
Morgan				0.20	0.18		0	0
Morven North	0.00	0.96	0.90	0.03	0.00		9	0
Morven South	0.00	0.95	0.90	0.03	0.00		2	0
Muir Mhor	0.06	0.55	0.90	0.03	0.00	17	15	0
Neart na Gaoithe	0.00	0.98	0.90	0.03	0.00	0	16	0
Norfolk Boreas	0.00	0.55	0.90	0.03	0.00		45	0
Norfolk Vanguard	0.03	0.55	0.90	0.03	0.00		64	0
North Falls		0.69	0.90	0.03	0.00		7	0
Ormonde				0.20	0.18		0	0
Ossian	0.03	0.98	0.90	0.03	0.00	38	20	0
Outer Dowsing		0.90	0.90	0.03	0.00		13	0
Pentland	0.11	0.55	0.90	0.20	0.18	9	5	1
Race Bank		0.55	0.90	0.03	0.00		1	0
Rampion		0.55	0.90	0.03	0.00		9	0
Rampion 2		0.55	0.90	0.03	0.00		3	0
Salamander	0.00	0.94	0.90	0.03	0.00	0	5	0
SeaGreen Bravo	0.00	0.97	0.90	0.03	0.00	0	9	0
SeaGreen Alpha	0.00	0.97	0.90	0.03	0.00	0	8	0

Project	Seasonal apportioning values					Apportioned population estimates			
	Breeding			Post-breeding	Pre-breeding	Breeding	Post-breeding	Pre-breeding	
	Colony	Immature	Sabbatical						
Sheringham Shoal Extension	0.00	0.55	0.90	0.03	0.00		8	0	
Teesside		0.55	0.90	0.03	0.00		0	0	
Thanet		0.55	0.90	0.03	0.00		0	0	
Triton Knoll		0.55	0.90	0.03	0.00		8	0	
Twinhub				0.20	0.18		0	0	
Walney Extension				0.20	0.18		0	0	
West of Orkney	0.00	0.55	0.90	0.20	0.18	0	269	25	
White Cross				0.20	0.18		0	0	
Total population estimates						98	959	27	
Annual mortality (birds/annum)	Applicant's approach	(1% breeding season mortality rate; 1% non-breeding seasons mortality rate)					1	7	0

Table 5.228: Summary of population viability analysis results for in-combination combined collision and displacement impacts on the gannet feature of the St Kilda Special Protection Area after 35 years

Approach	Predicted Mortality (no. of birds)	Increase in baseline mortality (percentage point change)	Median population size (no. of birds)	Growth Rate (Annual GR)	Change in population (%)	Median CGR	Median CPS	Quantile – unimpacted: 50%impacted
Baseline	-	-	246,438	1.012	54.14	-	-	-
NatureScot (3% breeding season mortality rate; 3% non-breeding season mortality rate)	31.6	0.026	243,706	1.012	52.51	1.000	0.989	48.1

Outer Firth of Forth and St Andrew's Bay Complex SPA

5.5.4.170 Of those SPAs for which in-combination combined collision and displacement impacts have been assessed, the Outer Firth of Forth and St Andrew's Bay Complex SPA supports kittiwake from the Forth Islands SPA, the St Abb's Head to Fast Castle SPA, the Fowlsheugh SPA, the Buchan Ness to Collieston Coast SPA and the Troup, Pennan and Lion's Heads SPA and gannet from the Forth Islands SPA.

5.5.4.171 Conclusions of no AEIOI have been reached for all of the SPAs for which in-combination combined collision and displacement impacts have been considered for kittiwake and gannet from SPAs from which birds are supported by the Outer Firth of Forth and St Andrew's Bay Complex SPA with the exception of kittiwake at St Abb's Head to Fast Castle SPA.

5.5.4.172 As the Outer Firth of Forth and St Andrew's Bay Complex SPA supports kittiwake from St Abb's Head to Fast Castle SPA an AEIOI is also concluded for the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to in-combination combined collision and displacement impacts on kittiwake.

5.5.4.173 It is therefore concluded that there is the potential for an AEIOI on the kittiwake population of the Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Northumberland Marine SPA

5.5.4.174 Of those SPAs for which in-combination combined collision and displacement risk impacts have been assessed, the Northumberland Marine SPA is designated to support kittiwake from the Farne Islands SPA.

5.5.4.175 A conclusion of no AEIOI has been reached for the kittiwake feature of the Farne Islands SPA. The conclusion reached for the kittiwake qualifying feature of this SPA is considered applicable to the kittiwake qualifying feature of the Northumberland Marine SPA. Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEIOI on the kittiwake population of the Northumberland Marine SPA in relation to combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

Conclusion

5.5.4.176 Potential effects from in-combination combined collision and displacement impacts on the relevant conservation objectives of each SPA (as presented in Table 5.9) are discussed in Appendix A. Impacts that undermine the conservation objectives will not occur as a result of in-combination combined collision and displacement impacts for the following SPAs and relevant offshore ornithological qualifying features:

- Kittiwake at the Buchan Ness to Collieston Coast SPA;
- Kittiwake at the East Caithness Cliffs SPA;
- Kittiwake at the Farne Islands SPA;
- Kittiwake at the Flamborough and Filey Coast SPA;
- Kittiwake at the Forth Islands SPA;
- Kittiwake at the Fowlsheugh SPA;
- Kittiwake at the Troup, Pennan and Lion's Heads SPA;
- Gannet at the Flamborough and Filey Coast SPA;
- Gannet at the Forth Islands SPA;
- Gannet at the Hermaness, Saxa Vord and Valla Field SPA;
- Gannet at the Noss SPA;
- Gannet at the St Kilda SPA.

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- 5.5.4.177 Therefore, it can be concluded beyond reasonable scientific doubt that there will be no AEOf of any of these SPAs in relation to in-combination combined collision and displacement impacts associated with Morven North in-combination with other plans and projects. For breeding seabird assemblage features the conclusions reached for individual qualifying features and named qualifiers are considered equally applicable to the assemblage features.
- 5.5.4.178 Impacts that undermine the conservation objectives are considered likely to occur as a result of in-combination combined collision and displacement impacts on the kittiwake and breeding seabird assemblage qualifying features of the St Abb's Head to Fast Castle SPA. This is also considered applicable to kittiwake as a qualifying feature of the Outer Firth of Forth and St Andrew's Bay Complex SPA as this SPA supports kittiwake from the St Abb's Head to Fast Castle SPA.
- 5.5.4.179 Therefore, it can be concluded beyond reasonable scientific doubt that there will be an AEOf on kittiwake and breeding seabird assemblage features of the St Abb's Head to Fast Castle SPA and Outer Firth of Forth and St Andrew's Bay Complex SPA in relation to in-combination combined collision and displacement impacts associated with Morven North in-combination with other plans and projects.

6 Summary

6.1.1.1 A summary of the assessments presented in this RIAA is provided in the sections below. Table 6.1 presents the conclusions of AEOL in relation to Morven North alone and in-combination with other plans and projects.

6.1.1.2 Based on the information presented within this RIAA Part 3, it is considered that Morven North alone will not lead to an AEOL on any of the 24 SPAs considered. However, a potential AEOL was identified at four SPAs and for three qualifying species as a result of displacement and/or collision during the operation and maintenance phase of Morven North in-combination with other plans and projects:

- Forth Islands SPA;
 - guillemot and the breeding seabird assemblage (with regards to guillemot);
- St Abb's Head to Fast Castle SPA
 - kittiwake, razorbill and the breeding seabird assemblage (with regards to kittiwake and razorbill);
- Troup, Pennan and Lion's Heads SPA;
 - guillemot and the breeding seabird assemblage (with regards to guillemot);
- Outer Firth of Forth and St Andrew's Bay Complex SPA;
 - kittiwake, guillemot and the breeding seabird assemblage (with regards to kittiwake and guillemot).

Table 6.1: Summary of conclusions for the assessment of adverse effects on Special Protection Area and Ramsar site integrity for Morven North alone and in-combination

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
UK9002271	Fowlsheugh SPA	Herring gull	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance	Collision		No AEIOI of the site	No AEIOI of the site
				Displacement		No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement		No AEIOI of the site	No AEIOI of the site
				Barrier effects		No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
Decommissioning	Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven				

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
		Guillemot	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEOL of the site	No AEOL of the site
				Displacement	No AEOL of the site	No AEOL of the site
				Combined collision and displacement	No AEOL of the site	No AEOL of the site
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9020316	Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	AEIOI of the site due to in-combination collision impacts on kittiwake at the St Abb's Head to Fast Castle SPA
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	AEIOI of the site due to in-combination combined collision and displacement impacts on kittiwake at the St Abb's Head to Fast Castle SPA
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Herring gull (non-breeding)	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
		Guillemot	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on guillemot at the Forth Islands SPA
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance		Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
					Displacement	No AEIOI of the site	No AEIOI of the site
					Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
					Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Gannet	Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
		Displacement		No AEIOI of the site	No AEIOI of the site	
		Combined collision and displacement		No AEIOI of the site	No AEIOI of the site	
		Barrier effects.		No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on kittiwake at the St Abb's Head to Fast Castle SPA
				Displacement	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on the guillemot feature of the Forth Islands SPA
				Combined collision and displacement	No AEIOI of the site	AEIOI of the site due to in-combination combined

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						collision and displacement impacts on kittiwake at the St Abb's Head to Fast Castle SPA
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Red-throated diver	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Slavonian grebe	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Eider	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Shag	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Long-tailed duck	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Common scoter	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Velvet scoter	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Goldeneye	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Red-breasted merganser	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002281	Buchan Ness to Collieston Coast SPA	Herring gull	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
		Kittiwake	Construction	Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance		North, in-combination assessment not required
			Operation and maintenance	Collision	No AEOL of the site	No AEOL of the site
				Displacement	No AEOL of the site	No AEOL of the site
				Combined collision and displacement	No AEOL of the site	No AEOL of the site
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Guillemot	Construction	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site
			Changes in prey availability due to		No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9004171	Forth Islands SPA	Gannet	Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Operation and maintenance	Collision	No AEOL of the site	No AEOL of the site
				Displacement	No AEOL of the site	No AEOL of the site
				Combined collision and displacement	No AEOL of the site	No AEOL of the site
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site
			Changes in prey availability due to		No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
		Guillemot (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEOI of the site	AEOI of the site
				Barrier effects	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on guillemot
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9020325	Northumberland Marine SPA	Fulmar (<i>Fulmarus glacialis</i>)	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Attraction to light	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9004173	St Abb's Head to Fast Castle SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEOI of the site	AEOI of the site
				Displacement	No AEOI of the site	No adverse effect on the integrity of the site
				Combined collision and displacement	No AEOI of the site	AEOI of the site
				Barrier effects	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
	Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required			

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Guillemot (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance		Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
					Displacement	No AEIOI of the site	No AEIOI of the site
					Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
					Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIO of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIO of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIO of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIO of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIO of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	AEIOI of the site due to in-combination collision impacts on kittiwake
				Displacement	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on razorbill
				Combined collision and displacement	No AEIOI of the site	AEIOI of the site due to in-combination combined collision and displacement impacts on kittiwake
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002471	Troup, Pennan and Lion's Heads SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Guillemot (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Razorbill	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Changes in prey availability due to temporary habitat loss/disturbance.		No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven	

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	AEIOI of the site due to in-combination displacement impacts on the guillemot
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9006021	Farne Islands SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9006031	Coquet Island SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance			combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
	Attraction to light			No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	
	Changes in prey availability due to temporary habitat loss/disturbance.			No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
	Operation and maintenance		Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
UK9001182	East Caithness Cliffs SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required			

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Razorbill (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9001181	North Caithness Cliffs SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance	Collision		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement		No AEIOI of the site	No AEIOI of the site
				Barrier effects		No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.		No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002291	Copinsay SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance			combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002292	Hoy SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						combination assessment not required
				Attraction to light.	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEOL of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEOL of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEOL of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Puffin	Construction		Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
					Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9006101	Flamborough and Filey Coast SPA	Gannet (non-breeding seasons only)	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No AEIOI of the site
				Displacement	No AEIOI of the site	No AEIOI of the site
		Combined collision and displacement		No AEIOI of the site	No AEIOI of the site	

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
		Razorbill (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance		Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
					Displacement	No AEIOI of the site	No AEIOI of the site
					Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
					Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Collision	No AEOL of the site	No AEOL of the site
				Displacement	No AEOL of the site	No AEOL of the site
				Combined collision and displacement	No AEOL of the site	No AEOL of the site
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002431	Calf of Eday SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002432	Rousay SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects		
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required		
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact		
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required		
					Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
					Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site
					Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002121	Marwick Head SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects		
		Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required		
			Operation and maintenance	Collision		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	
					Displacement		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
					Combined collision and displacement		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
					Barrier effects		No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
					Changes in prey availability due to temporary habitat loss/disturbance.		No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002101	West Westray SPA	Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Breeding seabird assemblage	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Operation and maintenance	Collision		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement		No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002441	Fair Isle SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects	
		Gannet (non-breeding seasons only)	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required	
				Barrier effects.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	
		Kittiwake	Construction	Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
				Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
					Displacement	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						combination assessment not required
				Combined collision and displacement	No AEOL of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Changes in prey availability due to temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEOL of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9002081	Noss SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Gannet	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No material contribution from Morven North, in-

