Morven Offshore Wind Farm



Morven Hawthorn Pit Grid Connection Project

Preliminary Environmental Information Report

Volume 4, Annex 1.1: Landscape Character Baseline Technical Report

MVCNS-J4029-RAM-00002
October 2026
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Morven Offshore Wind Limited

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Glossary

Term	Meaning
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of the Applicant's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient woodland	Land that has been continuously wooded since at least 1600 AD in England and is regarded as irreplaceable habitat in national planning policy. Ancient woodland greater than 2 hectares (ha) is recorded on the Ancient Woodland Inventory maintained by Natural England.
Baseline	Existing conditions as represented by the latest available data, whether from literature or survey and used as a benchmark for making comparisons to assess the impact of a development or project.
Blue Onshore Land Substation (LSS) Option Area	Proposed location option for the onshore land substation, located west of the A19 and south of the access road to the Jade Business Park.
Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type.
Conservation Area	An area of special architectural or historic interest, the character, appearance or setting of which it is desirable to preserve or enhance.
Desk study	A desk-based research method used to collect and analyse existing information, including the review of literature, previous survey reports, databases and maps to inform the baseline environment and the need for further surveys.
Effect	Term used to express the consequence of an impact. The significance of an effect is determined by correlating the magnitude of the impact with the importance, or sensitivity, of the receptor or resource in accordance with defined significance criteria.
Green Onshore Land Substation (LSS) Option Area	Proposed location option for the onshore land substation, located between Jade Business Park (Spring Rd, Murton, Seaham SR7 9DR) and the National Grid Hawthorn Pit Substation.
Impact	A change caused by an action that occurs during a project's lifetime.
Key characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
Land cover	The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.

Land use	What land is used for, based on broad categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.
Landform	The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.
Landscape	An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human factors.
Landscape character	A distinct, recognisable and consistent pattern of elements in the landscape that makes one landscape different from another, rather than better or worse.
Landscape Character Assessment	The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.
Likely Significant Effect	Effects from the Proposed Development that have a pathway for effect to the National site that could affect the conservation objectives for the site's qualifying features. If the proposed development 'would be likely to have significant effect on a 'National site' as per the Habitat Regulations, then then an appropriate assessment of the plan or project must be carried out by the Competent Authority.
MHPGC Project PEIR Red Line Boundary	The area within which all components of the MHPGC Project will be located, including areas required on a temporary basis during construction and/or decommissioning (such as construction compounds).
MHPGC Project Preliminary Environmental Information Report (PEIR)	A report that provides preliminary environmental information in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017. This is information that enables consultees to understand the likely significant environmental effects of a project and which helps to inform consultation responses.
MHPGC Project Scoping Report	A Scoping Report for the MHPGC Project, scoping the likely significant effects of the project on the environment, was submitted and accepted by Planning Inspectorate (PINS) and submitted to the Scottish Ministers, via the Marine Directorate – Licencing Operations Team (MD-LOT) in February 2025.

Morven Hawthorn Pit Grid Connection Project	The MHPGC Project is comprised of the offshore export cables in Scottish and English waters from the Morven North or the Morven South offshore substation platform(s) (OSP), landfall, onshore export cables, the onshore land substation (LSS) and AC connection cables. Also referred to in this report as the MHPGC Project, for ease of reading.
Onshore Land Substation (LSS)	A purpose-built site comprising a compound containing the electrical components for converting the HVDC to HVAC power. The LSS site associated with the MHPGC Project adjusts the power quality and power factor to meet the requirements of power supply being fed to the National Grid Hawthorn Pit Substation.
Receptor	A specific environmental feature, resource, population or asset that may be affected by the MHPGC Project, either directly or indirectly, and which falls within the environmental topics considered under the EIA Regulations.
Seascape	Landscapes with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.
Significance	Effect factor that is determined by the magnitude of impact along with the sensitivity of the receptor.
Susceptibility	The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.
the Study Area	For each environmental topic, the baseline environment will be characterised, and the likely significant effect will be described within a topic-specific Study Area. Specific Study Areas are defined for each topic and are based on the maximum spatial extent across which likely significant effects of the MHPGC Project may be experienced by the relevant receptors (i.e. Zone of Influence (ZoI)).
Tranquillity	A state of calm and quietude associated with peace, considered to be a significant asset of landscape.
Visual amenity	The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.
Zone of Theoretical Visibility (ZTV)	A computer-generated map that illustrates the area from which a proposed development may be visible based on a digital model.

Acronyms

Unit	Meaning
AHLV	Area of Higher Landscape Value
BCA	Broad Character Area
DCC	Durham County Council
EIA	Environmental Impact Assessment
EWG	Expert Working Group
GLVIA3	Guidelines for Landscape and Visual Impact Assessment 2013 (3rd edition)
IEMA	Institute of Environmental Management and Assessment
LCA	Landscape Character Area
LNR	Local Nature Reserve
LSS	onshore land substation
LVIA	Landscape and Visual Impact Assessment
MCA	Marine Character Area
MHPGC	Morven Hawthorn Pit Grid Connection
MMO	Marine Management Organisation
NCA	National Character Area
PEIR	Preliminary Environmental Information Report
SSSI	Site of Special Scientific Interest
ZTV	Zone of theoretical visibility

Units

Unit	Meaning
km	Kilometre
m	Metre

Executive Summary

This report presents the Landscape Character Baseline Technical Report for the Morven Hawthorn Pit Grid Connection Project. It forms **Volume 4, Annex 1.1: Landscape Character Baseline, of the Preliminary Environmental Information Report (PEIR)**.

The purpose of this report is to provide a comprehensive baseline understanding of the landscape character areas within the Landscape and Visual Amenity Study Area (presented in **Figure 1.1** of **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR**). The report draws upon studies such as the County Durham Landscape Character Assessment and City of Sunderland Landscape Character Assessment. It provides a description of the key characteristics and features of the National Character Area (NCA), broad character areas (BCAs) and Landscape Character Areas (LCAs) identified. The value, susceptibility, and sensitivity of each character area is defined, to inform the assessment of impact on landscape character within **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR**.

1 Introduction

1.1 Overview

1.1.1.1 This Annex presents the Landscape Character Baseline Technical Report for the Morven Hawthorn Pit Grid Connection Project (referred to hereafter as 'the MHPGC Project'). It forms **Volume 4, Annex 1.1: Landscape Character Baseline, of the Preliminary Environmental Information Report (PEIR)** prepared for the MHPGC Project and supports **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR**.

1.1.1.2 This report identifies the landscape and seascape character areas within the Landscape and Visual Amenity Study Area (defined in **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR)** and describes their baseline characteristics and relationship to the MHPGC Project PEIR Red Line Boundary. This provides a basis for the assessment of sensitivity and impact on landscape character, which is detailed within **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR**.

1.1.1.3 The report presented is informed by the following technical chapters:

- **Volume 1, Chapter 2: Project Description, of the PEIR**.

1.1.1.4 The chapter also draws on information contained within the following annexes:

- **Volume 1, Annex 4.2: Scoping Responses, of the PEIR**;
- **Volume 4, Annex 1.3: Landscape and Visual Amenity Impact Assessment Methodology, of the PEIR**.