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						combination assessment not required
				Barrier effects.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Breeding seabird assemblage	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
UK9002061	Foula SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
	Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
			Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
		Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven	

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
						North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Attraction to light	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEOL of the site	No AEOL of the site
				Barrier effects	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEOL of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEOL of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Attraction to light		No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact	
		Changes in prey availability due to temporary habitat loss/disturbance.		No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required	
UK9002071	Fetlar SPA	Fulmar	Construction	Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Breeding seabird assemblage	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No AEIOI of the site
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
UK9002051	Hermaness, Saxa Vord and Valla Field SPA	Fulmar	Construction	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Operation and maintenance	Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Attraction to light.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
			Decommissioning	Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
		Gannet	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects.	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Puffin (non-breeding seasons only)	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Changes in prey availability due to temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
		Breeding seabird assemblage	Construction	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
			Operation and maintenance	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No AEIOI of the site
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site
				Barrier effects	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				temporary habitat loss/disturbance.		North, in-combination assessment not required
			Decommissioning	Direct temporary habitat loss/disturbance	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
				Attraction to light	No AEIOI of the site	Negligible contribution from Morven North to any existing in-combination impact
				Changes in prey availability due to temporary habitat loss/disturbance.	No AEIOI of the site	Localised and temporary in nature, no material contribution from Morven North, in-combination assessment not required
UK9004172	St Kilda SPA	Gannet (non-breeding seasons only)	Operation and maintenance	Collision	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEIOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEIOI of the site	No AEIOI of the site

Site ID	Site name	Relevant qualifying features	Project phase	Potential impact	Conclusion for the assessment on Morven North alone	Conclusion for the assessment on Morven North in-combination with other plans and projects
				Barrier effects	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact
		Breeding seabird assemblage	Operation and maintenance	Collision	No AEOI of the site	No material contribution from Morven North, in-combination assessment not required
				Displacement	No AEOI of the site	No material contribution from Morven North, in-combination assessment not required
				Combined collision and displacement	No AEOI of the site	No AEOI of the site
				Barrier effects.	No AEOI of the site	Negligible contribution from Morven North to any existing in-combination impact

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Appendix A

Table of contents

1	Assessment of potential adverse effects on integrity	830
1.1	Assessment of the adverse effects of Morven North alone.....	830
1.1.1	Direct temporary habitat loss/disturbance	830
1.1.2	Changes in prey availability due to temporary habitat loss/disturbance	860
1.1.3	Collision risk.....	895
1.1.4	Displacement	932
1.1.5	Combined collision and displacement	981
1.1.6	Barrier effects	1021
1.1.7	Attraction to light	1060
1.2	Assessment of the adverse effects of Morven North in-combination with other plans and projects.....	1080
1.2.1	Collision risk.....	1080
1.2.2	Displacement	1104
1.2.3	Combined collision and displacement	1160

List of tables

Table 1.1:	Conclusions against the conservation objectives of all Special Protection Areas from direct temporary habitat loss/disturbance during all Morven North phases	831
Table 1.2:	Conclusions against the conservation objectives of all Special Protection Areas from changes in prey availability due to temporary habitat loss/disturbance during all Morven North phases	861
Table 1.3:	Conclusions against the conservation objectives of all Special Protection Areas relating to collision risk during the operations and maintenance phase	896
Table 1.4:	Conclusions against the conservation objectives of all Special Protection Areas from displacement during the operations and maintenance phase	933
Table 1.5:	Conclusions against the conservation objectives of all the Special Protection Areas from combined collision and displacement during operation and maintenance.....	982
Table 1.6:	Conclusions against the conservation objectives of all Special Protection Areas from barrier effects during the operations and maintenance phase	1022
Table 1.7:	Conclusions against the conservation objectives of all Special Protection Area from attraction to light during all Morven North phases.....	1061
Table 1.8:	Conclusions against the conservation objectives of all Special Protection Areas relating to collision risk during the operations and maintenance phase of Morven North in-combination with other plans and projects.....	1081
Table 1.9:	Conclusions against the conservation objectives of all Special Protection Areas relating to displacement during the operations and maintenance phase of Morven North in-combination with other plans and projects.....	1105
Table 1.10:	Conclusions against the conservation objectives of all Special Protection Areas relating to combined collision and displacement during the operations and maintenance phase of Morven North in-combination with other plans and projects	1161

1 Assessment of potential adverse effects on integrity

1.1 Assessment of the adverse effects of Morven North alone

1.1.1 Direct temporary habitat loss/disturbance

Table 1.1: Conclusions against the conservation objectives of all Special Protection Areas from direct temporary habitat loss/disturbance during all Morven North phases

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Guillemot Razorbill	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA	Maintain the breeding population of the feature at a stable or increasing trend relative to the current site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			between these areas within the site.	or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats.		No AEOI
Outer Firth of Forth and St Andrew's Complex SPA	Guillemot Razorbill Puffin Red-throated diver Slavonian grebe Eider Shag Long-tailed duck	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Common scoter Velvet scoter Goldeneye Red-breasted merganser				
	Shag	2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying feature has the ability to recover at the relevant SPA breeding colonies. Ensure the qualifying features within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons. Ensure the qualifying feature can move safely between the site and important areas of functionally linked land outwith the site.	The impact magnitude predicted during all project phases on all features is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the Outer Firth of Forth and St Andrews Bay Complex SPA. Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Puffin Guillemot Razorbill		Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Common eider Red-breasted merganser		Ensure the qualifying feature can move safely between the site and important areas of functionally linked land outwith the site.		No AEOI
			Maintain the population of the qualifying feature at a stable or increasing trend relative to the site reference population.		
			Ensure the qualifying feature can move safely between the site and important areas of functionally linked land outwith the site.		
	Goldeneye Common scoter		Maintain the population of the qualifying feature at a stable or increasing trend relative to the site reference population.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Long-tailed duck Red-throated diver Slavonian grebe Velvet scoter				
	Puffin Guillemot Shag Herring gull Eider Goldeneye Common scoter Long-tailed duck Razorbill Red-breasted merganser Red-throated diver	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site. Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		No AEOI
	Slavonian grebe Velvet scoter	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Direct temporary habitat loss/disturbance associated with Morven North will therefore	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Outer Firth of Forth and St Andrews Bay Complex SPA.	<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Buchan Ness to Collieston Coast SPA	Guillemot	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	<p>Maintain the breeding population of guillemots at a stable or increasing trend relative to the current site reference population.</p> <p>Ensure guillemots are not at significant risk from injury or mortality.</p>	<p>The impact magnitude predicted during all project phases on guillemot is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly impacting the population of the species as a qualifying feature of the SPA.</p> <p>Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEOI
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA	<p>Maintain the extent and distribution of the supporting habitats for guillemots within the site</p> <p>Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.</p> <p>Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
Forth Islands SPA	Razorbill Puffin	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable	Maintain the breeding population of the feature at a stable or increasing trend	The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		components of the Forth Islands SPA.	relative to the site reference population.	between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.	
			Ensure the feature is not at significant risk from injury or mortality during the breeding season.	Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
				Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Forth Islands SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
				Maintain the variety and abundance of food resources and the condition of	Direct temporary habitat loss/disturbance associated with Morven North will therefore

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>supporting habitats and associated processes.</p> <p>Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p>
<p>Northumberland Marine SPA</p>	<p>Razorbill Puffin</p>	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site</p>	<p>No AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
St Abb's Head to Fast Castle SPA	Razorbill	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of razorbill have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on razorbill is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure razorbill are not at significant risk from injury or mortality.		No AEOI
			Ensure razorbill can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
Avoid significant disturbance to razorbill and ensure	Furthermore, the impact of disturbance/habitat loss during all project		No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			individuals can move safely between these areas within the site.	phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for razorbill within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Troup, Pennan and Lion's Heads SPA	Razorbill	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of environmental		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
		2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.	Maintain the breeding population of razorbill at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during all project phases on razorbill is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure razorbills are not at significant risk from injury or mortality.		No AEOI
			Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure razorbills continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to razorbills and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to	Maintain or enhance the extent and distribution of the	There is no pathway for direct temporary habitat loss/disturbance during all project	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		qualifying features and their prey resources are maintained, or where appropriate restored, at Troup, Pennan and Lion's Heads SPA.	supporting habitats for razorbills within the site.	phases of Morven North to result in adverse effects on the habitats of the qualifying species. Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Farne Islands SPA	Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site.</p> <p>There is no pathway for disturbance/habitat loss during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, disturbance/habitat loss associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Coquet Island SPA	Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site.</p> <p>There is no pathway for disturbance/habitat loss during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, disturbance/habitat loss associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Razorbill (non-breeding seasons only)	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of razorbills at a stable or increasing trend relative to the site reference population.	The impact magnitude predicted during all project phases on razorbill is considered to be negligible based on the distance between the SPA and Morven North and the restricted	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure razorbills are not at significant risk from injury or mortality.	temporal and spatial scales across which impacts will occur.	No AEOI
			Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure razorbills continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to razorbills and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for razorbills within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of	Direct temporary habitat loss/disturbance associated with Morven North will therefore	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			supporting habitats and associated processes.	not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
North Caithness Cliffs SPA	Puffin	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure puffins are not at significant risk from injury or mortality.		No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the	Ensure puffins continue to have access to and can utilise all optimal habitats suitable	Disturbance/habitat loss during all project phases will therefore not prevent the	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		site by avoiding significant disturbance of the species.	for all relevant aspects of their life cycles associated with the site.	conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Hoy	Puffin	1. To ensure that the qualifying features of Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of puffins have the ability to recover to the site reference population	The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure puffins are not at significant risk from injury or mortality		
	Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	Maintain or enhance the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		appropriate restored, at Hoy SPA.	<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could</p>	Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Flamborough and Filey Coast SPA	Razorbill (non-breeding seasons only) Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for disturbance/habitat loss during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, disturbance/habitat loss associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Fair Isle SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure puffins are not at significant risk from injury or mortality.	temporal and spatial scales across which impacts will occur.	No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fair Isle SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and	Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated processes have the ability to recover.	and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Foula SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all	No AEOI
			Ensure puffins are not at significant risk from injury or mortality.		No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Foula SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on puffin is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of disturbance/habitat loss significantly affecting the population of the species as a qualifying feature of the SPA.	No AEOI
			Ensure puffins are not at significant risk from injury or mortality.		No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Disturbance/habitat loss during all project phases will therefore not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of disturbance/habitat loss during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for direct temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Direct temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

1.1.2 Changes in prey availability due to temporary habitat loss/disturbance

Table 1.2: Conclusions against the conservation objectives of all Special Protection Areas from changes in prey availability due to temporary habitat loss/disturbance during all Morven North phases

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake Guillemot Razorbill	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEIOI
	Guillemot Razorbill		Maintain the breeding population of the feature at a stable or increasing trend relative to the current site reference population.		No AEIOI
	Kittiwake Guillemot Razorbill		Ensure the feature is not at significant risk from injury or mortality.		No AEIOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		disturbance of the species.	relevant aspects of their life cycles associated with the site.	loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake Guillemot Razorbill Puffin	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Kittiwake	2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying species have the ability to recover at the relevant SPA breeding colonies.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
	Kittiwake Guillemot Razorbill Puffin		Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		No AEIOI
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.		No AEIOI
			2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.
			Avoid significant disturbance to the qualifying species and ensure individuals can		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake Guillemot	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Guillemot	Buchan Ness to Collieston Coast SPA.	Maintain the breeding population of guillemots at a stable or increasing trend relative to the current site reference population.	<p>and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
	Kittiwake Guillemot		Ensure the feature is not at significant risk from injury or mortality.		No AEOI
		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	No AEOI		
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
		Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	No AEOI		
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate	Maintain the extent and distribution of the supporting habitats for the feature within the site.	No AEOI		
		Ensure the variety and abundance of food resources and the condition	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		restored, at Buchan Ness to Collieston Coast SPA.	of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Forth Islands SPA	Kittiwake Guillemot (non-breeding seasons only) Razorbill Puffin	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI	
		Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	
		Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI	
	Northumberland Marine SPA	Kittiwake	The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored		The impact magnitude predicted during all project phases on the feature is considered to be negligible

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Razorbill Puffin	<p>as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance during all project phases will therefore not prevent the conservation objectives from being achieved for the species as a viable component of the SPA.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				which the habitats of qualifying species rely from being maintained or restored.	
St Abb's Head to Fast Castle SPA	Kittiwake Guillemot (non-breeding seasons only) Razorbill	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
	Kittiwake Razorbill	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEIOI
			Maintain the breeding population of guillemots at a stable or increasing trend relative to the site reference population.		No AEIOI
	Ensure the feature are not at significant risk from injury or mortality.		No AEIOI		
	Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI		
	Guillemot (non-breeding seasons only)				No AEIOI
Kittiwake Guillemot (non-breeding seasons only) Razorbill				No AEIOI	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		disturbance of the species.	relevant aspects of their life cycles associated with the site.	loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
		Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI	
Troup, Pennan and Lion's Heads SPA	Kittiwake Guillemot (non-breeding seasons only) Razorbill	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Kittiwake Guillemot (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA	Ensure the breeding population of the feature has the ability to recover to the site reference population.	<p>The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEIOI
	Razorbill		Maintain the breeding population of razorbill at a stable or increasing trend relative to the site reference population		No AEIOI
	Kittiwake Guillemot (non-breeding seasons only) Razorbill		Ensure the feature is not at significant risk from injury or mortality.		No AEIOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEIOI	
			Avoid significant disturbance to the feature and ensure individuals can		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Troup, Pennan and Lion's Heads SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIOI
Farne Islands SPA	Kittiwake Puffin	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. 		The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance significantly affecting the population of the species as a qualifying feature of the SPA.	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The distribution of qualifying features within the site. 		<p>Changes in prey availability due to temporary habitat loss/disturbance during all project phases will therefore not prevent the conservation objectives from being achieved for the species as a viable component of the SPA.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Coquet Island SPA	Kittiwake Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. 		<p>The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to</p>	No AEOL