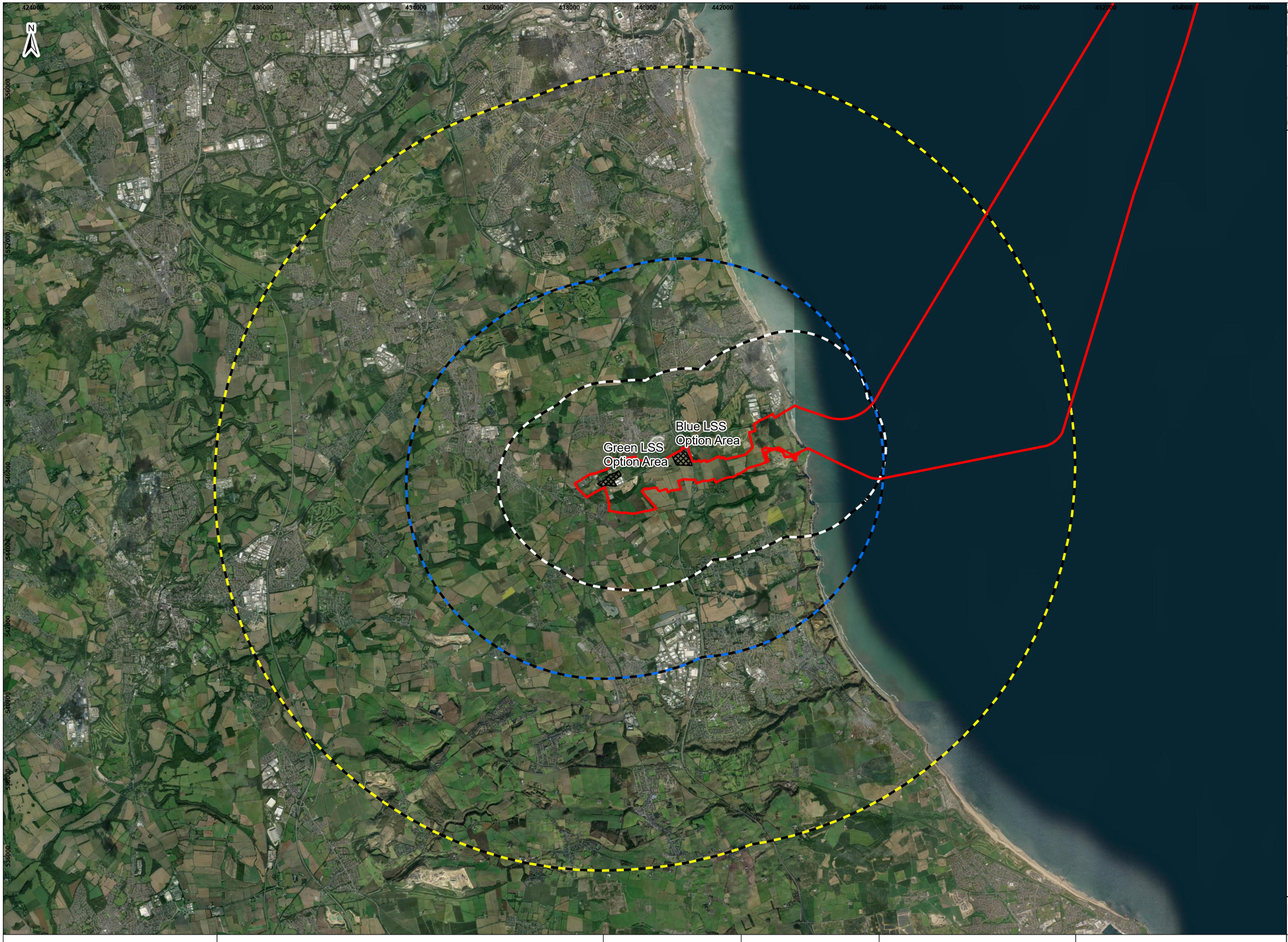
2 Landscape Character

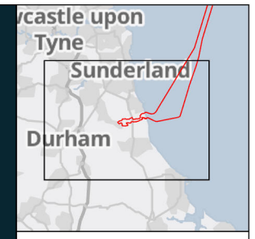
2.1.1.1 The following published studies on landscape and seascape character have been reviewed in the preparation of this report, alongside observations from site visits:

- National Character Area (NCA) Profiles, Natural England, 2026;
- MMO 1134: Seascape Character Assessment for the North East Inshore and Offshore marine plan areas, Marine Management Organisation, 2018
- County Durham Landscape Character Assessment, Durham County Council, 2008; and
- City of Sunderland Landscape Character Assessment, LUC for Sunderland City Council, 2015.

2.1.1.2 The Landscape and Visual Amenity Study Area is described within **Volume 4, Chapter 1 and** presented in **Figure 1.1**. An overview of each published study and identification of the character areas within the Landscape and Visual Amenity Study Area is provided below, alongside a description of the key characteristics and identification of the value, susceptibility and sensitivity of each character area, informed by a combination of site visits in October 2026 and March 2026 and desk study. Accompanying illustrative information is presented across the following figures:

- **Figure 1.2: Zone of theoretical visibility and viewpoints – green LSS**;
- **Figure 1.3: Zone of theoretical visibility and viewpoints – blue LSS;**
- **Figure 1.4: Topography**;
- **Figure 1.5: Landscape character**;
- **Figure 1.6: Designations and classifications**;
- **Figure 1.7: Landscape elements**;
- **Figure 1.8: Amenity access**.





LEGEND

- MHPGC Project PEIR Red Line Boundary
- LSS Option Areas
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Cumulative Landscape and Visual Amenity Study Area

The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Red Line Boundary: Onshore.

The Cumulative Landscape and Visual Amenity Study Area extends 10km from the LSS Option Areas.

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RAMBOLL

Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 1.1: LANDSCAPE AND VISUAL AMENITY STUDY AREA

0 2 km

Scale@A3 1:90,000

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

Data Sources:
M3, Ramboll, Ordnance Survey

Service Layer Credits:
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04	29/09/26	Updates	BW	JC	IL

Green LSS Option Area

LEGEND

- MHPGC Project PEIR Red Line Boundary
- Green LSS Option Area
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Building
- Woodland
- Viewpoint Location

Zone of Theoretical Visibility (ZTV) Scenarios:

DTM (Digital Terrain Model)
No obstructions; visibility based solely on terrain

DTM + Buildings + Woodland
Visibility obstructed by buildings and woodland areas

DSM (Digital Surface Model)
Visibility obstructed by all above-ground features, including buildings, vegetation, and other structures

Disclaimer:

1. ZTV were calculated using points placed at 100m intervals around the LSS Option boundary, set at 30m above ground level as the height would not extend across the full extent of the LSS Option area.

2. Visibility analysis was conducted for three different scenarios using the DEFRA LIDAR Composite DTM and DSM (2m x 2m resolution, 8-bit unsigned pixel depth) excluding the area that extends offshore, along with Open Data layers representing woodland and buildings.

3. Predicted visibility based on a viewer eye height 2m above ground.

4. Observation Points set to 30m above ground level.

5. Effect of earth curvature and light refraction is included.

6.The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

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RAMBOLL

Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 1.2: ZONE OF THEORETICAL VISIBILITY AND VIEWPOINTS - GREEN LSS

0 1 km

Scale@A3 1:50,000

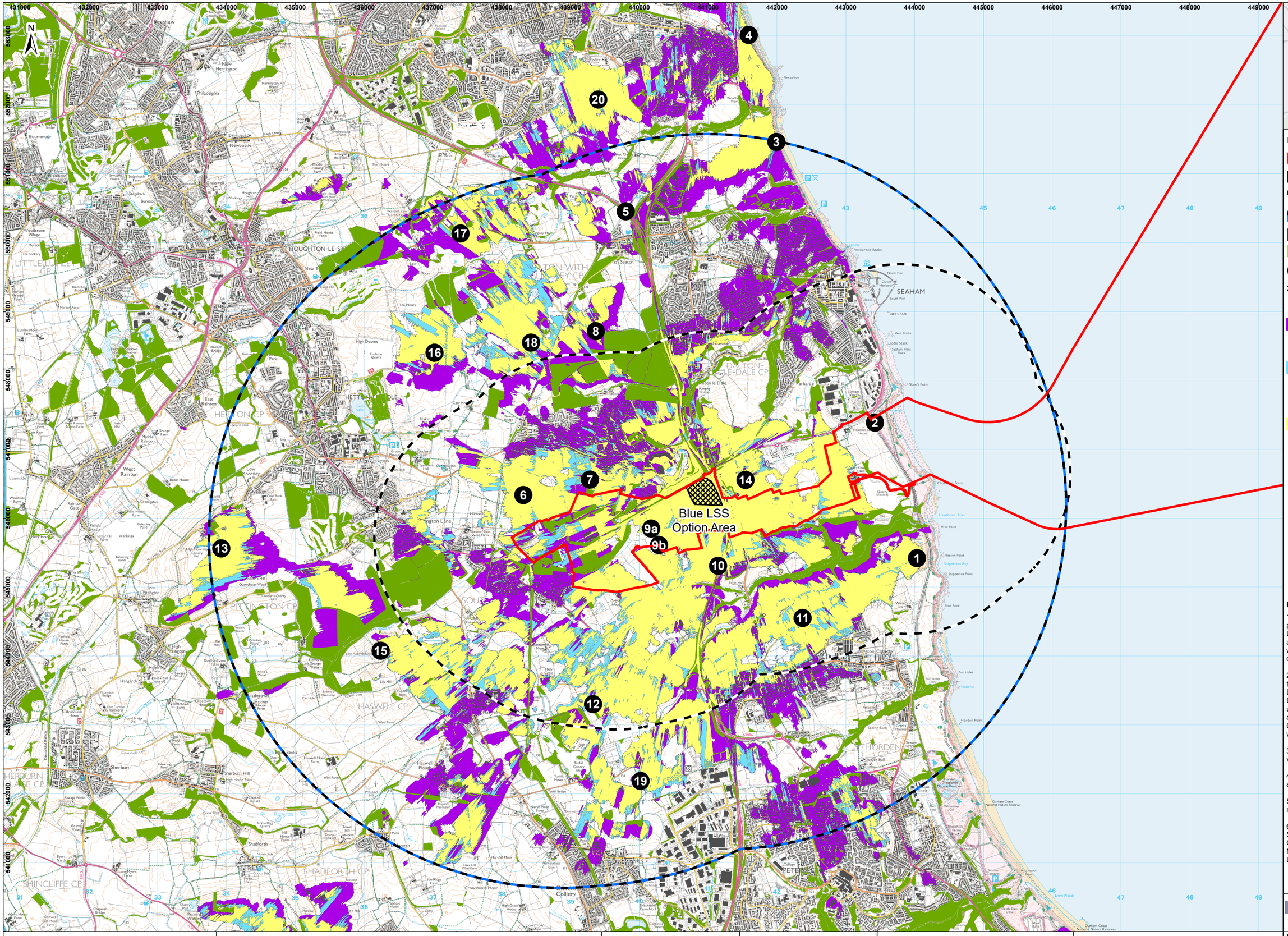
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LEGEND

- MHPGC Project PEIR Red Line Boundary
- Blue LSS Option Area
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Building
- Woodland
- Viewpoint Location

Zone of Theoretical Visibility (ZTV) Scenarios:

DTM (Digital Terrain Model)
No obstructions; visibility based solely on terrain

DTM + Buildings + Woodland
Visibility obstructed by buildings and woodland areas

DSM (Digital Surface Model)
Visibility obstructed by all above-ground features, including buildings, vegetation, and other structures

Disclaimer:

1. ZTV were calculated using points placed at 100m intervals around the LSS Option boundary, set at 30m above ground level as the height would not extend across the full extent of the LSS Option area.