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>temporary habitat loss/disturbance significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance during all project phases will therefore not prevent the conservation objectives from being achieved for the species as a viable component of the SPA.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake Razorbill (non-breeding seasons only)	<ol style="list-style-type: none"> To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes 		<p>The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c</p> <p>Please see justifications for objectives 2a, 2b and 2c</p>	<p>No AE0I</p> <p>No AE0I</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		by meeting objectives 2a, 2b and 2c for each qualifying feature:			
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.	Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes	Maintain or enhance the extent and distribution of	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	the supporting habitats for the feature within the site.	project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
North Caithness Cliffs SPA	Kittiwake Puffin	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded	No AEOI	
		Ensure the feature is not at significant risk from injury or mortality.		No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.		Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients,		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
Copinsay SPA	Kittiwake	1. To ensure that the qualifying features of the Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Copinsay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on kittiwake at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on	No AEIOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hoy SPA	Kittiwake Puffin	1. To ensure that the qualifying features of the Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.	Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes	Maintain or enhance the extent and distribution of	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	<p>the supporting habitats for the feature within the site.</p> <p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEIO</p> <p>No AEIO</p>
Flamborough and Filey Coast SPA	Kittiwake Razorbill (non-breeding seasons only) Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on the feature is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance significantly affecting the population of the species as a qualifying feature of the SPA.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance during all project phases will therefore not prevent the conservation objectives from being achieved for the species as a viable component of the SPA.</p>	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Calf of Eday SPA	Kittiwake	1. To ensure that the qualifying features of the Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Calf of Eday SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on kittiwake at the SPA is considered to be negligible based on the distance between the SPA and Morven	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes are not at significant risk from injury or mortality.	<p>North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Calf of Eday SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	<p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the</p>	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated processes have the ability to recover.	qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Rousay SPA	Kittiwake	1. To ensure that the qualifying features of the Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Rousay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on kittiwake at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		
2b. The distribution of the qualifying features is	Ensure kittiwakes continue to have access to and can	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		maintained throughout the site by avoiding significant disturbance of the species.	utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIOI
	Kittiwake	1. To ensure that the qualifying features of the Marwick Head SPA are in favourable condition and make an		The predicted impact is not considered to be of a magnitude that would undermine this conservation	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Marwick Head SPA		appropriate contribution to achieving Favourable Conservation Status.		objective. Please see justifications for objectives 2a, 2b and 2c	
		2. To ensure that the integrity of the Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on kittiwake at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all	No AEIOI
Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.					

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIOI
West Westray SPA	Kittiwake	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the West Westray SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level predicted during all project phases on kittiwake at the SPA is considered to be negligible based on the distance between the SPA and Morven	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes are not at significant risk from injury or mortality.	<p>North and the restricted temporal and spatial scales across which impacts will occur.</p> <p>Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p> <p>Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at West Westray SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	<p>There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the</p>	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion		
			associated processes have the ability to recover.	qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.			
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIO		
Fair Isle SPA	Kittiwake Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO		
		2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO		
		2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Ensure the breeding population of the feature have the ability to recover to the site reference population.	The impact level predicted during all project phases on the feature at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur.	No AEIO		
			Ensure the feature is not at significant risk from injury or mortality.			Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the species as a qualifying feature of the SPA.	No AEIO
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.			No AEIO	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fair Isle SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Foula SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The impact level predicted during all project phases on puffin at the SPA is considered to be negligible based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the razorbill populations as a qualifying feature of the SPA.	No AEIOI
			Ensure puffins are not at significant risk from injury or mortality.		No AEIOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all	No AEIOI
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Foula SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are	Ensure the breeding population of puffin have	The impact level predicted during all project phases on puffin at the SPA is considered to be negligible	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the Hermaness, Saxa Vord and Valla Field SPA.	the ability to recover to the site reference population.	based on the distance between the SPA and Morven North and the restricted temporal and spatial scales across which impacts will occur. Consequently, the impact is considered undetectable against natural fluctuations of background mortality for the SPA population. It can therefore be concluded that there is a negligible risk during all project phases, of changes in prey availability due to temporary habitat loss/disturbance causing injury or mortality to the razorbill populations as a qualifying feature of the SPA.	
			Ensure puffins are not at significant risk from injury or mortality.		No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored. Furthermore, the impact of changes in prey availability due to temporary habitat loss/disturbance during all project phases will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
					Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness,	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness,	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for changes in prey availability due to temporary habitat loss/disturbance during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Changes in prey availability due to temporary habitat loss/disturbance associated with Morven North will therefore not prevent the extent, distribution,	No AEOI
					Ensure the variety and abundance of food resources and the condition

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Saxa Vord and Valla Field SPA.	<p>of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	<p></p> <p>No AEIO</p>

1.1.3 Collision risk

Table 1.3: Conclusions against the conservation objectives of all Special Protection Areas relating to collision risk during the operations and maintenance phase

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake Herring gull	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c.	No AEOI
		2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked land and sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained any increase in nutrients turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake Herring gull (non-breeding) Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c.	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the		Please see justifications for objectives 2a, 2b and 2c.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Kittiwake Herring gull (non-breeding)	2a The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying features have the ability to recover at the relevant SPA breeding colonies.	The impact level predicted during operations and maintenance on the feature at the functionally linked SPA(s) remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the to the species as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Kittiwake Herring gull (non-breeding) Gannet		Ensure the qualifying features within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		No AEOI
			Ensure the qualifying features can move safely between the site and important areas of functionally linked land outwith the site.		No AEOI
			2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the qualifying feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.
			Avoid significant disturbance to the qualifying feature and ensure individuals can		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake Herring gull	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the	Ensure the breeding population of the feature has the ability to recover to	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Buchan Ness to Collieston Coast SPA.	the site reference population.	percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	
			Ensure the feature is not a significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked land and sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	No AEOI	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated processes have the ability to recover.	which the habitats of qualifying species rely from being maintained or restored.	
Forth Islands SPA	Kittiwake Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality during the breeding season.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Forth Islands SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Northumberland Marine SPA	Kittiwake	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. 		<p>The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the species as a qualifying feature of the SPA..</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
St Abb's Head to Fast Castle SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.		Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site.		No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey		Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI No AEOI
Troup, Pennan and Lion's Heads SPA	Kittiwake	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwake can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea and freshwater outwith the site.	<p>that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.			No AEOI
		Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.			No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Troup, Pennan and Lion's Heads SPA	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.			No AEOI
		Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.			No AEOI
		Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce			No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			supporting habitats and/or prey, should be avoided.		
Farne Islands SPA	Kittiwake	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Coquet Island SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:	<ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 	<p>The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
				<p>Additionally, there is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>		
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2. To ensure that the integrity of East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.			No AEOI
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	No AEOI					

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and/or prey should be avoided.		
North Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
Avoid significant disturbance to kittiwakes and ensure individuals can	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the		No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Copinsay SPA	Kittiwake	1. To ensure that the qualifying features of Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Copinsay SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwake from Copinsay SPA are not at significant risk from injury or mortality	<p>NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	<p>There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on</p>	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated processes have the ability to recover.	which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided.		No AEOI
Hoy SPA	Kittiwake	1. To ensure that the qualifying features of Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Flamborough and Filey Coast SPA	Kittiwake Gannet (non-breeding seasons only)	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the gannet populations as a qualifying feature of the SPA.</p> <p>Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision risk associated with Morven North will not prevent the extent, distribution,</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Calf of Eday SPA	Kittiwake	1. To ensure that the qualifying features of Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Calf of Eday SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality		No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Calf of Eday SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided.		No AEOI
Rousay SPA	Kittiwake	1. To ensure that the qualifying features of Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Rousay SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
Ensure kittiwake from Rousay SPA are not at significant risk from injury or mortality			No AEOI		
Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.			No AEOI		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	No AEOI	
				No AEOI	
		2c. The supporting habitats and processes	Maintain or enhance the extent and distribution of	There is no pathway for collision risk during all operations and maintenance of Morven North to	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.	the supporting habitats for kittiwakes within the site.	result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided.		No AEOI
Marwick Head SPA	Kittiwake	1. To ensure that the qualifying features of Marwick Head SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold	No AEOI
			Ensure kittiwake from Marwick Head SPA are not		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			at significant risk from injury or mortality	are considered non-material, falling within the natural fluctuations of the population.	
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided.		No AEOI
West Westray SPA	Kittiwake	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the West Westray SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site.		No AEOI
2b. The distribution of the qualifying features is	Ensure kittiwakes continue to have access to and can		No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		maintained throughout the site by avoiding significant disturbance of the species.	utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIO
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at West Westray SPA	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIO
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIO
			Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fair Isle SPA	Kittiwake Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			Please see justifications for objectives 2a, 2b and 2c
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Maintain the breeding population of gannets at a stable or increasing trend relative to the current site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
	Kittiwake		Ensure the breeding population of kittiwake has the ability to recover to the site reference population.		No AEOI
	Kittiwake Gannet (non-breeding seasons only)		Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the sites		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fair Isle SPA.	Maintain or enhance the extent and distribution of the support habitats for the feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Noss SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Noss SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the current site reference population.	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the gannet populations as a qualifying feature of the SPA.	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannet can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the sites.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Noss SPA .	Maintain or enhance the extent and distribution of the support habitats for gannet within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the	Maintain the breeding population of gannet at a stable or increasing trend	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised threshold of 0.02 percentage	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
		Hermaness, Saxa Vord and Valla Field SPA.	relative to the current site reference population.	points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or mortality to the gannet populations as a qualifying feature of the SPA.		
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI	
			Ensure gannet can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI	
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.			Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites.	Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
				Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the sites.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the			Maintain or enhance the extent and distribution of the support habitats for gannet within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
				Ensure the variety and abundance of food resources and the condition of supporting habitats and	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Hermaness, Saxa Vord and Valla Field SPA.	associated processes have the ability to recover. Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	which the habitats of qualifying species rely from being maintained or restored.	No AEOI
St Kilda SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the St Kilda SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the current site reference population.	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision causing injury or	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		
			Ensure gannet can move safely between the site and important areas of functionally linked sea outwith the site.		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the sites.	mortality to the gannet populations as a qualifying feature of the SPA. Therefore, collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the sites.	Furthermore, the impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the St Kilda SPA.	Maintain or enhance the extent and distribution of the support habitats for gannet within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover.	Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

1.1.4 Displacement

Table 1.4: Conclusions against the conservation objectives of all Special Protection Areas from displacement during the operations and maintenance phase

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Guillemot				
	Razorbill	2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation	No AEOI
	Razorbill		Maintain the breeding population of the feature at a stable or increasing trend relative to the current site reference population.		No AEOI
	Kittiwake		Ensure the feature is not at significant risk from injury or mortality.		No AEOI
	Razorbill		Ensure the feature can move safely between the		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			site and important areas of functionally linked sea outwith the site.	objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
	Kittiwake Guillemot Razorbill	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Guillemot	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Maintain the breeding population of guillemot at a stable or increasing trend relative to the current site reference population.	The impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA. The PVA results for guillemot presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations. Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA.	No AEOI
Ensure guillemots are not at significant risk from injury or mortality.			No AEOI		
Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.		No AEOI			
			Avoid significant disturbance to guillemots and ensure individuals can	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the guillemot populations as a qualifying feature of the SPA.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake Guillemot Razorbill	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Puffin Gannet	2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying features have the ability to recover at the relevant SPA breeding colonies.	The impact level experienced during operations and maintenance on the feature at the functionally linked SPA(s) remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below	No AEOI
	Kittiwake		Ensure the qualifying features within Outer Firth		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
	Guillemot		of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.	<p>this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p>		
	Razorbill					
	Puffin		Ensure the qualifying features can move safely between the site and important areas of functionally linked land outwith the site.		<p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
	Gannet		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.			Ensure the qualifying features continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.
		2c. The supporting habitats and processes	Avoid significant disturbance to the qualifying feature and ensure individuals can move safely between these areas within the site.		No AEOI	
			Maintain the extent and distribution of the	There is no pathway for displacement during all operations and maintenance of Morven North to result	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	supporting habitats for the qualifying features within the site.	in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake Guillemot	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Kittiwake	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	<p>The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
Ensure the feature is not at significant risk from injury or mortality.			No AEOI		
Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Kittiwake Guillemot	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Guillemot	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Maintain the breeding population of guillemots at a stable or increasing trend relative to the current site reference population.	The impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA. The PVA results for guillemot presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations.	No AEOI
			Ensure guillemots are not at significant risk from injury or mortality.		No AEOI
			Ensure guillemots can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the guillemot populations as a qualifying feature of the SPA.	No AEIO
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIO
Forth Islands SPA	Kittiwake Guillemot (non-breeding seasons only)	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by		Please see justifications for objectives 2a, 2b and 2c	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Razorbill Puffin Gannet	meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Kittiwake Gannet Puffin	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Kittiwake	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Guillemot (non-breeding seasons only)		Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI
	Razorbill				No AEOI
	Puffin				No AEOI
	Gannet		Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Guillemot (non-breeding)	2a. The populations of the qualifying features	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population.	The impact level experienced during operations and maintenance on the feature surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	seasons only)	are viable components of the Forth Islands SPA.	Ensure the feature is not at significant risk from injury or mortality	population modelling was conducted to further understand potential impacts on the feature's population at the SPA.	No AEOI
	Razorbill		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	The PVA results for guillemot presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations. Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Northumberland Marine SPA	Kittiwake Razorbill Puffin Fulmar	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. 	<p>The distribution of qualifying features within the site.</p>	<p>The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature’s life cycle associated with the site.</p> <p>Additionally, there is no pathway for displacement impacts during all operations and maintenance of</p>	No AE0I