2. Visibility analysis was conducted for three different scenarios using the DEFRA LIDAR Composite DTM and DSM (2m x 2m resolution, 8-bit unsigned pixel depth) excluding the area that extends offshore, along with Open Data layers representing woodland and buildings.

3. Predicted visibility based on a viewer eye height 2m above ground.

4. Observation Points set to 30m above ground level.

5. Effect of earth curvature and light refraction is included.

6.The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

Morven Offshore Wind Farm

RAMBOLL

Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 1.3: ZONE OF THEORETICAL VISIBILITY AND VIEWPOINTS - BLUE LSS

0 1 km

Scale@A3 1:50,000

Geodetic Information:
Datum: OSGB 1936
Projection: British National Grid

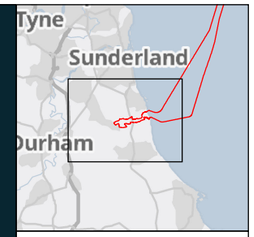
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LEGEND

- MHPGC Project PEIR Red Line Boundary
- LSS Option Areas
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Watercourse / Waterbody
- Contours (10m)
- Contours (50m)

Topography (mAOD)

195 mAOD

0 mAOD

The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

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Project Name:

MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:

FIGURE 1.4: TOPOGRAPHY

0 1 km

Scale@A3 1:50,000

Geodetic Information:

Datum: OSGB 1936
Projection: British National Grid

Data Sources:

M3, Ramboll, Ordnance Survey, DEFRA, Environment Agency

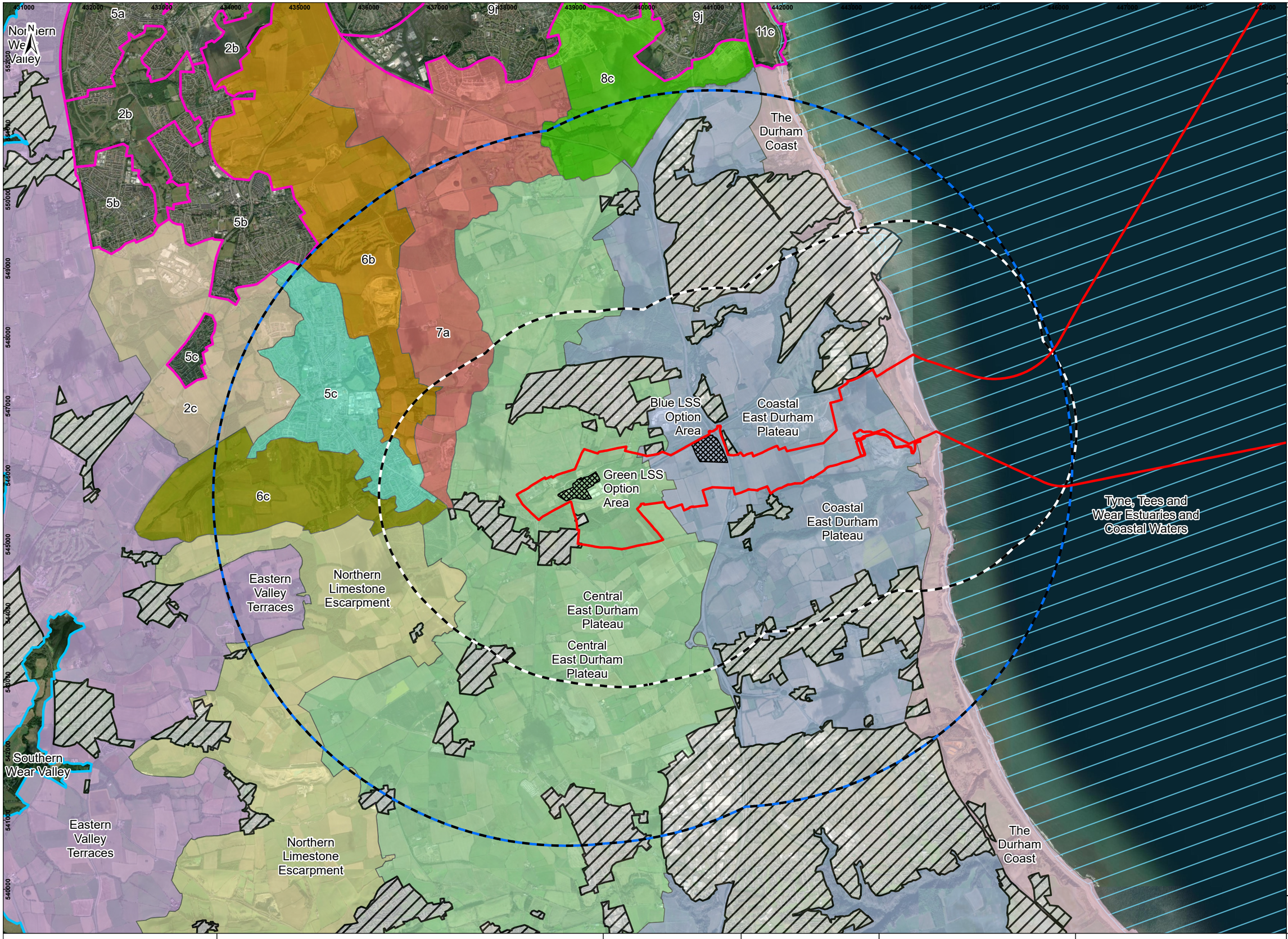
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LEGEND

- MHPGC Project PEIR Red Line Boundary
- LSS Option Areas
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km

Within Study Area

- 2c: Rainton Lowland
- 5c: Hetton-le-Hole, Easington Lane and East Rainton
- 6b: Hastings Hill and Copt Hill
- 6c: High Moorsley
- 7a: Warden Law and Eppleton Moor
- 8c: Burdon to Ryhope
- Central East Durham Plateau
- Coastal East Durham Plateau
- Eastern Valley Terraces
- Northern Limestone Escarpment
- The Durham Coast
- Urban
- Marine Character Areas

Outside Study Area

- Sunderland Landscape Character Area
- Durham Broad Character Area

The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

Morven Offshore Wind Farm

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Project Name:
MORVEN HAWTHORN PIT GRID CONNECTION PROJECT

Drawing Title:
FIGURE 1.5: LANDSCAPE CHARACTER

0 1 km

Scale@A3 1:50,000

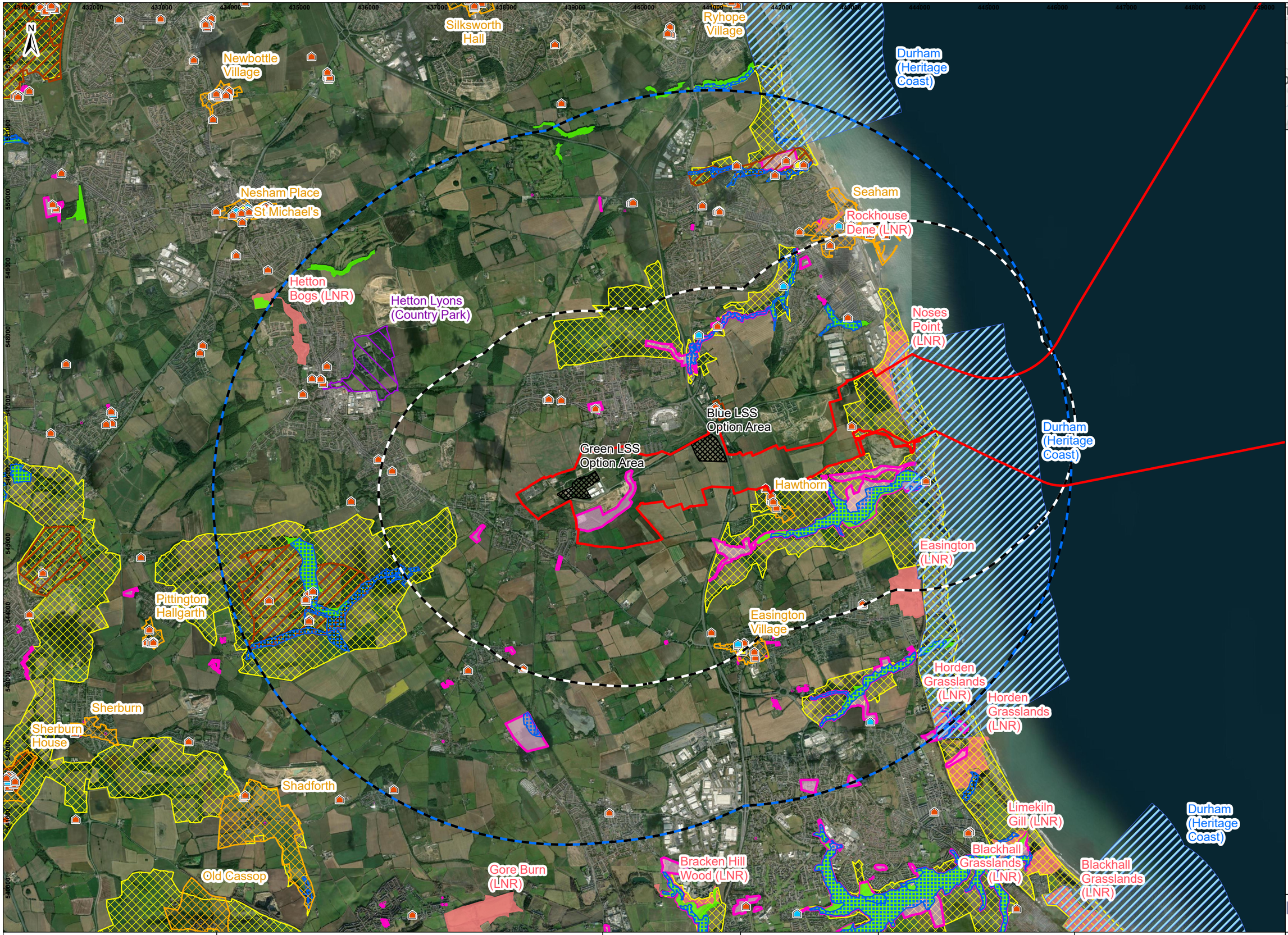
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Datum: OSGB 1936
Projection: British National Grid