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
St Abb's Head to Fast Castle SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Guillemot (non-breeding seasons only)				
	Razorbill	2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:	Please see justifications for objectives 2a, 2b and 2c	No AEOI	
Kittiwake Razorbill	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.		Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
	Kittiwake Guillemot (non-breeding seasons only)	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Razorbill	St Abb's Head to Fast Castle SPA.	associated processes have the ability to recover.	qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Guillemot (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Maintain the breeding population of guillemots at a stable or increasing trend relative to the site reference population.	The impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA.	No AEOI
			Ensure guillemots are not at significant risk from injury or mortality.	The PVA results for guillemot presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations. Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA.	No AEOI
			Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement	No AEOI
			2b. The distribution of the qualifying features is maintained throughout	Ensure guillemots continue to have access to and can utilise all optimal habitats	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		the site by avoiding significant disturbance of the species.	suitable for all relevant aspects of their life cycle associated with the site.	causing injury or mortality to the guillemot populations as a qualifying feature of the SPA.	
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIO
Troup, Pennan and Lion's Heads SPA	Kittiwake	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
	Guillemot (non-breeding seasons only)	2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO
	Razorbill				
	Kittiwake	2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
	Razorbill		Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	<p>non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI	
	Kittiwake		Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI	
	Razorbill		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI	
			2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI
					Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion		
	Kittiwake	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Troup, Pennan and Lion's Heads SPA	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	<p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI		
	Guillemot (non-breeding seasons only)		Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI		
	Razorbill		Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
	Guillemot (non-breeding seasons only)		2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.		Ensure the breeding population of guillemot have the ability to recover to the site reference population.	<p>The impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA.</p> <p>The PVA results for guillemot presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations.</p>	No AEOI
					Ensure guillemots are not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.	Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.	Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the guillemot populations as a qualifying feature of the SPA.	No AEOI
			Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site	No AEOI
Farne Islands SPA	Kittiwake Puffin	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. 		The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Coquet Island SPA	Kittiwake Puffin Fulmar	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:	<ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 	<p>The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p>	No AEOf

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
	Razorbill (non-breeding seasons only)				
	Fulmar	2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEIO
			Ensure the feature is not at significant risk from injury or mortality.		
	Ensure the feature can move safely between the site and important areas of		Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
North Caithness Cliffs SPA	Kittiwake Puffin Fulmar	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		
Ensure the feature can move safely between the site and important areas of	No AEOI				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Copinsay SPA	Kittiwake	1. To ensure that the qualifying features of the Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Copinsay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
Ensure kittiwakes can move safely between the site and important areas of	No AEOI				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
Hoy SPA	Kittiwake Puffin Fulmar	1. To ensure that the qualifying features of the Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		significant disturbance of the species.	cycles associated with the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Flamborough and Filey Coast SPA	Kittiwake Razorbill (non-breeding seasons only) Puffin	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. 		The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Gannet (non-breeding seasons only) Fulmar	<ul style="list-style-type: none"> The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Calf of Eday SPA	Kittiwake	1. To ensure that the qualifying features of the Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Calf of Eday SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIO
Ensure kittiwakes are not at significant risk from injury or mortality.			No AEIO		
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.			No AEIO		
Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.			No AEIO		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	No AEIO	
				No AEIO	
		2c. The supporting habitats and processes relevant to qualifying features and their prey	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		resources are maintained, or where appropriate restored, at Calf of Eday SPA.	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Rousay SPA	Kittiwake	1. To ensure that the qualifying features of the Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Rousay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Marwick Head SPA	Kittiwake	1. To ensure that the qualifying features of the Marwick Head SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
West Westray SPA	Kittiwake	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the West Westray SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at West Westray SPA.		Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			supporting habitats and/or prey, should be avoided.		
Fair Isle SPA	Kittiwake Puffin (non-breeding seasons only) Gannet (non-breeding seasons only) Fulmar	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status. 2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
				Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only) Fulmar	2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
	Kittiwake Puffin (non-breeding seasons only)		Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
	Kittiwake Puffin (non-breeding)		Ensure the feature is not at significant risk from injury or mortality.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Ensure the feature can move safely between the		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	seasons only) Gannet (non-breeding seasons only) Fulmar		site and important areas of functionally linked sea outwith the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fair Isle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Noss SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Fulmar				
		2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Noss SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all	No AEOI
	Fulmar		Ensure the breeding population of fulmar have the ability to recover to the site reference population.		No AEOI
	Gannet (non-breeding seasons only)		Ensure the feature is not at significant risk from injury or mortality.		No AEOI
	Fulmar		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		significant disturbance of the species.	cycles associated with the site.	relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Foula SPA	Puffin (non-breeding seasons only) Fulmar	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
		2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI	
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI	
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
						No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	Maintain the extent and distribution of the supporting habitats for the feature within the site.	Ensure the variety and abundance of food resources and the condition	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the	No AEOI
No AEOI						

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		appropriate restored, at Foula SPA.	of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Fetlar SPA	Fulmar	1. To ensure that the qualifying features of the Fetlar SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fetlar SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	2a. The populations of the qualifying features are viable components of the Fetlar SPA.	Ensure the breeding population of fulmar has the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on fulmar at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement	No AEOI	
		Ensure fulmars are not at significant risk from injury or mortality.			
		Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.			

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	causing injury or mortality to the fulmar populations as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fetlar SPA.	Maintain or enhance the extent and distribution of the supporting habitats for fulmars within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Puffin (non-breeding)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate		The predicted impact is not considered to be of a magnitude that would undermine this conservation	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Hermaness, Saxa Vord and Valla Field SPA	seasons only)	contribution to achieving Favourable Conservation Status.		objective. Please see justifications for objectives 2a, 2b and 2c	
	Gannet (non-breeding seasons only) Fulmar	2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Puffin (non-breeding seasons only) Fulmar		Ensure the breeding population of the feature has the ability to recover to the site reference population.		No AEOI
	Puffin (non-breeding seasons only)		Ensure the feature is not at significant risk from injury or mortality.		No AEOI
Gannet (non-breeding seasons only) Fulmar	Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI		
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		significant disturbance of the species.	cycles associated with the site.		
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
St Kilda SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the St Kilda SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	<p>The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of displacement causing injury or mortality to the gannet populations as a qualifying feature of the SPA.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the</p>	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.		No AEOI
			Maintain the variety and abundance of food resources and the condition		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		appropriate restored, at St Kilda SPA.	<p>of supporting habitats and associated processes.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	supporting processes on which the habitats of qualifying species rely from being maintained or restored.	<p>No AEOI</p>

1.1.5 Combined collision and displacement

Table 1.5: Conclusions against the conservation objectives of all the Special Protection Areas from combined collision and displacement during operation and maintenance

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA.	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	The PVA results for kittiwake presented in the RIAA Part 3 demonstrate that the impact would likely remain undetectable against natural population fluctuations. Therefore, it is evident that impact magnitude is negligible and would not significantly impact the guillemot feature of the SPA. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision and displacement causing injury or	No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	<p>mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying species have the ability to recover at the relevant SPA breeding colonies.	The impact level experienced during operations and maintenance on kittiwake at the functionally linked SPA(s) remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and	No AEOI
			Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		No AEOI
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
		site by avoiding significant disturbance of the species.	life cycle associated with the site.	therefore the species will remain a viable component of the SPA.	No AEOI	
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for combined collision and displacement impacts during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.			Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.			
Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.	The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI			

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOf
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised threshold of 0.02 percentage points for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOf
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk during the operational and maintenance phase, of collision and displacement causing injury or mortality to the species as a qualifying feature of the SPA..	No AEOf
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOf
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site.	No AEOf

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	As Morven North is located outside the SPA boundary, there is no pathway for combined collision and displacement impacts during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI		
	Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
Buchan Ness to Collieston Coast SPA	Kittiwake	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Buchan Ness to Collieston Coast SPA.	Ensure kittiwakes are not at significant risk from injury or mortality.	mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Forth Islands SPA	Kittiwake Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEIOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			where this could reduce supporting habitats and/or prey, should be avoided.		
Northumberland Marine SPA	Kittiwake	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. <p>The distribution of qualifying features within the site.</p>		<p>The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision and displacement causing injury or mortality to the fulmar populations as a qualifying feature of the SPA.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Additionally, there is no pathway for combined collision and displacement impacts during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
St Abb's Head to Fast Castle SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c.	No AEIO
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEIO
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIO
	Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the	No AEIO		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			where this could reduce supporting habitats and/or prey, should be avoided.		
Troup, Pennan and Lion's Heads SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI	
		Ensure kittiwakes are not at significant risk from injury or mortality.			
		Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.			
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI	
Avoid significant disturbance to kittiwakes		Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and			No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and ensure individuals can move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI		
	Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
Farne Islands SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:		The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Coquet Island SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:	<ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 	<p>The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the gannet populations as a qualifying feature of the SPA.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			important areas of functionally linked sea outwith the site.	background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
North Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.</p>	<p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	<p>No AEOI</p>
		<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.</p>	<p>Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.</p>	<p>There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p>	<p>No AEOI</p>
			<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p>	<p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p>
			<p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>		<p>No AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Copinsay SPA	Kittiwake	1. To ensure that the qualifying features of the Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Copinsay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hoy SPA	Kittiwake	1. To ensure that the qualifying features of the Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEIOI	
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEIOI
		2c. The supporting habitats and processes relevant to	Maintain or enhance the extent and distribution of	There is no pathway for collision and displacement during all operations and	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	<p>the supporting habitats for kittiwakes within the site.</p> <p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p> <p>No AEOI</p>
Flamborough and Filey Coast SPA	Kittiwake Gannet (non-breeding seasons only)	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the species as a qualifying feature of the SPA.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Calf of Eday SPA	Kittiwake	<p>1. To ensure that the qualifying features of the Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.</p>		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		<p>2. To ensure that the integrity of the Calf of Eday SPA is restored in the context of environmental changes by</p>		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		meeting objectives 2a, 2b and 2c for each qualifying feature:			
		2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
Ensure kittiwakes are not at significant risk from injury or mortality.			No AEOI		
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Calf of Eday SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Rousay SPA	Kittiwake	1. To ensure that the qualifying features of the Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			Please see justifications for objectives 2a, 2b and 2c
		2a. The populations of the qualifying features are viable components of the Rousay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	considered non-material, falling within the natural fluctuations of the population.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition	Therefore, collision and displacement associated with Morven North will not prevent	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Marwick Head SPA	Kittiwake	1. To ensure that the qualifying features of the Marwick Head SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population. Ensure kittiwakes are not at significant risk from injury or mortality. Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the	No AEOI No AEOI No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			where this could reduce supporting habitats and/or prey, should be avoided.		
West Westray SPA	Kittiwake	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the West Westray SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at West Westray SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI		
	Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
Fair Isle SPA	Kittiwake	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Gannet (non-breeding seasons only)	2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on the feature at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal	No AEIOI
	Kittiwake		Ensure the breeding population of kittiwake have the ability to recover to the site reference population.		No AEIOI
	Kittiwake Gannet (non-breeding seasons only)		Ensure the feature is not at significant risk from injury or mortality.		No AEIOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEIOI
			Avoid significant disturbance to the feature and ensure individuals can		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fair Isle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Noss SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are	Maintain the breeding population of gannet at a stable or increasing trend	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised 0.02	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the Noss SPA.	relative to the site reference population	percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the gannet populations as a qualifying feature of the SPA. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		maintained, or where appropriate restored, at Noss SPA.	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the gannet populations as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.	Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
St Kilda SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the St Kilda SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact level experienced during operations and maintenance on gannet at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of the combined impact of collision and displacement causing injury or mortality to the gannet populations as a qualifying feature of the SPA.	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, combined collision and displacement during operation and	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.	maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Kilda SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

1.1.6 Barrier effects

Table 1.6: Conclusions against the conservation objectives of all Special Protection Areas from barrier effects during the operations and maintenance phase

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
Fowlsheugh SPA	Kittiwake Guillemot Razorbill	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:				
	Kittiwake	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not	No AEOI	
	Guillemot Razorbill		Maintain the breeding population of guillemot at a stable or increasing trend relative to the current site reference population.			
	Kittiwake Guillemot Razorbill		Ensure the feature is not at significant risk from injury or mortality.			
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.			
		2b. The distribution of the qualifying features is maintained	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant			No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		throughout the site by avoiding significant disturbance of the species.	aspects of their life cycles associated with the site. Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fowlsheugh SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake Guillemot Razorbill Puffin Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Kittiwake	2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the breeding qualifying feature have the ability to recover at the relevant SPA breeding colonies.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Kittiwake Guillemot Razorbill Puffin Gannet		Ensure the breeding qualifying feature within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		No AEOI
			Ensure the breeding qualifying feature can move safely between the site and important areas of functionally linked land outwith the site.		No AEOI
			2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and	Maintain the extent and distribution of the supporting	There is no pathway for barrier effects during the operations and maintenance phase of Morven	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	habitats for the qualifying species within the site.	North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake Guillemot	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI
	Guillemot		Maintain the breeding population of guillemots at a stable or increasing trend		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Kittiwake Guillemot		relative to the current site reference population.	<p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.		There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.
		Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Forth Islands SPA	Kittiwake Razorbill Puffin Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
	Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	No AEOI			
	2b. The distribution of the qualifying features is maintained	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		throughout the site by avoiding significant disturbance of the species.	aspects of their life cycles associated with the site. Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
	Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	
	Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
Northumberland Marine SPA	Kittiwake Razorbill Puffin Fulmar	The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:		The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and		The predicted impact is not considered to be of a magnitude that would undermine this	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
St Abb's Head to Fast Castle SPA	Razorbill	make an appropriate contribution to achieving Favourable Conservation Status.		conservation objective. Please see justifications for objectives 2a, 2b and 2c	
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of the feature have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	No AEOI				
			Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Troup, Pennan and Lion's Heads SPA	Kittiwake Razorbill	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact	No AEOI
	Razorbill		Maintain the breeding population of razorbill at a		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Kittiwake Razorbill		stable or increasing trend relative to the site reference population	is considered non-material, falling within the natural fluctuations of the population.	
			Ensure the feature is not at significant risk from injury or mortality.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
		Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Farne Islands SPA	Kittiwake Puffin	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Coquet Island SPA	Kittiwake Puffin Fulmar	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Razorbill (non-breeding seasons only)	2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Fulmar	2a. The populations of the qualifying features are viable components of the	Maintain the breeding population of the feature at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		East Caithness Cliffs SPA.	Ensure the feature is not at significant risk from injury or mortality.	<p>is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.		No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI
			Existing water quality should be maintained and any		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
North Caithness Cliffs SPA	Kittiwake Puffin Fulmar	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		disturbance of the species.	Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Copinsay SPA	Kittiwake	1. To ensure that the qualifying features of the Copinsay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Copinsay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	2a. The populations of the qualifying features are viable components of the Copinsay SPA.		Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
			Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
					No AEOI
	2c. The supporting habitats and		Maintain the extent and distribution of the supporting	There is no pathway for barrier effects during the operations and maintenance phase of Morven	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Copinsay SPA.	habitats for kittiwake within the site.	North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hoy SPA	Kittiwake Puffin Fulmar	1. To ensure that the qualifying features of the Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure the feature is not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	<p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.		No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
Flamborough and Filey Coast SPA	Kittiwake Razorbill (non-breeding seasons only) Puffin Gannet (non-breeding seasons only) Fulmar	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for barrier effects during the operations and maintenance phase of Morven</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Calf of Eday	Kittiwake	1. To ensure that the qualifying features of Calf of Eday SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Calf of Eday SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Calf of Eday SPA.	<p>Ensure the breeding population of kittiwake have the ability to recover the site reference population</p> <p>Ensure kittiwake are not a significant risk from injury or mortality</p>	<p>The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.	there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		appropriate restored, at Calf of Eday SPA.	<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided.</p>	qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
Rousay	Kittiwake	1. To ensure that the qualifying features of Rousay SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Rousay SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Rousay SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for relevant aspects of their life cycle associated with the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.			Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI	
	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Rousay SPA.		Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.			Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	
Existing water quality should be maintained and any increase in eutrophication or				No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			water turbidity, where this could reduce supporting habitats and/or prey, should be avoided.		
Marwick Head	Kittiwake	1. To ensure that the qualifying features of the Marwick Head SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of Marwick Head SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Marwick Head SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality		No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for relevant aspects of their life cycle associated with the site.		No AEOI
Avoid significant disturbance to kittiwakes and ensure	No AEOI				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			individuals can move safely between these areas within this site.	Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Marwick Head SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
West Westray SPA	Kittiwake (non-breeding seasons only)	1. To ensure that the qualifying features of the West Westray SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the West Westray SPA is restored in the context of environmental changes by		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		meeting objectives 2a, 2b and 2c for each qualifying feature:			
		2a. The populations of the qualifying features are viable components of the West Westray SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		and their prey resources are maintained, or where appropriate restored, at West Westray SPA.	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Fair Isle SPA	Kittiwake Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only)	2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Fulmar				
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact	No AEOI
	Fulmar				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
	Kittiwake Puffin (non-breeding seasons only)		Ensure the breeding population of the feature has the ability to recover to the site reference population.	<p>is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI	
	Kittiwake Puffin (non-breeding seasons only)		Ensure the feature is not at significant risk from injury or mortality.		No AEOI	
	Gannet (non-breeding seasons only)		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI	
	Fulmar	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		<p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.			No AEOI
						No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.		There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of		Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		appropriate restored, at Fair Isle SPA.	supporting habitats and associated processes. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Noss SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Fulmar	2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Noss SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI
	Fulmar		Ensure the breeding population of fulmar have the ability to recover to the site reference population.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
	Gannet (non-breeding)		Ensure the feature is not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	seasons only) Fulmar		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			habitats and/or prey, should be avoided.		
Foula SPA	Puffin (non-breeding seasons only) Fulmar	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of the feature has the ability to recover to the site reference population.	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI	
		Ensure the feature is not at significant risk from injury or mortality.			
		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.			
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the	No AEOI	
Avoid significant disturbance to the feature and ensure individuals can move safely					

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			between these areas within the site.	assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Foula SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet (non-breeding seasons only) Fulmar	2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion			
	Gannet (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	<p>The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI			
	Puffin (non-breeding seasons only)		Ensure the breeding population of the feature has the ability to recover to the site reference population.		No AEOI			
	Fulmar		Ensure the feature is not at significant risk from injury or mortality.		No AEOI			
	Puffin (non-breeding seasons only)		Ensure the feature can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
	Gannet (non-breeding seasons only)		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure the feature continues to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
	Fulmar				Avoid significant disturbance to the feature and ensure individuals can move safely between these areas within the site.	No AEOI		
					2c. The supporting habitats and	Maintain or enhance the extent and distribution of the	There is no pathway for barrier effects during the operations and maintenance phase of Morven	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	supporting habitats for the feature within the site.	North to result in adverse effects on the habitats of the qualifying species. Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
St Kilda SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the St Kilda SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during operations and maintenance phase on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from barrier to movement to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during operations and maintenance, of barrier effects causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, barrier effects during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.	Furthermore, the impact from barrier effects during operations and maintenance will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Kilda SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for barrier effects during the operations and maintenance phase of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, barrier effects associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			could reduce supporting habitats and/or prey, should be avoided.		

1.1.7 Attraction to light

1.1.7.1

Table 1.7: Conclusions against the conservation objectives of all Special Protection Area from attraction to light during all Morven North phases

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Northumberland Marine SPA	Fulmar	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, attraction to light during all project phases, will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				which the habitats of qualifying species rely from being maintained or restored.	
Coquet Island SPA	Fulmar	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:	<ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 	<p>The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on</p>	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				which the habitats of qualifying species rely from being maintained or restored.	
East Caithness Cliffs SPA	Fulmar	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of fulmars at a stable or increasing trend relative to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles	Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated with the site.	relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for fulmar within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Fulmar	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable		The predicted impact is not considered to be of a magnitude that would undermine this conservation	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
North Caithness Cliffs SPA		condition and make an appropriate contribution to achieving Favourable Conservation Status.		objective. Please see justifications for objectives 2a, 2b and 2c	
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of fulmar have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Avoid significant disturbance to fulmars and ensure individuals	No AEOI
	No AEOI				

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			can move safely between these areas within the site.		
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.	Maintain the extent and distribution of the supporting habitats for fulmar within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hoy SPA	Fulmar	1. To ensure that the qualifying features of the Hoy SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hoy SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the Hoy SPA.	Ensure the breeding population of fulmars have the ability to recover to the site reference population.	<p>The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.</p> <p>Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying	Maintain or enhance the extent and distribution of the		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		features and their prey resources are maintained, or where appropriate restored, at Hoy SPA.	<p>supporting habitats for fulmar within the site.</p> <p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	<p>There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p> <p>No AEOI</p>
Flamborough and Filey Coast SPA	Fulmar	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. 		<p>The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population.</p> <p>Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The distribution of qualifying features within the site. 		<p>Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Fair Isle SPA	Fulmar	1. To ensure that the qualifying features of the Fair Isle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fair Isle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Fair Isle SPA.	Maintain the breeding population of fulmar at a stable or increasing trend relative to the site reference population	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure fulmars are not at significant risk from injury or mortality.	is considered non-material, falling within the natural fluctuations of the population.	No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.	Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fair Isle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for fulmars within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the	Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			condition of supporting habitats and associated processes.	which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Noss SPA	Fulmar	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Noss SPA.	Ensure the breeding population of fulmar have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			linked sea outwith the site.	causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	Maintain the extent and distribution of the supporting habitats for fulmar within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Foula SPA	Fulmar	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of fulmar have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk)	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			the site and important areas of functionally linked sea outwith the site.	during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Foula SPA.	Maintain the extent and distribution of the supporting habitats for fulmar within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		
Fetlar SPA	Fulmar	1. To ensure that the qualifying features of the Fetlar SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fetlar SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Fetlar SPA.	Ensure the breeding population of fulmar has the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout	Ensure fulmars continue to have access to and can	No AEOI			

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		the site by avoiding significant disturbance of the species.	utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fetlar SPA.	Maintain or enhance the extent and distribution of the supporting habitats for fulmars within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and/or prey, should be avoided.		
Hermaness, Saxa Vord and Valla Field SPA	Fulmar	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Ensure the breeding population of fulmar have the ability to recover to the site reference population.	The impact magnitude predicted during all project phases on this feature was qualitatively assessed. The outcome of the assessment deemed the impact from attraction to light to be negligible as the impact is considered non-material, falling within the natural fluctuations of the population. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the feature, it can be concluded that there is a negligible risk (and so not a significant risk) during all project phases, of attraction to light causing injury or mortality to the species as a qualifying feature of the SPA. Therefore, attraction to light during all project phases will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact from attraction to light during all project phases will not significantly influence the distribution of the assessed qualifying	No AEOI
			Ensure fulmars are not at significant risk from injury or mortality.		No AEOI
			Ensure fulmars can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
2b. The distribution of the qualifying features is maintained throughout the site by avoiding	Ensure fulmars continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of		No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		significant disturbance of the species.	their life cycles associated with the site.	species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
			Avoid significant disturbance to fulmars and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain the extent and distribution of the supporting habitats for fulmar within the site.	There is no pathway for attraction to light during all project phases of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, attraction to light associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI

1.2 Assessment of the adverse effects of Morven North in- combination with other plans and projects

1.2.1 Collision risk

Table 1.8: Conclusions against the conservation objectives of all Special Protection Areas relating to collision risk during the operations and maintenance phase of Morven North in-combination with other plans and projects

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AEIO
			Ensure kittiwakes are not at significant risk from injury or mortality.		
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		
		2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for significant effects can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population	No AEIO
			Avoid significant disturbance to kittiwakes		No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and ensure individuals can move safely between these areas within the site.	<p>of kittiwake at the Fowlsheugh SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fowlsheugh SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the current site reference population	<p>There is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding kittiwake have the ability to recover at the relevant SPA breeding colonies.	The in-combination impact level experienced during operations and maintenance on kittiwake at the St Abb's Head to Fast Castle SPA, from which kittiwake may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the St Abb's Head to Fast Castle SPA with this analysis presented in the RIAA Part 3.	AEOI
			Ensure kittiwake within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked land outwith the site.		The predicted effect on the growth rate of the St Abb's Head to Fast Castle SPA population as predicted by PVA modelling has the potential to be of a magnitude that could prevent the kittiwake population at the St Abb's Head to Fast Castle SPA from continuing to recover. The population of kittiwake at the St Abb's Head to Fast Castle SPA has decreased between the two most recent national censuses but has shown signs of recovery since however, it remains below the designated population. The in-combination impact is