Data Sources:
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04	20/08/26	Updates	JC	BW	IL



LEGEND

- MHPGC Project PEIR Red Line Boundary
- LSS Option Areas
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Grade I Listed Building
- Grade II Listed Building
- Grade II* Listed Building
- Conservation Area
- Country Park
- Local Nature Reserve
- Heritage Coast
- Ancient & Semi-Natural Woodland

Durham County Council

- Tree Preservation Order
- Ancient Woodland
- Park and Garden of Local Interest
- Area of Higher Landscape Value

The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

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Project Name:
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Drawing Title:
FIGURE 1.6: DESIGNATIONS AND CLASSIFICATIONS

0 1 km

Scale@A3 1:50,000

Geodetic Information:
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Projection: British National Grid

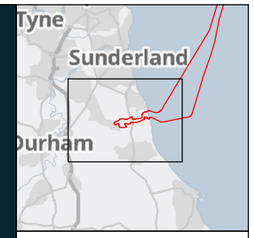
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04	20/08/26	Updates	JC	BW	IL





LEGEND

- MHPGC Project PEIR Red Line Boundary
- LSS Option Areas
- Landscape and Visual Amenity Study Area – 2km
- Landscape and Visual Amenity Study Area – 5km
- Railway
- Motorway
- A Road
- B Road
- Minor Road
- Electricity Transmission Line
- Built Form
- Woodland
- Watercourse / Waterbody
- Wind Turbine
- Communication Mast
- Communication Tower
- Power Tower

The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

Morven Offshore Wind Farm

RAMBOLL

Project Name:
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Drawing Title:
FIGURE 1.7: LANDSCAPE ELEMENTS

0 1 km

Scale@A3 1:50,000

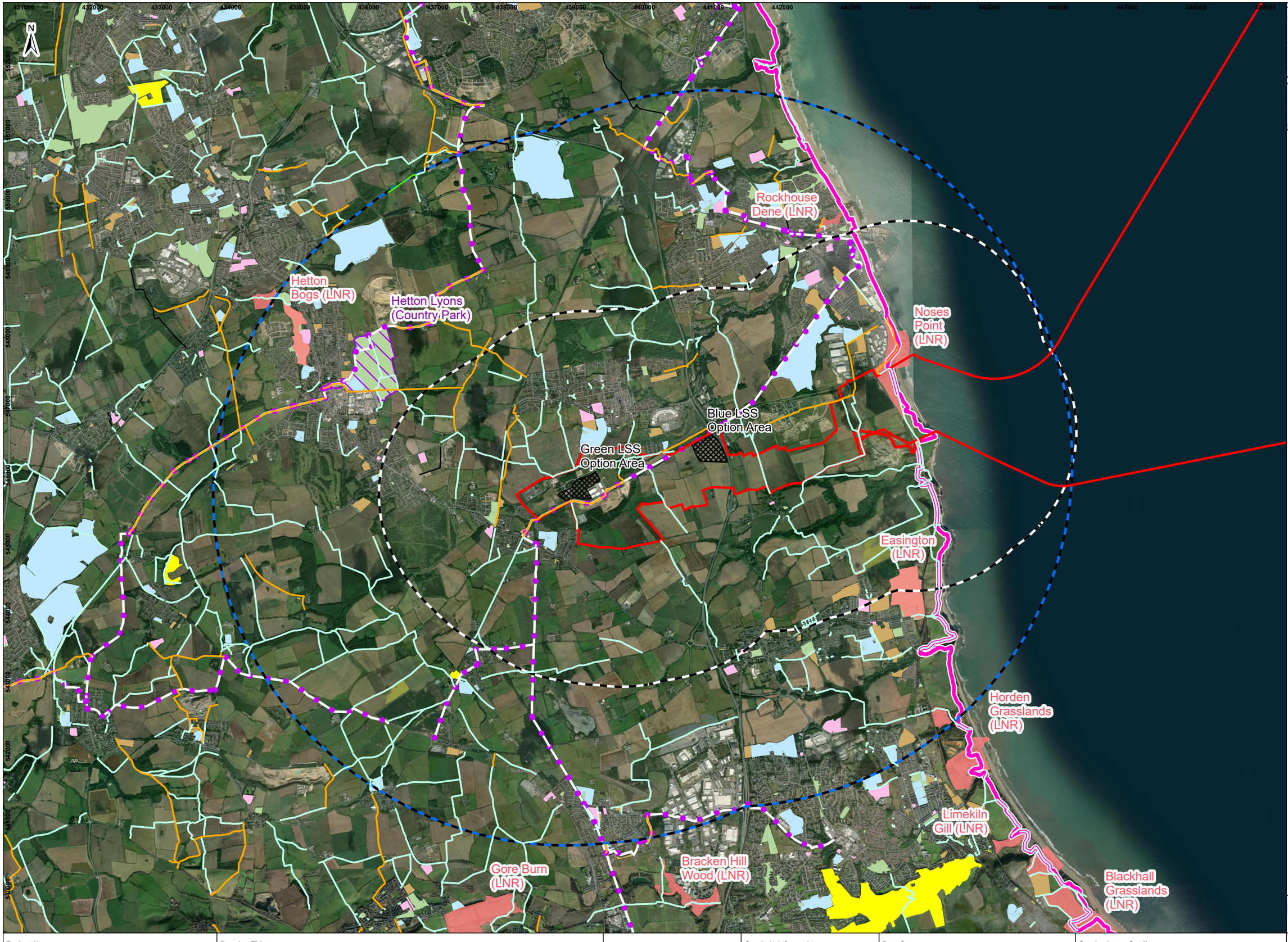
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The Landscape and Visual Amenity Study Area extends 5km from the LSS Option Areas and 2km from the MHPGC Project PEIR Onshore Red Line Boundary.

Morven Offshore Wind Farm

RAMBOLL

Project Name: MORVEN HAWTHORN PIT GRID CONNECTION PROJECT	**Drawing Title:** FIGURE 1.8: AMENITY ACCESS	0 1 km Scale@A3 1:50,000	**Geodetic Information:** Datum: OSGB 1936 Projection: British National Grid	**Data Sources:** M3, Ramboll, Ordnance Survey, Natural England, Durham County Council, Sunderland City Council, Walk Wheel Cycle Trust	**Service Layer Credits:** Earthstar Geographics, Contains OS data © Crown Copyright and database right 2026. Contains data from OS Zoomstack Contains public sector information licensed under the Open Government Licence v3.0. © Natural England Copyright 2025. Copyright © 2025 Durham County Council. Copyright © 2025 Sunderland City Council. © Walk Wheel Cycle Trust. Contains Ordnance Survey data © Crown copyright and database right 2025.

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04	20/08/26	Updates	JC	BW	IL

National Character Areas

2.1.1.3 NCAs divide England into 159 distinct areas. Each NCA represents an area of distinct and recognisable character at the national scale and is defined by a unique combination of:

- landscape;
- biodiversity;
- geodiversity;
- history; and
- cultural and economic activity.

2.1.1.4 The NCA profiles have been developed by Natural England in partnership with stakeholders.

2.1.1.5 The Landscape and Visual Amenity Study Area is located within NCA 15, Durham Magnesian Limestone Plateau (Natural England, 2026).