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>considered to be an over-estimate due to various factors discussed in the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. Whilst taking account of these factors improves the PVA metrics it is considered that this may not be to a level at which the potential for a significant effect can confidently be ruled out. Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the kittiwake population of the St Abb's Head to Fast Castle SPA as a result of in-combination collision risk impacts associated with Morven North and other plans and projects.</p> <p>Therefore, there is potential for in-combination collision risk during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p>	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwake continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	The impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to kittiwake and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI	
	Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.			The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a The populations of the qualifying features are	Ensure breeding gannet have the ability to recover		The in-combination impact level experienced during operations and maintenance on gannet at	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	at the relevant SPA breeding colonies.	the Forth Islands SPA, from which gannet may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the Forth Islands SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure gannet within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.	The predicted effect on the growth rate of the Forth Islands SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the Forth Islands SPA, noting that although the population of gannet at the Forth Islands SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination collision risk impacts.	No AEOI
			Ensure gannet can move safely between the site and important areas of functionally linked land outwith the site.	Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannet continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all	No AEOI
			Avoid significant disturbance to gannet and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying feature within the site.	There is no pathway for collision risk during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species. Therefore, collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are	Ensure the breeding population of kittiwake have	The in-combination impact level experienced during operations and maintenance on kittiwake	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the Buchan Ness to Collieston Coast SPA.	the ability to recover to the site reference population.	<p>surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Buchan Ness to Collieston Coast SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk impacts during operation and maintenance will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of collision risk during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all</p>	
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Forth Islands SPA	Kittiwake Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population.	The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannet are not at significant risk from injury or mortality during the breeding season.	population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure gannet can move safely between the site and important areas of functionally linked sea outwith the site.	The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination collision risk impacts.	No AEOI
			Ensure gannet continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to gannet and ensure individuals can move safely between these areas within the site.	Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
	Kittiwake	2a. The populations of the qualifying features are	Maintain the breeding population of kittiwake at a stable or increasing trend	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the Forth Islands SPA.	relative to the site reference population.	threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	
			Ensure kittiwake are not at significant risk from injury or mortality during the breeding season.	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the Forth Islands SPA as a result of in-combination collision risk impacts.	No AEOI
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea outwith the site.	Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Kittiwake Gannet	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Forth Islands SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.			No AEOI		
Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.			No AEOI		
Northumberland Marine SPA	Kittiwake	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. 		The in-combination impact level experienced during operations and maintenance on kittiwake at the Farne Islands SPA, from which kittiwake may occur within the Northumberland Marine SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the Farne Islands SPA with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The distribution of qualifying features within the site. 		<p>prevent the kittiwake population at the Farne Islands SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that they will be no a significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
St Abb's Head to Fast Castle SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is considered to be of a magnitude that has the potential to impact this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site.		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>effect can confidently be ruled out. Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the kittiwake population of the St Abb's Head to Fast Castle SPA as a result of in-combination collision risk impacts associated with Morven North and other plans and projects.</p> <p>Therefore, there is potential for in-combination collision risk during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p>	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	The impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			associated processes have the ability to recover.	processes on which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Troup, Pennan and Lion's Heads SPA	Kittiwake	1. To ensure that the qualifying features of the Troup, Pennan and Lion's Heads SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Troup, Pennan and Lion's Heads SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.	Ensure the breeding population of kittiwake have the ability to recover the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure kittiwake are not at significant risk from injury or mortality.		
			Ensure kittiwake can move safely between the site and important areas of functionally linked sea and freshwater outwith the site.		
2b. The distribution of the qualifying features is	Ensure kittiwakes continue to have access to and can	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		maintained throughout the site by avoiding significant disturbance of the species.	utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	<p>significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the Troup, Pennan and Lion's Heads SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate	Maintain or enhance the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition	Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		restored, at Troup, Pennan and Lion's Heads SPA	<p>of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained any increase in eutrophication, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Farne Islands SPA	Kittiwake	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that they will be no significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk during operation and maintenance will not prevent the</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are	Maintain the breeding population of kittiwake at a stable or increasing trend	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		viable components of the East Caithness Cliffs SPA.	relative to the site reference population	threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the East Caithness Cliffs SPA as a result of in-combination collision risk impacts.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI		
	Existing water quality should be maintained and any increase in eutrophication or water turbidity where this could reduce supporting habitats and/or prey should be avoided.		No AEOI		
Flamborough and Filey Coast SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. 		The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that they will be no significant effect on the population of kittiwake at the Flamborough and Filey Coast SPA as a result of in-combination collision risk impacts.</p> <p>Therefore, in-combination collision risk during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of collision during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Additionally, there is no pathway for in-combination collision risk during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination collision risk associated with Morven North will not prevent the extent, distribution, structure and function of the habitats</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	

1.2.2 Displacement

Table 1.9: Conclusions against the conservation objectives of all Special Protection Areas relating to displacement during the operations and maintenance phase of Morven North in-combination with other plans and projects

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake Guillemot Razorbill	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Fowlsheugh SPA as a result of in-combination displacement impacts.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Guillemot	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Maintain the breeding population of guillemot at a stable or increasing trend relative to the current site reference population.	The in-combination impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot population at the SPA. However, the population at the SPA is above the cited population and as the PVA modelling predicts that the population growth rate will remain positive, the conservation objectives for the SPA will not be undermined. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no	No AEOI
Ensure guillemots are not at significant risk from injury or mortality.			No AEOI		
Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained, or where appropriate restored, throughout the site by avoiding significant			No AEOI		
		Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.			

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		disturbance of the species.	Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.	<p>significant effect on the population of guillemot at the Fowlsheugh SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
	Razorbill	2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Maintain the breeding population of razorbills at a stable or increasing trend relative to the current site reference population.	<p>The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. The population at the SPA is above the cited population and the population has increased between the two most recent national census. The in-combination impact is considered to be an over-estimate due to various factors discussed within the RIAA Part 3 and when some of these are taken into account within the</p>	No AEOI
Ensure razorbills are not at significant risk from injury or mortality.			No AEOI		
Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained, or where appropriate restored,		Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant	No AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		throughout the site by avoiding significant disturbance of the species.	<p>aspects of their life cycle associated with the site.</p> <hr/> <p>Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site.</p>	<p>Applicant's scenario, the predicted effect on the growth rate of the SPA population as predicted by the PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from recovering. In addition, there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. It is therefore considered that there will be no significant effect on the population of razorbill at Fowlsheugh SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
	Kittiwake Guillemot Razorbill	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Fowlsheugh SPA.	<p>Maintain the extent and distribution of the supporting habitats for the feature within the site.</p> <hr/> <p>Maintain the variety and abundance of food resources and the condition of supporting</p>	<p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on</p>	No AEOI No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			habitats and associated processes.	which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying species have the ability to recover at the relevant SPA breeding colonies.	The in-combination impact level experienced during operations and maintenance on kittiwake at the functionally linked SPAs, from which kittiwake may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the functionally linked SPAs with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.	<p>The predicted effect on the growth rate of the St Abb's Head to Fast Castle SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the kittiwake population at the functionally linked SPA. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the St Abb's Head to Fast Castle SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Outer Firth of Forth and St Andrews Bay Complex SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the Outer Firth of Forth and St Andrews Bay Complex SPA</p>	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	The in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Guillemot	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons	The in-combination impact level experienced during operations and maintenance on guillemot at the Forth Islands SPA and Troup, Pennan and Lion's Heads SPA, from which guillemot may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the Forth Islands SPA and Troup, Pennan and Lion's Heads SPA with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA populations as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot populations at the SPAs. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at both SPAs where the population is declining and, as a result of the predicted in-combination impact, may decline below the designated population during the lifetime of Morven North. The in-combination impact is considered to be an over-estimate due to various factors discussed within the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. However, due to the current declining trend at both SPAs and	AEOI
			Ensure the qualifying feature can move safely between the site and important areas of functionally linked land outwith the site.		AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		AEOI
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>the PVA outputs it is considered, on a precautionary basis that there is potential for such a significant effect on the guillemot population of the Forth Islands SPA and Troup, Pennan and Lion's Heads SPA as a result of in-combination displacement impacts associated with Morven North and other plans and projects during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site by preventing the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Therefore, there is potential for in-combination displacement during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site.</p>	
		<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.</p>	<p>Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.</p> <p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated</p>	<p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p> <p>No AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
			processes have the ability to recover.			
	Razorbill	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons		The in-combination impact level experienced during operations and maintenance on razorbill at functionally linked SPAs, from which razorbill may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population at functionally linked breeding colonies with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.		The predicted effect on the growth rate of the razorbill population as predicted by PVA modelling is not considered to be of a magnitude that would impact the razorbill population at functionally linked breeding colonies. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted to a level at which it is considered the potential for a significant effect can be discounted.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.</p>	<p>The predicted effect on the growth rate as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the razorbill population from being maintained. It is therefore considered that there will be no significant effect on the population of razorbill at the Outer Firth of Forth and St Andrews Bay Complex SPA as a result of in-combination displacement impacts.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>Therefore, in-combination displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the Outer Firth of Forth and St Andrews Bay Complex SPA.</p>	<p>No AEOI</p>
		<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.</p>	<p>Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.</p>	<p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p>	<p>No AEOI</p>
			<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p>	<p>Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Puffin	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons	The in-combination impact level experienced during operations and maintenance on puffin at the Forth Islands SPA, from which puffin may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population at the Forth Islands SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.		The predicted effect on the growth rate of the Forth Islands SPA population as predicted by PVA modelling is not considered to be of a magnitude