2.1.1.6 MMO 1134 establishes seascape character assessments for the north east, north west, south east and south west marine plan areas. The Seascape Character Assessment for the North East Inshore and Offshore marine plan areas report (Marine Management Organisation, 2018) identifies nine Marine Character Areas (MCAs).

2.1.1.7 The Landscape and Visual Amenity Study Area is located within MCA 22, Tyne, Tees and Wear Estuaries and Coastal Waters.

2.1.2 NCA 15, Durham Magnesian Limestone Plateau

2.1.2.1 The MHPGC Project PEIR Red Line Boundary is located centrally within the overall NCA, it comprises a small proportion of the NCA with the NCA extending beyond the Landscape and Visual Amenity Study Area, excluding the sea (see **Figure 1.5**).

2.1.2.2 The key characteristics or features of the NCA are identified in the published NCA description (Natural England, 2026) as:

- a gently rolling plateau, with incised denes (steep-sided valleys) and rounded topography;
- coastal cliffs, denes, and sandy beaches along the coastline;
- predominantly agricultural land, interspersed with urban areas; and
- notable features such as wind farms and electricity pylons.

2.1.2.3 A west-facing Magnesian Limestone escarpment forms a series of spurs and valleys which mark the western boundary of the NCA and overlooks the Tyne and Wear Lowlands to the north and west, affording views of the City of Durham. The plateau drops gradually to the Tees Lowlands to the south and the Durham Coalfield Pennine Fringe to the south-west.

2.1.2.4 The general land use of the NCA includes productive arable farmland and improved pasture. Urban areas are concentrated around towns such as Sunderland, Peterlee, and Seaham, with smaller villages dispersed throughout. The area also features significant open spaces such as parkland, country estates, the River Wear Valley and coastal denes and nature reserves.

2.1.2.5 Vegetation across the area is characterised by well-managed hedgerows, some containing trees, alongside agricultural fields. There are limited large woodland blocks, which are often associated with parkland and estate landscapes. Habitats of high conservation importance include the Magnesian Limestone grassland which exists in small, isolated fragments, with concentrations along the western escarpment.

2.1.2.6 The Durham Magnesian Limestone Plateau features gently undulating large, open arable fields, with dramatic boundaries formed by a steep limestone escarpment to the west and coastal cliffs to the east. The escarpment rises to 193m and is dissected by streams which have carved it into a series of incised valleys. Notable watercourses include streams flowing east to the North Sea, short western streams joining the River Wear, and southern streams feeding the River Skerne.

2.1.2.7 Key views from the plateau often feature expansive, open vistas over farmland towards the coast, and the visual amenity is generally open with occasional enclosure caused by vegetation and built structures. The largely open landscape enables long-distance views which contribute to the area's visual character.

2.1.2.8 The tranquillity varies throughout the NCA, with less tranquil areas around urban centres and more tranquil, secluded regions within agricultural and natural spaces. This variation is reflected within the Landscape and Visual Amenity Study Area.

2.1.2.9 The presence of linear infrastructure such as major highways (A19 and A1), electricity pylons, and wind farms is notable within the NCA. Additionally, there are various industrial buildings and substations, contributing to the dynamic and evolving landscape character.

2.1.3 MCA 22, Tyne, Tees and Wear Estuaries and Coastal Waters

2.1.3.1 The MHPGC Project PEIR Red Line Boundary is located centrally within the overall MCA, it comprises a small proportion of the MCA, with the MCA extending beyond the study area to the north, east and south, as shown on **Figure 1.5**.

2.1.3.2 The key characteristics or features of the Tyne, Tees and Wear Estuaries and Coastal Waters MCA 22 are identified in the published MCA description (Marine Management Organisation, 2018) and include:

- Contrasting areas of undeveloped exposed coastline of sweeping sandy beaches, punctuated by estuaries and rocky outcrops that form slight headlands between South Shields and Hartlepool.
- The major ports of Tyne, Teesport and Blyth accommodate a variety of vessels, including ferries from the Port of Tyne. These shipping hubs combined with traffic from the smaller harbours and ports (Seaham, South Shields and Sunderland) generate large volumes of sea traffic and busy waters. Significant cultural and industrial heritage associated with ports and harbours represented in built character.
- Large fishing fleets based at the region's major commercial fishing and shellfish ports at North Shields, with other landings at smaller ports such as Hartlepool and Blyth.
- Recovering Durham coast, formally degraded by colliery waste: the 'black beaches' and landfill at Easington and Horden are now popular recreational areas, and form part of the undeveloped Durham Heritage Coast and a valuable buffer between industrial development associated with the estuaries to the north and south.
- Good coastal access along much of the coast providing increasing opportunities for recreation and tourism, including fishing from the now clean former industrial beaches and walking along stretches of the England Coast Path.
- Expansive views across the North Sea, particularly from the 'Leas' in South Tyneside, where vast horizons are frequently marked by cargo ships, tankers and fishing vessels, or the moving turbines of the Teeside and Blyth (Demonstrator) Offshore Wind Farms.
- Viewed from the sea, the coastline is perceived as a well lit developed lowland, densely populated with several large coastal conurbations, including Sunderland, South Shields, and Tynemouth. The southern part of the MCA is intensely lit by the extensive industrial facilities at Middlesbrough.

2.1.3.3 The area of the MCA within the Landscape and Visual Amenity Study area reflects these key characteristics through:

- the presence of residential, commercial, and industrial uses along the coast, as well as sections of more rural and open areas;
- the presence of large working vessels within the sea (moving and stationary) visible off the coast;
- reddish rock pools on Blast Beach from traces of iron oxides;
- coastal access along the King Charles III Coastal Path; and
- expansive views across the North Sea, particularly from elevated cliff-top positions.

2.1.3.4 There is relatively limited visibility of the sea from inland areas due to the gently undulating topography and cliffs, however there are distant views towards a seascape horizon line from more elevated rural locations.

2.1.3.5 Along the coastline of MCA 22 are the three segments of the Durham Heritage Coast, split around the localities of Seaham and Peterlee and extending approximately 1.5km into the sea from the

shoreline. The MHPGC Project PEIR Red Line Boundary passes through the central segment of the Durham Heritage Coast, including Blast Beach.

2.2 County Durham Landscape Character Assessment

2.2.1.1 The County Durham Landscape Character Assessment (Durham County Council, 2008) is described as a detailed assessment of the character of the county. It was undertaken by the Council's Landscape Section between 2000 and 2003 with the assistance of the Countryside Agency and consultants Shiels Flynn and was formally adopted by the Council in April 2008. All areas within the county are included in the assessment, whether developed or undeveloped.

2.2.1.2 The Landscape and Visual Amenity Study Area is located within the East Durham Limestone Plateau landscape type, which is divided into seven broad character areas (BCAs): Southern Limestone Escarpment, Limestone Escarpment Ridge, Northern Limestone Escarpment, Central East Durham Plateau, Coastal East Durham Plateau, Sheraton and The Durham Coast. The Southern Limestone Escarpment, Limestone Escarpment Ridge and Sheraton BCAs are located outside the Landscape and Visual Amenity Study Area and are therefore not considered further within this report. The BCAs within the Landscape and Visual Amenity Study Area are presented in **Figure 1.5**. Viewpoint photography from across the study area provides an illustration of part of the landscape character within the study area at each viewpoint location and is presented within **Volume 4, Annex 1.3: Landscape and Visual Resources Impact Assessment Methodology, of the PEIR** with viewpoint locations presented in **Figure 1.2** and **Figure 1.3** of **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR**.

2.2.1.3 The Eastern Valley Terraces BCA, part of the Lowland Valley Terraces landscape type, is situated in the west of the Landscape and Visual Amenity Study Area. A small proportion of the BCA lies within the Landscape and Visual Amenity Study Area and the BCA is visually screened by intervening woodland and landform. The zone of theoretical visibility (ZTV) analysis (presented in **Figure 1.2** and **Figure 1.3**) shows that neither the Blue nor Green onshore land substation (LSS) Option Areas would be visible from this location. Therefore, this BCA has been scoped out from further consideration.

2.2.1.4 While the Wear Lowlands (and associated BCAs) was included within the MHPGC Project Scoping Report, it is now located outside the Landscape and Visual Amenity Study Area and not judged to have the potential for significant landscape impacts. As such, it has been scoped out from further consideration and agreed with the EWG.

2.2.2 Northern Limestone Escarpment BCA

2.2.2.1 The Northern Limestone Escarpment BCA is partially situated within the west of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 1.3km to the east) as shown on **Figure 1.5**. Viewpoint 15 is located within this BCA and provides an illustration of its character within part of the BCA.

2.2.2.2 The key characteristics or features of the Northern Limestone Escarpment BCA are identified in the published BCA description (Durham County Council, 2008) as:

- a prominent Magnesian Limestone escarpment that forms distinctive landforms including spurs, ridges, and steep slopes;
- elevation varies significantly from higher points along the escarpment overlooking lower areas to the west and south;
- active and abandoned limestone quarries and settlement pattern includes small villages, mining villages and towns scattered across; and
- visually open and panoramic views extend from the ridge tops and spurs, across a landscape of open farmland, low woodland cover, and flower-rich limestone grassland.

2.2.2.3 The northern area of the BCA is an Area of Higher Landscape Value (AHLV) (see **Table 1.3** of **Volume 4, Chapter 1: Landscape and Visual Amenity, of the PEIR** for policy details regarding AHLV), extending west to Low Pittington and south to Littletown.

2.2.2.4 The eastern half of Elemore, one of Durhams Parks, Gardens and Designed Landscapes of Local Interest (Durham County Council, 2020) is located within the BCA (with the western half within the Eastern Valley Terraces BCA) and is located fully within the Landscape and Visual Amenity Study

Area. Views from Elemore in the direction of the MHPGC Project Red Line Boundary are prevented by surrounding woodland blocks.

2.2.2.5 The general land use of the BCA includes agricultural land predominantly composed of arable fields interspersed with pasture. The escarpment is relatively undeveloped with scattered villages and small urban areas. Open spaces include natural habitats and occasional recreation areas.

2.2.2.6 Vegetation within the area primarily consists of well-managed hedgerows in semi-regular patterns of medium and large-scale fields, typically clipped low and dominated by hawthorn, with few trees. Additionally, the landscape includes patches of broadleaf woodland and small areas of ancient ash woodlands and semi-natural grasslands, which collectively contribute to the area's biodiversity.

2.2.2.7 The general topography of the BCA is characterised by a prominent, steep escarpment with varied relief, featuring spurs and ridges. Notable watercourses include small streams that flow off the escarpment into adjacent lowlands.

2.2.2.8 The visual amenity of the BCA is marked by dramatic views from the escarpment over surrounding areas, including expansive vistas towards Durham City and the Tyne and Wear Lowlands. The landscape is generally open, with occasional enclosures created by topography and vegetation.

2.2.2.9 The BCA is relatively tranquil overall. More tranquil areas are found in rural areas, including the part of the BCA within the Landscape and Visual Amenity Study Area, while lower tranquillity may be experienced near transport routes and urban areas outside the Landscape and Visual Amenity Study Area to the south.

2.2.2.10 Several large and smaller limestone quarries active or abandoned are present on ridges and spurs, often highly visible. The large quarry face of Cornforth (Raisby) Quarry is a notable landmark. The BCA also features linear infrastructure such as the A19 highway and electricity pylons, contributing to the landscape's character. The presence of small industrial buildings and substations is noted, with minimal large-scale urban development.

2.2.3 Central East Durham Plateau BCA

2.2.3.1 The Central East Durham Plateau BCA is partially situated north-south within the centre of the Landscape and Visual Amenity Study Area and is partially located within the MHPGC Project PEIR Red Line Boundary. The Green LSS Option Area is located wholly within the BCA as shown on **Figure 1.5**. Viewpoints 6, 7, 8, 9, 12, 18 and 19 are located within this BCA and provide an illustration of its character within part of the BCA.

2.2.3.2 The key characteristics or features of the Central East Durham Plateau BCA are identified in the published BCA description (Durham County Council, 2008) as:

- low plateau of flat, gently rolling or undulating terrain;
- soft magnesian limestones are covered by a thick mantle of boulder clay with heavy, seasonally waterlogged clay soils;
- mosaic of improved pasture and arable cropping;
- a visually open landscape, broad in scale with few trees and sparsely wooded; and
- scattered mining villages, abandoned railway lines, areas of derelict colliery land, reclaimed land and old clay pits.

2.2.3.3 The general land use of the BCA includes agricultural land predominantly composed of arable fields interspersed with pasture. The plateau is relatively undeveloped with scattered mining villages and small urban areas.

2.2.3.4 Vegetation within the area primarily consists of low hawthorn hedges in semi-regular patterns of medium and large-scale fields. Additionally, tree and woodland cover is low including degraded hedgerows often with large gaps, occasional small broadleaved woods and larger conifer plantations. Areas of scrub and young woodland are found on pockets of derelict colliery land, old railway lines and abandoned grassland. A number of tree preservation orders are located within the BCA (with locations shown on **Figure 1.6**), including Coop House Wood located within the MHPGC Project PEIR Red Line Boundary and to the south of the Green LSS Option Area (baseline analysis and assessment of arboricultural receptors is provided within **Volume 3, Chapter 3: Terrestrial Ecology and Terrestrial and Intertidal Ornithology, of the PEIR**, CoT42 commits that vegetation,

including trees, woodland and hedgerows, will be mapped through a Vegetation Retention Plan (or similar) to inform construction activities, with vegetation retained wherever practicable).

2.2.3.5 The general topography of the BCA is characterised by an open landscape of gently rolling landform, in places almost flat. The BCA features several small rivers and streams that traverse its extent.

2.2.3.6 The landscape is visually very open and broad in scale, characterised by a semi-rural or urban fringe ambiance prevalent in most areas. This atmosphere results from a dense settlement pattern, numerous busy roads, overhead utilities, and patches of derelict land. Telecommunications masts and the pylons of overhead transmission lines feature frequently on the skyline.

2.2.3.7 The tranquillity of the Central East Durham Plateau varies significantly across the BCA. The northern areas of the BCA are less tranquil due to the presence of dense settlements and road corridors, while the southern parts of the BCA are further away from urban fringes and exhibit higher levels of tranquillity. Within the Landscape and Visual Amenity Study Area tranquillity is limited by the presence of settlements at Murton and South Hetton, Haswell, the A19, A1018, and A182, with Jade Business Park, and the density of electricity transmission lines limiting tranquillity within the MHPGC Project PEIR Red Line Boundary.

2.2.3.8 The plateau is bordered to the east by the A19 highway, with villages connected by a relatively dense network of busy roads. The presence of notable built elements includes Hawthorn Pit substation, wind turbines, pylons, telecommunications masts and abandoned railway lines.

2.2.4 Coastal East Durham Plateau BCA

2.2.4.1 The Coastal East Durham Plateau BCA is partially situated north-south within the eastern side of the Landscape and Visual Amenity Study Area and is partially situated within the MHPGC Project PEIR Red Line Boundary. The Blue LSS Option Area is located wholly within the BCA as shown on **Figure 1.5**. Viewpoints 10, 11 and 14 are located within this BCA and provide an illustration of its character within part of the BCA.

2.2.4.2 The key characteristics or features of the Coastal East Durham Plateau BCA are identified in the published BCA description (Durham County Council, 2008) as:

- low coastal plateau of rolling terrain, incised by narrow steep-sided denes, with other areas presenting gently rounded topography;
- agricultural lands showing semi-regular patterns of medium and large-scale fields;
- open landscape exposed to the sea on the eastern side, featuring few trees or woodlands;
- presence of large mining towns, villages and scattered agricultural villages; and
- semi-rural or urban fringe quality in places.

2.2.4.3 The AHLV within the Durham County Council (DCC) Local Plan extends into the eastern edge of this BCA and within the MHPGC Project PEIR Red Line Boundary to the north and west of Hawthorn Quarry. AHLVs also extend around Hawthorn and Hawthorn Dene, Horden Burn south of Easington, Dalton Dene north of Murton and at Murton Dene in Dalton-le-Dale (locations are shown on **Figure 1.6**).

2.2.4.4 There are three densely settled urban areas: the towns of Peterlee, Seaham and Easington. The areas between these settlements are characterised by broad stretches of open arable farmlands with smaller settlements such as Hawthorn and smaller clusters of properties. The BCA includes the Hawthorn Conservation Area and the Easington Village Conservation Area (Durham County Council, 2026, locations are shown on **Figure 1.6**).

2.2.4.5 There are some Parks, Gardens and Designed Landscapes of Local Interest (Durham County Council, 2020) within the BCA and Landscape and Visual Amenity Study Area including:

- Dalton Pumping Station, approximately 100m to the north of the MHPGC PEIR Red Line Boundary and east of the A19; and
- Seaham Hall, located to the north of Seaham.

2.2.4.6 The landscape features open arable farmlands with low degraded hedgerows often with large gaps and few trees, with heavily wooded denes containing ancient ash woods and mixed plantations; woodlands are largely absent elsewhere except for localised areas of parkland and estate farmland

in the south of Peterlee at Castle Eden. A number of tree preservation orders are located within the BCA, including around Hawthorn Burn, with its northernmost extent located approximately 15m south of the MHPGC Project PEIR Red Line Boundary and 300m east of Hawthorn.

2.2.4.7 The Coastal East Durham Plateau features gently rolling terrain incised by steep-sided denes and other areas presenting gently rounded topography, with the latter attributed to the area within the MHPGC PEIR Red Line Boundary. The changes of elevation contribute to variations in vegetation and agricultural patterns. The notable presence of the River Tyne further influences the BCA's landscape characteristics.

2.2.4.8 The area exhibits a visually open landscape characterised by broad agricultural expanses, minimal tree cover, and the presence of large mining towns, villages, and scattered agricultural settlements.

2.2.4.9 The busy A19 highway defines the western boundary of the character area, serving as a significant transportation corridor. The presence of electricity pylons contribute to the evolving landscape.