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	that would prevent the puffin population at the Forth Islands SPA from being maintained, noting that the population of puffin at the Forth Islands SPA is higher than the designated population. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of puffin at the Forth Islands SPA as a result of in-combination displacement impacts.	No AEOI
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site. Therefore, in-combination displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the Outer Firth of Forth and St Andrews Bay Complex SPA.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in a significant effect on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated	Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion	
			processes have the ability to recover.			
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI	
	Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI	
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons		The in-combination impact level experienced during operations and maintenance on gannet at the Forth Islands SPA, from which gannet may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the Forth Islands SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure the qualifying species can move safely between the site and important areas of			No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked land outwith the site.	The predicted effect on the growth rate of the Forth Islands SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the Forth Islands SPA, noting that although the population of gannet at the Forth Islands SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination displacement impacts.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	Therefore, in-combination displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.	Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in a significant effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the	Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		of Forth and St Andrews Bay Complex SPA.	condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Buchan Ness to Collieston Coast SPA	Kittiwake Guillemot	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population. Ensure kittiwakes are not at significant risk from injury or mortality. Ensure kittiwakes can move safely between the site and important areas of	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA	No AEOI No AEOI No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	<p>modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Buchan Ness to Collieston Coast SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement impacts during operation and maintenance will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
	Guillemot	2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Maintain the breeding population of guillemots at a stable or increasing trend relative to the current site reference population.	<p>The in-combination impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA with this analysis presented in the RIAA Part 3.</p>	No AEOI
			Ensure guillemots are not at significant risk from injury or mortality.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion		
			Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.	<p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot population at the SPA. However, the population at the SPA is well above the cited population and as the PVA modelling predicts that the population growth rate will remain positive, the conservation objectives for the SPA will not be undermined. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of guillemot at the Buchan Ness to Collieston Coast SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEOI		
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.		No AEOI		
	Kittiwake Guillemot	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at			Maintain the extent and distribution of the supporting habitats for the feature within the site	There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEOI
					Maintain the variety and abundance of food resources and the	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		Buchan Ness to Collieston Coast SPA	<p>condition of supporting habitats and associated processes.</p> <p>Existing water quality should be maintained any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>	qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Forth Islands SPA	Kittiwake Razorbill Puffin Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Gannet	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	<p>Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population</p> <p>Ensure gannets are not at significant risk from injury or mortality.</p> <p>Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.</p>	<p>The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national</p>	No AEOI No AEOI No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination displacement impacts. It can be concluded that there is a negligible risk (and so not a significant risk) Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			functionally linked sea outwith the site.	<p>modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Forth Islands SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement impacts during operation and maintenance will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI
	Guillemot	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of guillemot at a stable or increasing trend relative to the site reference population.	The in-combination impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA with this analysis presented in the RIAA Part 3.	AEOI
			Ensure guillemot are not at significant risk from injury or mortality.	The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot population at the SPA. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining and, as a result of the predicted in-combination impact, may decline below the designated population during the lifetime of Morven North. The in-combination impact is considered to be an over-estimate due to various factors discussed within the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. However, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the guillemot population of the Forth Islands SPA as a result of in-combination displacement impacts associated with Morven North and other plans and projects .	AEOI
			Ensure guillemot can move safely between the site and important areas of functionally linked sea outwith the site.		AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure guillemot continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		AEOI
			Avoid significant disturbance to guillemot and ensure individuals can move safely between these areas within the site.	Therefore, there is potential for in-combination displacement impacts during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying	AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site and prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Razorbill	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of razorbill at a stable or increasing trend relative to the site reference population.	<p>The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. However, the population at the SPA is significantly above the cited population and as the PVA modelling predicts that the population growth rate will remain positive, the conservation objectives for the SPA will not be undermined. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of razorbill at the Forth Islands SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and</p>	No AEOI
Ensure razorbill are not at significant risk from injury or mortality during the breeding season.			No AEOI		
Ensure razorbill can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	No AEOI		
			Avoid significant disturbance to razorbill and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	Puffin	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of puffin at a stable or increasing trend relative to the site reference population	<p>The in-combination impact level experienced during operations and maintenance on puffin surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of puffin at the Forth Islands SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and</p>	No AEOI
Ensure puffins are not at significant risk from injury or mortality.			No AEOI		
Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to puffins and ensure individuals can		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Kittiwake Guillemot Razorbill Puffin Gannet	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in a significant effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.			No AEOI		
Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.			No AEOI		
Northumberland Marine SPA	Kittiwake	The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:		The in-combination impact level experienced during operations and maintenance on kittiwake at the Farne Islands SPA, from which kittiwake may occur within the Northumberland Marine SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>modelling was conducted to further understand potential impacts on the kittiwake population at the Farne Islands SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the Farne Islands SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that they will be no significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				Therefore, in-combination displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
	Puffin	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on puffin at the Farne Islands SPA and Coquet Island SPA, from which puffin may occur within the Northumberland Marine SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population at the Farne Islands SPA and Coquet Island SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA populations as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPAs from being maintained, noting that the population of puffin at both SPAs is higher than the designated population. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of puffin at the Farne Islands SPA or the Coquet Island SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>therefore the species will remain a viable component of the Northumberland Marine SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
St Abb's Head to Fast Castle SPA	Kittiwake Guillemot	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes are not at significant risk from injury or mortality.	modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the St Abb's Head to Fast Castle SPA as a result of in-combination displacement impacts. Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Guillemot	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Maintain the breeding population of guillemots at a stable or increasing trend relative to the site reference population.	<p>The in-combination impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot population at the SPA. However, the population at the SPA is above the cited population and as the PVA modelling predicts that the population growth rate will remain positive, the conservation objectives for the SPA will not be undermined. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of guillemot at the St Abb's Head to Fast Castle SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal</p>	No AEOI
Ensure guillemots are not at significant risk from injury or mortality.			No AEOI		
Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	No AEOI		
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Razorbill	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of razorbill have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.	AEOI
			Ensure razorbill are not at significant risk from injury or mortality.		AEOI
			Ensure razorbill can move safely between the site and important areas of functionally linked sea outwith the site.		AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure razorbill continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the razorbill population at the SPA. The PVA modelling predicts that the population growth rate will be negative corresponding with the current trend seen at the SPA where the population is declining and, as a result of the predicted in-combination impact, may decline below the designated population during the lifetime of Morven North. The in-combination impact is considered to be an over-estimate due to various factors discussed within the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination	AEOI
	Avoid significant disturbance to razorbill and ensure individuals can		AEOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>move safely between these areas within the site.</p>	<p>impact. However, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the razorbill population at the St Abb's Head to Fast Castle SPA as a result of in-combination displacement impacts.</p> <p>Therefore, there is potential for in-combination displacement impacts during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site and prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	<p>Kittiwake Guillemot Razorbill</p>	<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.</p>	<p>Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.</p> <p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p> <p>Existing water quality should be maintained and any increase in eutrophication or water turbidity, where this could</p>	<p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination displacement impacts associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	<p>No AEOI</p> <p>No AEOI</p> <p>No AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			reduce supporting habitats and/or prey, should be avoided.		
Troup, Pennan and Lion's Heads SPA	Kittiwake Razorbill	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality at the associated SPA, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	No AEOI				
	2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA has decreased between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population	No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	<p>of kittiwake at the Troup, Pennan and Lion's Heads SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	No AEOI
	Guillemot	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a. The populations of the qualifying features are viable components of the Troup, Pennan and Lion's Heads SPA.	Ensure the breeding population of guillemot have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on guillemot surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the guillemot population at the SPA with this analysis presented in the RIAA Part 3.	AEOI
			Ensure guillemots are not at significant risk from injury or mortality.		AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure guillemots can move safely between the site and important areas of functionally linked sea outwith the site.	<p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that would impact the guillemot population at the SPA. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining. The in-combination impact is considered to be an over-estimate due to various factors discussed within the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. However, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the guillemot population of the Troup, Pennan and Lion's Heads SPA as a result of in-combination displacement impacts associated with Morven North and other plans and projects.</p> <p>Therefore, there is potential for in-combination displacement impacts during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site and prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure guillemots continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		AEOI
			Avoid significant disturbance to guillemots and ensure individuals can move safely between these areas within the site.		AEOI
	Razorbill	2a. The populations of the qualifying features are viable components of	Maintain the breeding population of razorbill at a stable or increasing trend	The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		the Troup, Pennan and Lion's Heads SPA.	relative to the site reference population	increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.	
			Ensure razorbills are not at significant risk from injury or mortality.		No AEOI
			Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site.	The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the razorbill population at the SPA. The population at the SPA is above the cited population (Table 5.8) however the population has declined between the two most recent national census but has remained stable since. Whilst the PVA modelling predicts that the population growth rate will remain positive this does not correspond with the current trend seen at the SPA where the population is declining. The in-combination impact is considered to be an over-estimate due to various factors discussed and when some of these are taken into account within the Applicant's scenario, the predicted effect on the growth rate of the SPA population as predicted by the PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from recovering. In addition, there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. It is therefore considered that there will be no significant effect on the population of razorbill at the Troup, Pennan and Lion's Heads SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure razorbills continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to razorbills and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	Kittiwake Guillemot Razorbill	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Troup, Pennan and Lion's Heads SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	<p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.			No AEOI		
Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.			No AEOI		
Farne Islands SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:		The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. The structure and function of the habitats of the qualifying features. The supporting processes on which the habitats of the qualifying features rely. The populations of each of the qualifying features. The distribution of qualifying features within the site. 		<p>modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. In addition consideration should be given to other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling. It is also important to note that the Farne Islands SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake and therefore it can be concluded that it is considered that there will be no significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement impacts during operation and maintenance will not prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>result in a significant effect on the habitats of the qualifying species.</p> <p>Therefore, in-combination displacement impacts associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
	Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on puffin surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of puffin at the Farne Islands SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in a significant effect on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Coquet Island SPA	Puffin	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. 		<p>The in-combination impact level experienced during operations and maintenance on puffin surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from being maintained, noting that the population of puffin at the SPA is higher than the designated population. When considered alongside other factors discussed</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The distribution of qualifying features within the site. 		<p>in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no adverse effect on the population of puffin at the Coquet Island SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in a significant effect on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Razorbill (non-breeding seasons only)	2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
	Kittiwake	2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the East Caithness Cliffs SPA as a result of in-combination displacement impacts. Therefore, in-combination displacement impacts during operation and maintenance will not prevent the conservation objectives from being achieved for	No AEOI
Ensure kittiwakes are not at significant risk from injury or mortality.			No AEOI		
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	Razorbill (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the East Caithness Cliffs SPA.	Maintain the breeding population of razorbills at a stable or increasing trend relative to the site reference population.	<p>The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from being maintained, noting that the population of razorbill at the SPA is significantly higher than the designated population. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of razorbill at the East Caithness Cliffs SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and</p>	No AEOI
Ensure razorbills are not at significant risk from injury or mortality.			No AEOI		
Ensure razorbills can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure razorbills continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to razorbills and ensure individuals can		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Kittiwake Razorbill (non-breeding seasons only)	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.			No AEOI		
Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.			No AEOI		
Flamborough and Filey Coast SPA	Gannet (non-breeding seasons only)	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> The extent and distribution of the habitats of the qualifying features. 		The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>potential impacts on the gannet population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the gannet population at the SPA from being maintained, noting that the population at the SPA is higher than at designation. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Flamborough and Filey Coast SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution,</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Kittiwake	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p> <p>The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. In addition consideration should be given to other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling. It is also important to note that the Flamborough and Filey Coast SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake and therefore it is considered that there will be no significant effect on the population of kittiwake at the Flamborough and Filey Coast SPA as a result of in-combination displacement impacts.</p> <p>Therefore, in-combination displacement impacts during operation and maintenance will not prevent the conservation objectives from being achieved for</p>	No AEOL

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>the assessed qualifying features and the population of the species as viable components of the site.</p> <p>Furthermore, the in-combination impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination displacement impacts associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
	Razorbill (non-breeding seasons only)	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. 		<p>The in-combination impact level experienced during operations and maintenance on razorbill surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the razorbill population with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the razorbill population at the SPA from being maintained, noting that the population of razorbill at the SPA is significantly higher than the designated population. When considered alongside other</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		<ul style="list-style-type: none"> The distribution of qualifying features within the site. 		<p>factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of kittiwake at the Flamborough and Filey Coast SPA as a result of in-combination displacement impacts.</p> <p>Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Noss SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AE0I

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Noss SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Noss SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk) Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in a significant effect on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Foula SPA	Puffin (non-breeding seasons only)	1. To ensure that the qualifying features of the Foula SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Foula SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the Foula SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on puffin surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure puffins are not at significant risk from injury or mortality.		No AEOI
			Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.	When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of puffin at the Foula SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.	Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Foula SPA.	Maintain the extent and distribution of the supporting habitats for puffin within the site.	There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Puffin (non-breeding seasons only) Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of	Maintain the breeding population of gannet at a stable or increasing trend	The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Gannet (non-breeding seasons only)	the Hermaness, Saxa Vord and Valla Field SPA.	relative to the site reference population	increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population with this analysis presented in the RIAA Part 3.	
Ensure gannets are not at significant risk from injury or mortality.		The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Hermaness, Saxa Vord and Valla Field SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)	No AEOI		
Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI	
Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.					

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Puffin (non-breeding seasons only)	2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Ensure the breeding population of puffin have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on puffin surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the puffin population with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the puffin population at the SPA from recovering. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of puffin at the Hermaness, Saxa Vord and Valla Field SPA as a result of in-combination displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk) Therefore, displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the impact of displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	No AEOI
Ensure puffins are not at significant risk from injury or mortality.			No AEOI		
Ensure puffins can move safely between the site and important areas of functionally linked sea outwith the site.			No AEOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure puffins continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to puffins and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	Puffin (non-breeding seasons only) Gannet (non-breeding seasons only)	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain the extent and distribution of the supporting habitats for the feature within the site. Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover. Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.	There is no pathway for in-combination displacement during all operations and maintenance to result in a significant effect on the habitats of the qualifying species. Therefore, displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI No AEOI No AEOI

1.2.3 Combined collision and displacement

Table 1.10: Conclusions against the conservation objectives of all Special Protection Areas relating to combined collision and displacement during the operations and maintenance phase of Morven North in-combination with other plans and projects

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Fowlsheugh SPA	Kittiwake	1. To ensure that the qualifying features of the Fowlsheugh SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the Fowlsheugh SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Fowlsheugh SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When considered against the current status of the kittiwake population at the SPA, the CGR associated with the PVA outputs associated with NatureScot's approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
		Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	No AEIOI		
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEIOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.</p>	<p>discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Fowlsheugh SPA as a result of in-combination combined collision and displacement impacts. Consequently, as the impact on mortality rate falls within the natural fluctuations of background mortality for the populations, it can be concluded that there is a negligible risk (and so not a significant risk) during the operational and maintenance phase, of collision and displacement causing injury or mortality to the kittiwake populations as a qualifying feature of the SPA.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	<p>No AE0I</p>
		<p>2c. The supporting habitats and processes</p>	<p>Maintain the extent and distribution of the</p>	<p>There is no pathway for in-combination combined collision and displacement during all operations</p>	<p>No AE0I</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Fowlsheugh SPA.	supporting habitats for kittiwake within the site.	and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Outer Firth of Forth and St Andrews Bay Complex SPA	Kittiwake	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure breeding qualifying species have the ability to recover at the relevant SPA breeding colonies.	The in-combination impact level experienced during operations and maintenance on kittiwake at the St Abb's Head to Fast Castle SPA, from which kittiwake may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for	AEOI
			Ensure the qualifying species within Outer Firth		AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			<p>of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and non-breeding seasons.</p>	<p>increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the St Abb's Head to Fast Castle SPA with this analysis presented in the RIAA Part 3.</p>	
			<p>Ensure the qualifying species can move safely between the site and important areas of functionally linked land outwith the site.</p>	<p>The predicted effect on the growth rate of the St Abb's Head to Fast Castle SPA population as predicted by PVA modelling has the potential to be of a magnitude that could prevent the kittiwake population at the St Abb's Head to Fast Castle SPA from continuing to recover. The population of kittiwake at the St Abb's Head to Fast Castle SPA has decreased between the two most recent national censuses but has shown signs of recovery since however, it remains below the designated population. The in-combination impact is considered to be an over-estimate due to various factors discussed in the RIAA Part 3 and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. Whilst taking account of these factors improves the PVA metrics it is considered that this may not be to a level at which the potential for a significant effect can confidently be ruled out. Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the kittiwake population of the St Abb's Head to Fast Castle SPA as a result of in-combination combined collision and displacement impacts associated with Morven North and other plans and projects.</p>	<p>AEOI</p>

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				Therefore, there is potential for in-combination combined collision and displacement during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site, as well as to influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.	The impact of combined collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site.	No AEIOI
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at the Outer Firth	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEIOI
			Ensure the variety and abundance of food	Therefore, combined collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the	No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		of Forth and St Andrews Bay Complex SPA.	resources and the condition of supporting habitats and associated processes have the ability to recover.	habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
	Gannet	1. To ensure that the qualifying features of the Outer Firth of Forth and St Andrews Bay Complex SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Outer Firth of Forth and St Andrews Bay Complex SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2a. The populations of the qualifying features are viable components of the Outer Firth of Forth and St Andrews Bay Complex SPA	Ensure the qualifying species within Outer Firth of Forth and St Andrews Bay Complex SPA are not at significant risk from injury or mortality during the breeding and nonbreeding seasons	The in-combination impact level experienced during operations and maintenance on gannet at the Forth Islands SPA, from which gannet may occur within the Outer Firth of Forth and St Andrews Bay Complex SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the Forth Islands SPA with this analysis presented in the RIAA Part 3.	No AEOI
			Ensure the qualifying species can move safely between the site and		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			important areas of functionally linked land outwith the site.	<p>The predicted effect on the growth rate of the Forth Islands SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the Forth Islands SPA, noting that although the population of gannet at the Forth Islands SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, in-combination combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of combined collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure the qualifying species continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycle associated with the site.		No AEIO
			Avoid significant disturbance to the qualifying species and ensure individuals can move safely between these areas within the site.		No AEIO
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained,	Maintain the extent and distribution of the supporting habitats for the qualifying species within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in a significant effect on the habitats of the qualifying species.	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		or where appropriate restored, at the Outer Firth of Forth and St Andrews Bay Complex SPA.	Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, in-combination combined collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AE0I
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AE0I
Buchan Ness to Collieston Coast SPA	Kittiwake	1. To ensure that the qualifying features of the Buchan Ness to Collieston Coast SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AE0I
		2. To ensure that the integrity of the Buchan Ness to Collieston Coast SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AE0I
		2a. The populations of the qualifying features are viable components of the Buchan Ness to Collieston Coast SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	No AE0I
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AE0I