2.2.4.10 The Coastal East Durham Plateau BCA varies in tranquillity, with higher tranquillity found in natural and remote areas and lower tranquillity in parts within and around settlements, road corridors and Hawthorn Quarry. Within the part of the BCA within Landscape and Visual Amenity Study Area and the MHPGC Project PEIR Red Line Boundary, tranquillity is limited by the presence of Hawthorn Quarry, the A19, the A182, and urban development to the south of Seaham.

2.2.5 The Durham Coast BCA

2.2.5.1 The Durham Coast BCA is partially situated north-south along the coast within the eastern side of the Landscape and Visual Amenity Study Area and is partially situated within the MHPGC Project PEIR Red Line Boundary as shown on **Figure 1.5**. Viewpoints 1 and 2 are located within this BCA and provide an illustration of its character within part of the BCA.

2.2.5.2 The key characteristics or features of The Durham Coast BCA are identified in the published BCA description (Durham County Council, 2008) as:

- a varied coastline of shallow bays, headlands, and cliffs formed from pale Magnesian Limestone overlain by boulder clay;
- feature landscapes including caves, stacks, and rock platforms with sand or shingle beaches;
- shallow denes cut into the cliffs, and larger denes breach the coastal limestone; and
- the landscape is open with extensive views out across the North Sea, with a largely undeveloped character.

2.2.5.3 A large proportion of the BCA is covered by the Durham Heritage Coast, including the majority of the BCA within the Landscape and Visual Amenity Study Area and MHPGC Project PEIR Red Line Boundary (excluding a small section immediately west of the railway corridor). The Durham Heritage Coast has a Heritage Coast Management Plan (Durham Heritage Coast Partnership, 2018) which describes its significance, special qualities, features, and pressures.

2.2.5.4 The special qualities of the Durham Heritage Coast are stated in section 4.9 of the Heritage Coast Management Plan and are:

- dramatic coastline with exposed cliffs of limestone and boulder clay, undulating series of small, sheltered bays and headlands;
- flower-rich magnesian limestone grassland;
- steep-sided wooded denes;
- sand dunes and beaches that support populations of waders and seabirds;
- wide, unspoilt and expansive panoramic views;
- strong influence of historic mining industry on both local culture and the landscape, in the form of ex-coal mining villages with distinctive surrounding areas of allotments and pony paddocks, reclaimed colliery sites, railways and industrial archaeology;
- a strengthening network of habitats, species and associated natural events;
- an intricate network of access paths and recreational routes; and
- areas of tranquillity, distinctive natural soundscapes and visible movement.

2.2.5.5 Some of the special landscape, seascape, sensory and recreation and tourism features of the Heritage Coast include:

- magnesian Limestone grasslands;
- woodlands and coastal gills;
- sand dunes;
- strandlines;
- rocky shores;
- wild space;
- dramatic cliff and seascape;
- wide open views up and down the coast;
- present and past evidence of industry;
- sense of naturalness in a largely urban backdrop;
- intimacy of denes and gills;
- coastal footpath;
- beach access from high cliffs; and
- tranquillity.

2.2.5.6 Opportunities to protect and enhance the landscape of the Heritage Coast include:

- protection and promotion of the area's industrial heritage which contributes to its sense of history and identity;
- protection and expansion of magnesian limestone grassland for the benefit of wildlife and sense of place; and
- enhancement of the access network and maintaining the access and wildlife value of the coast by promoting access routes back from the eroding coastline and extending habitats inland.

2.2.5.7 The AHLV within the DCC Local Plan extends across the majority of this BCA, with the AHLV and the Durham Heritage Coast passing through the MHPGC Project PEIR Red Line Boundary. Noses Point Local Nature Reserve is located east of Spectrum Business Park and partly within the MHPGC Project PEIR Red Line Boundary. These designations and classifications are shown on **Figure 1.6**.

2.2.5.8 Land use of the BCA is predominantly open arable farmland and rough coastal grassland occupying the gently rolling cliff tops. The area is sparsely developed, with urban influence limited to Seaham's port and seafront, localised caravan parks, and edges of former mining settlements. The BCA includes the Seaham Conservation Area.

2.2.5.9 Vegetation is diverse, including species-rich coastal grasslands with red fescue, sea plantain, and bloody cranesbill. Wind-shaped blackthorn scrub, with occasional hazel and juniper, occupies exposed clay slopes and dene tops. Ancient semi-natural woodlands of ash, oak, wych elm, and yew occur in deeper and more sheltered watercourses.

2.2.5.10 The landscape is gently rolling, with cliffs typically 20-30m high, creating a varied coastal profile. Elevation increases slightly inland before levelling into the coastal plateau. Notable watercourses include dominant streams draining towards the North Sea, with tributaries to the River Wear and the River Skerne.

2.2.5.11 The landscape is exposed and visually open with extensive panoramic views out across the North Sea, and dramatic scenic views along the coastline. The visual amenity is primarily open, with occasional enclosures formed by semi-natural vegetation and small built structures.

2.2.5.12 Tranquillity varies across the BCA. Coastal sections away from Seaham and industrial areas are relatively tranquil, influenced by natural sounds and sea exposure. Areas near the town, railway, or caravan sites are less tranquil due to human activity and movement.

2.2.5.13 The presence of linear infrastructure includes the coastal railway line, local access roads, and the developed port area at Seaham. Evidence of former colliery activity and associated land reclamation contributes to a semi-industrial character in some locations but does not dominate the overall coastal setting.

2.3 City of Sunderland Landscape Character Assessment

2.3.1.1 The City of Sunderland Landscape Character Assessment presents a description and assessment of the landscape of the City of Sunderland administrative area. It was prepared in 2015 by consultants Land Use Consultants to provide part of the evidence base for the then forthcoming

development planning documents. All areas within the borough are included in the assessment, whether developed or undeveloped.

2.3.1.2 As presented in **Figure 1.5**, the Landscape and Visual Amenity Study Area is located within the following Landscape Character Areas (LCAs): Rainton Lowland Coalfield Lowland Terraces (LCA 2c), Hetton-le-Hole, Easington Lane and East Rainton Coalfield Villages (LCA 5c), Hastings Hill and Copt Hill Limestone Escarpment (LCA 6b), High Moorsley Limestone Escarpment (LCA 6c), Warden Law and Eppleton Moor Clay Plateau (LCA 7a) and Burdon to Ryhope (LCA 8c).

2.3.1.3 While Urban Limestone Plateau (LCA 9) and Limestone Coast (LCA 10) were included within the MHPGC Project Scoping Report, they are now located outside the Landscape and Visual Amenity Study Area and not judged to have the potential for significant landscape impacts, so have been scoped out from further consideration and agreed with the EWG.

2.3.2 Rainton Lowland Coalfield Lowland Terraces (LCA 2c)

2.3.2.1 Rainton Lowland Coalfield Lowland Terraces (LCA 2c) is partially situated within the west of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 3.5km to the southeast) as shown on **Figure 1.5**. Viewpoint 13 is located within this LCA and provides an illustration of its character within part of the LCA.

2.3.2.2 LCA 2c is characterised by a patchwork of arable fields with fragmented hedgerows, interspersed with areas of pasture, grassland, and extensive recent woodland planting. Reclaimed sites such as Rainton Meadows and Hetton Houses Wood contribute valuable semi-natural habitats, including grasslands and ponds.

2.3.2.3 This area supports a rich network of designated wildlife sites, including Hetton Bogs (a Local Nature Reserve (LNR) and Site of Special Scientific Interest (SSSI)), Hetton Houses Wood ancient woodland, and Joe's Pond SSSI, which together provide important habitats for biodiversity. Rainton Meadows, along with the Great North Forest Heritage Trail and the Walney to Wear and Whitby (W2W) cycle route, enhances public access and recreational value within the landscape.

2.3.2.4 LCA 2c features a gently undulating landform that slopes northwest towards the River Wear, with a distinctive low ridge at East Rainton reaching a height of around 114mAOD. This ridge provides elevated views over the Wear Valley and forms a subtle yet defining contrast with the surrounding lowland terrain.

2.3.2.5 Historically, this area was used for coal mining until the 1970s, with remnants of its railway infrastructure still visible in the landscape. Former pit sites have since been repurposed, including Rainton Bridge Business Park and Rainton Meadows Nature Reserve. The landscape is influenced by surrounding settlements and infrastructure, notably the A690 and Rainton Bridge Business Park, giving a distinctly mixed rural–urban character.

2.3.3 Hetton-le-Hole, Easington Lane and East Rainton Coalfield Villages (LCA 5c)

2.3.3.1 Hetton-le-Hole, Easington Lane and East Rainton Coalfield Villages (LCA 5c) is partially situated within the west of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 1.2km to the east) as shown on **Figure 1.5**.

2.3.3.2 LCA 5c encompasses a series of small settlements that originated during the coal-mining boom of the 19th century. They maintain a distinct character compared to other settlements in Sunderland, being more closely related to the mining villages of County Durham. This distinctiveness arises from the fragmented settlement pattern due to the rapid, unplanned growth of mining communities.

2.3.3.3 Hetton-le-Hole is sited beside the Hetton Burn watercourse, the valley of which has become a significant green space within the settlement and forms the focus of a SSSI and LNR downstream at Hetton Bogs.

2.3.3.4 The topography is gently rolling and slightly undulating terrain. Hetton-le-Hole is fundamental to its character and situated on the undulating foot-slopes of Magnesian Limestone, with surrounding features like East Rainton on a prominent ridge allowing expansive views. Easington Lane's elevated

position on the escarpment offers open vistas westward, while the descending land towards Hetton Burn results in more contained views due to vegetation and urban structures.

2.3.3.5 Limestone quarrying significantly influenced early settlement development, with historic structures made from the distinct yellow Magnesian Limestone sourced from local quarries including Curlew Hope Quarry and Eppleton Quarry. Contemporary pathways and cycleways follow former mineral and passenger rail lines, including the W2W coast-to-coast cycle route and Stephenson Trail, commemorating the world's first steam-operated railway built in 1822.

2.3.4 Hastings Hill and Copt Hill Limestone Escarpment (LCA 6b)

2.3.4.1 Hastings Hill and Copt Hill Limestone Escarpment (LCA 6b) is partially situated within the northwest of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 1.4km to the east) as shown on **Figure 1.5**.

2.3.4.2 LCA 6b is undeveloped and sparsely settled, aside from farms and occasional cottages. The land cover is mainly arable farmland, with areas of pasture and paddocks on steeper slopes. Fields are generally large in scale, and valuable areas of calcareous grassland occur throughout, including SSSIs at Hastings Hill and Herrington Hill.

2.3.4.3 Tree cover is generally sparse, except in denes and on steeper slopes where dense native woodlands and occasional sycamore copses occur. Agricultural fields are typically large, with weak hedgerow boundaries.

2.3.4.4 The Magnesian Limestone escarpment runs north–south, forming distinct hills and spurs, and narrow denes. Hilltop outcrops at Hastings Hill and Houghton Hill mark the underlying Magnesian Limestone, with the scarp rising up to a height about 150mAOD at High Downs and lowering towards the north.

2.3.4.5 LCA 6b holds notable archaeological significance, with prehistoric monuments at Hastings Hill and Copt Hill, revealing Neolithic and Bronze Age activity. Quarrying for limestone, sand, and gravel has shaped the landscape, with active extraction at Eppleton Quarry and restoration at former sites like Houghton Quarry. This area is also traversed by major transport routes, including the A690 and A19 highways.

2.3.5 High Moorsley Limestone Escarpment (LCA 6c)

2.3.5.1 The High Moorsley Limestone Escarpment (LCA 6c) is partially situated within the west of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 1km to the east) as shown on **Figure 1.5**.

2.3.5.2 LCA 6c comprises predominantly arable farmland with large fields. Woodland occurs around settlements, farms, and steeper slopes, while the escarpment supports areas of calcareous grassland.

2.3.5.3 Clumps of woodland are associated with settlements and farms, while discontinuous hedgerows define the surrounding farmland. The escarpment supports calcareous grassland that extends into the former High Moorsley Quarry, with the escarpment and quarry designated as SSSIs.

2.3.5.4 The area features steep, west-facing slopes that are prominently visible from the surrounding lowlands. High Moorsley forms the southern spur of the Magnesian Limestone escarpment, rising to a height of around 163mAOD and representing the highest distinct point within the local landscape.

2.3.5.5 LCA 6c has a strong industrial heritage, formerly occupied by North Hetton and Elemore Collieries, with a mineral railway running along the northern base of the escarpment. The Great North Forest Heritage Trail crosses the hill, offering wide panoramic views and access to open spaces such as Elemore Vale and the nearby golf course.

2.3.6 Warden Law and Eppleton Moor Clay Plateau (LCA 7a)

2.3.6.1 Warden Law and Eppleton Moor Clay Plateau (LCA 7a) is partially situated within the northwest of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR

Red Line Boundary (which is located approximately 950m to the east) as shown on **Figure 1.5**. Viewpoints 16 and 17 are located within this LCA and provide an illustration of its character within part of the LCA.

2.3.6.2 LCA 7a has a generally open farmed landscape of large arable fields with some pasture with occasional woodland plantations and shelter belts and occasional field boundary ash, oak and small copses of mature sycamore.

2.3.6.3 The area has limited settlement, mainly comprising the hamlets of Burdon, Warden Law, and Old Burdon. These clusters feature traditional buildings sheltered by deciduous woodlands, with wooded hummocks at Warden Law marking the sites of Neolithic burials.

2.3.6.4 The landscape is open and gently undulating, forming an elevated plateau between 100mAOD and 170mAOD, extending from the urban edge of Silksworth and Moorside in the north to Easington Lane in the south, with the highest ground in Sunderland often prominently visible from the lowland to the west. It is a dry landscape with few water bodies.

2.3.6.5 LCA 7a has a history of prehistoric activity, long-established farming, and mineral extraction, including a Neolithic barrow, now a karting track. Recreational landscapes like fishing lakes and a golf course around Old Burdon, while the A19 and rural roads including the B1260, Burdon Lane, and Hangman's Lane heavily cross the area. Its proximity to urban areas and sporadic development, like at Stoneygate, gives the north-facing slopes a settlement fringe character.

2.3.7 Burdon to Ryhope (LCA 8c)

2.3.7.1 Warden Burdon to Ryhope (LCA 8c) is partially located within the north of the Landscape and Visual Amenity Study Area and is not situated within the MHPGC Project PEIR Red Line Boundary (which is located approximately 4km to the south) as shown on **Figure 1.5**.

2.3.7.2 LCA 8c has a generally open farmed landscape of large arable fields to the south of Ryhope and Doxford Park and extending into County Durham, with small pasture fields along the denes. The area has limited settlement, the urban edge has a strong influence on local character, with some abrupt settlement boundaries on the north edge.

2.3.7.3 The boundaries of the arable fields feature weak, gappy, or overgrown hedges with few boundary trees. Dense woodland is mainly confined to the denes, while mature woodland is found around the nearby settled areas in Durham coastal dene, including Burdon Dene, Cherry Knowle Dene, and Ryhope Dene, featuring ancient woodland.

2.3.7.4 In this area, the hard reef limestone of the Ford Formation creates high ground, reaching elevations of 107mAOD at Mill Hill near Tunstall and 92mAOD at Mill Hill by Ryhope, historically sites for windmills. The coastal slope is deeply incised by burns forming classic Durham coastal denes.

2.3.7.5 Residential development is currently under construction within the northern part of the LCA. In addition, the A19 highway cuts through the landscape and the Ryhope Pumping Station chimney serves as a visual focal point.

3 Summary

3.1.1.1 The MHPGC Project is located within National Character Area (NCA) 15: Durham Magnesian Limestone Plateau.

3.1.1.2 The MHPGC Project is located within Marine Character Area (MCA) 22: Tyne, Tees and Wear Estuaries and Coastal Waters.

3.1.1.3 At a local level, the MHPGC Project is located within the East Durham Limestone Plateau of the County Durham Landscape Character Assessment, which is divided into seven broad character areas (BCAs). The MHPGC Project and Landscape and Visual Amenity Study Area is located within the following BCAs:

- Northern Limestone Escarpment, outside the MHPGC Project PEIR Red Line Boundary;
- Central East Durham Plateau, partially within the MHPGC Project PEIR Red Line Boundary, including the Green LSS Option Area;
- Coastal East Durham Plateau, partially within the MHPGC Project PEIR Red Line Boundary, including the Blue LSS Option Area;
- The Durham Coast, partially within the MHPGC Project PEIR Red Line Boundary.

3.1.1.4 The Landscape and Visual Amenity Study Area also includes the following landscape character areas (LCAs) from the City of Sunderland Landscape Character Assessment, however all are located outside the MHPGC Project PEIR Red Line Boundary:

- Rainton Lowland Coalfield Lowland Terraces (LCA 2c);
- Hetton-le-Hole, Easington Lane and East Rainton Coalfield Villages (LCA 5c);
- Hastings Hill and Copt Hill Limestone Escarpment (LCA 6b);
- High Moorsley Limestone Escarpment (LCA 6c);
- Warden Law and Eppleton Moor Clay Plateau (LCA 7a);
- Burden to Ryhope (LCA 8c).

3.1.1.5 Across the Landscape and Visual Amenity Study Area there are a range of designations and classifications including Heritage Coast, AHLV, Conservation Areas, SSSI, TPO, Ancient and Semi Natural Woodland, Parks and Gardens of Local Interest, and Local Nature Reserves. Typically, these are located along the coastline and around Denes, with some elsewhere throughout the area, indicating specific areas or features of local landscape value and interest. The majority of the designations and classifications are located outside the MHPGC Project PEIR Red Line Boundary, with part of the Durham Heritage Coast, Coop House Wood TPO, part of an AHLV to the east of Seaham Garden Village, and part of Noses Point Local Nature Reserve located within it.

3.1.1.6 The overall character of the Landscape and Visual Amenity Study Area is varied, comprising residential areas, industrial estates, energy infrastructure including pylons, wind turbines, substations, agricultural fields, woodland blocks, and gappy hedgerows.

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