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	<p>When considered against the current status of the kittiwake population at the SPA, the CGR associated with the PVA outputs associated with NatureScot's approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the Buchan Ness to Collieston Coast SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle</p>	No AE0I
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AE0I
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AE0I

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				associated with the site.it can be concluded that there is a negligible risk (and so not a significant risk)Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Buchan Ness to Collieston Coast SPA.	Maintain the extent and distribution of the supporting habitats for kittiwake within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEIO
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.	Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIO
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIO
Forth Islands SPA	Kittiwake Gannet	1. To ensure that the qualifying features of the Forth Islands SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2. To ensure that the integrity of the Forth Islands SPA is restored in the context of environmental changes by		Please see justifications for objectives 2a, 2b and 2c	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		meeting objectives 2a, 2b and 2c for each qualifying feature:			
	Gannet	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	<p>The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Forth Islands SPA as a result of in-combination combined collision and displacement impacts. it can be concluded that there is a negligible risk (and so not a significant risk)</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance</p>	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
		Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.	No AEOI		
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
	Kittiwake	2a. The populations of the qualifying features are viable components of the Forth Islands SPA.	Maintain the breeding population of kittiwake at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. it can be concluded that there is a negligible risk (and so not a significant risk)When considered against the current status of the kittiwake population at the SPA, the CGR associated with the PVA outputs associated with NatureScot's approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at	No AEOI
Ensure kittiwakes are not at significant risk from injury or mortality.			No AEOI		
Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI			
2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.		Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI		
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>the Forth Islands SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
	Kittiwake Gannet	2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Forth Islands SPA.	Maintain or enhance the extent and distribution of the supporting habitats for the feature within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEOI
Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.			Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI	
Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.				No AEOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Northumberland Marine SPA	Kittiwake	<p>The objectives are to ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on kittiwake at the Farne Islands SPA, from which kittiwake may occur within the Northumberland Marine SPA, surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the Farne Islands SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the Farne Islands SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that they will be no significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, in-combination combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the in-combination impact of combined collision and displacement during operation and maintenance will not influence the</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for in-combination displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, in-combination combined collision and displacement associated with Morven North will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
St Abb's Head to Fast Castle SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	AEOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c.	AEOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population	AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			Ensure kittiwakes are not at significant risk from injury or mortality.	modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	<p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling has the potential to be of a magnitude that could prevent the kittiwake population at the SPA from continuing to recover. The population of kittiwake at the SPA has decreased between the two most recent national censuses but has shown signs of recovery since however, it remains below the designated population. The in-combination impact is considered to be an over-estimate due to various factors discussed and there are various uncertainties that limit the ability of PVA modelling to accurately predict the population effect of the predicted in-combination impact. Whilst taking account of these factors improves the PVA metrics it is considered that this may not be to a level at which the potential for a significant effect can confidently be ruled out. Therefore, due to the current declining trend at the SPA and the PVA outputs it is considered, on a precautionary basis that there is potential for a significant effect on the kittiwake population of the St Abb's Head to Fast Castle SPA</p> <p>Therefore, there is potential for in-combination combined collision and displacement during operation and maintenance to prevent the conservation objectives from being achieved for the assessed qualifying features and the population of the species as viable components of the site or prevent the feature from accessing all</p>	AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	The combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site.	No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.		No AEIOI
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEIOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEIOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Troup, Pennan and Lion's Heads SPA	Kittiwake	1. To ensure that the qualifying features of the St Abb's Head to Fast Castle SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2. To ensure that the integrity of the St Abb's Head to Fast Castle SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the St Abb's Head to Fast Castle SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3. When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can		No AEIOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			move safely between these areas within the site.	<p>significant effect on the population of kittiwake at the Troup, Pennan and Lion's Heads SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Abb's Head to Fast Castle SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	<p>There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
			where this could reduce supporting habitats and/or prey, should be avoided.		
Farne Islands SPA	Kittiwake	Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring: <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering, noting that the population of kittiwake at the SPA declined between the two most recent national censuses. In addition, consideration should be given to other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling. It is also important to note that the Farne Islands SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake and therefore it can be concluded that it is considered that there will be no significant effect on the population of kittiwake at the Farne Islands SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
East Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the East Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2. To ensure that the integrity of the East Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIO
		2a. The populations of the qualifying features are viable components of the	Maintain the breeding population of kittiwake at a stable or increasing trend	The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point	No AEIO

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		East Caithness Cliffs SPA.	relative to the site reference population	threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.	
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.	When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot’s approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. It is therefore considered that there will be no significant effect on the population of kittiwake at the East Caithness Cliffs SPA as a result of in-combination combined collision and displacement impacts.	No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at East Caithness Cliffs SPA.	Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
	Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.		No AEOI		
	Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI		
North Caithness Cliffs SPA	Kittiwake	1. To ensure that the qualifying features of the North Caithness Cliffs SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the North Caithness Cliffs SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the North Caithness Cliffs SPA.	Ensure the breeding population of kittiwake have the ability to recover to the site reference population.	<p>The in-combination impact level experienced during operations and maintenance on kittiwake surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the kittiwake population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>When considered against the current status of the kittiwake population at the SPA, the CGR associated with NatureScot's approach is approaching a level whereby there would be the potential for a significant effect. When the factors discussed in relation to the inherent over-estimation of the in-combination impacts and the uncertainties associated with PVA modelling are taken into account this would improve the PVA metrics predicted above to a level at which it is considered the potential for a significant effect can be discounted. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is therefore not considered to be of a magnitude that would prevent the kittiwake population at the SPA from recovering. The contribution of Morven North to the in-combination impact, particularly under NatureScot's recommended parameter scenario is also not considered to materially alter the current in-combination impact. It is therefore considered that there will be no significant effect on the population of kittiwake at the North Caithness Cliffs SPA as a result of in-combination displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent</p>	No AEIOI
			Ensure kittiwakes are not at significant risk from injury or mortality.		No AEIOI
			Ensure kittiwakes can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure kittiwakes continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEIOI
			Avoid significant disturbance to kittiwakes and ensure individuals can move safely between these areas within the site.	No AEIOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p>	
		<p>2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at North Caithness Cliffs SPA.</p>	<p>Maintain or enhance the extent and distribution of the supporting habitats for kittiwakes within the site.</p>	<p>There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	No AEOI
			<p>Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.</p>		No AEOI
			<p>Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.</p>		No AEOI
	Gannet (non-breeding)	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and</p>		<p>The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
Flamborough and Filey Coast SPA	seasons only)	that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:	<ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 	<p>threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the gannet population at the SPA from being maintained, noting that the population at the SPA is higher than at designation. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Flamborough and Filey Coast SPA as a result of in-combination displacement impacts. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for collision and displacement during all operations and maintenance of Morven</p>	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
	Kittiwake	<p>Ensure that, subject to natural change, the integrity of the site is maintained or restored as appropriate, and that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> • The extent and distribution of the habitats of the qualifying features. • The structure and function of the habitats of the qualifying features. • The supporting processes on which the habitats of the qualifying features rely. • The populations of each of the qualifying features. • The distribution of qualifying features within the site. 		<p>The in-combination impact level experienced during operations and maintenance on kittiwake at the SPA remains below the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). Impacts below this threshold are considered non-material, falling within the natural fluctuations of the population.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would prevent the kittiwake population at the SPA from continuing to grow, noting that the population of kittiwake at the SPA has shown an increasing trend between the two most recent national censuses. In addition consideration should be given to other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling. It is also important to note that the Flamborough and Filey Coast SPA falls under the remit of Natural England. Natural England do not require consideration of displacement impacts for kittiwake and therefore it is considered that there will be no significant effect on the population of</p>	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				<p>kittiwake at the Flamborough and Filey Coast SPA as a result of in-combination combined collision and displacement impacts. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.</p> <p>There is no pathway for collision and displacement during all operations and maintenance of Morven North to result in adverse effects on the habitats of the qualifying species.</p> <p>Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.</p>	
Noss SPA	Gannet (non-breeding)	1. To ensure that the qualifying features of the Noss SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
	seasons only)	2. To ensure that the integrity of the Noss SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEIOI
		2a. The populations of the qualifying features are viable components of the Noss SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Noss SPA as a result of in-combination combined collision and displacement impacts. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance	No AEIOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEIOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEIOI	
	Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEIOI		

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Noss SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
Hermaness, Saxa Vord and Valla Field SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the Hermaness, Saxa Vord and Valla Field SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the Hermaness, Saxa Vord and Valla Field SPA is restored in the context of		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:			
		2a. The populations of the qualifying features are viable components of the Hermaness, Saxa Vord and Valla Field SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3. The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that although the population of gannet at the SPA has increased between the two most recent national censuses it has since declined due to HPAI. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the Hermaness, Saxa Vord and Valla Field SPA as a result of in-combination combined collision and displacement impacts. Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA. Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the	No AEOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.	No AEOI	
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.		No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at Hermaness, Saxa Vord and Valla Field SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species. Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Ensure the variety and abundance of food resources and the condition of supporting habitats and associated processes have the ability to recover.		No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI
St Kilda SPA	Gannet (non-breeding seasons only)	1. To ensure that the qualifying features of the St Kilda SPA are in favourable condition and make an appropriate contribution to achieving Favourable Conservation Status.		The predicted impact is not considered to be of a magnitude that would undermine this conservation objective. Please see justifications for objectives 2a, 2b and 2c	No AEOI
		2. To ensure that the integrity of the St Kilda SPA is restored in the context of environmental changes by meeting objectives 2a, 2b and 2c for each qualifying feature:		Please see justifications for objectives 2a, 2b and 2c	No AEOI

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
		2a. The populations of the qualifying features are viable components of the St Kilda SPA.	Maintain the breeding population of gannet at a stable or increasing trend relative to the site reference population	<p>The in-combination impact level experienced during operations and maintenance on gannet surpasses the advised 0.02 percentage point threshold for increased mortality, as recommended by NatureScot (2023h). As a result population modelling was conducted to further understand potential impacts on the gannet population at the SPA with this analysis presented in the RIAA Part 3.</p> <p>The predicted effect on the growth rate of the SPA population as predicted by PVA modelling is not considered to be of a magnitude that would impact the gannet population at the SPA, noting that the population of gannet at the SPA has remained stable between the two most recent national censuses. When considered alongside other factors discussed in relation to over-estimation of impacts and the uncertainties associated with PVA modelling it is considered that there will be no significant effect on the population of gannet at the St Kilda SPA as a result of in-combination combined collision and displacement impacts.</p> <p>Therefore, combined collision and displacement during operation and maintenance will not prevent the conservation objectives of the site from being achieved and therefore the species will remain a viable component of the SPA.</p> <p>Furthermore, the combined impact of collision and displacement during operation and maintenance will not influence the long-term maintenance of the distribution of the assessed qualifying species within the site or prevent the feature from accessing all optimal habitats suitable for all</p>	No AEIOI
			Ensure gannets are not at significant risk from injury or mortality.		No AEIOI
			Ensure gannets can move safely between the site and important areas of functionally linked sea outwith the site.		No AEIOI
		2b. The distribution of the qualifying features is maintained throughout the site by avoiding significant disturbance of the species.	Ensure gannets continue to have access to and can utilise all optimal habitats suitable for all relevant aspects of their life cycles associated with the site.		No AEIOI
			Avoid significant disturbance to gannets and ensure individuals can move safely between these areas within the site.	No AEIOI	

SPA	Feature	Conservation objective	Site specific advice	Justification	Conclusion
				relevant aspects of the feature's life cycle associated with the site.	
		2c. The supporting habitats and processes relevant to qualifying features and their prey resources are maintained, or where appropriate restored, at St Kilda SPA.	Maintain or enhance the extent and distribution of the supporting habitats for gannets within the site.	There is no pathway for in-combination combined collision and displacement during all operations and maintenance to result in adverse effects on the habitats of the qualifying species.	No AEOI
			Maintain the variety and abundance of food resources and the condition of supporting habitats and associated processes.	Therefore, collision and displacement associated with Morven North in-combination with other plans and projects will not prevent the extent, distribution, structure and function of the habitats of the qualifying species or the supporting processes on which the habitats of qualifying species rely from being maintained or restored.	No AEOI
			Existing water quality should be maintained and any increase in nutrients, turbidity or contaminants where this could reduce supporting habitats and/or prey, should be avoided.		No AEOI