



Morven Hawthorn Pit Grid Connection Project

Preliminary Environmental Information Report

Volume 2, Annex 2.1: Offshore Water Framework
Directive Assessment

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Table of contents

Executive Summary.....	1
1 Introduction	2
1.1 Overview.....	2
1.2 Legislative and Policy Context	2
1.3 Consultation and Engagement.....	4
2 Methodology	6
2.1 Water Framework Directive Assessment approach	6
2.2 Data Sources	6
2.3 WFD Screening	6
2.4 WFD Scoping	7
2.5 WFD Impact Assessment	7
3 Water Framework Directive Assessment	8
3.1 Stage 1 - Water Framework Directive Screening.....	8
3.2 Proposed Activities for Consideration.....	12
3.3 Commitments adopted as part of the MHPGC Project	13
3.4 Stage 2 - Water Framework Directive Scoping.....	16
3.5 Stage 3 – Offshore Water Framework Directive Impact Assessment	28
4 Summary	35
5 References.....	36

List of tables

Table 1.1: Summary of Scoping Responses relevant to the WFD Assessment	4
Table 3.1: Summary of the Tyne and Wear Coastal Waterbody Qualifying Elements (EA, 2025).....	9
Table 3.2: Summary of the Tees Coastal Waterbody Qualifying Elements (EA, 2025)	9
Table 3.3: Embedded commitments relevant to the WFD Assessment implemented as part of the MHPGC Project	14
Table 3.4: Offshore Specific Risk Information: Hydromorphology (EA, 2023).	16
Table 3.5: WFD Sensitive Habitat Categorisation (EA, 2023)	17
Table 3.6: Offshore Specific Risk Information: Habitats (EA, 2023).	18
Table 3.7: Offshore Specific Risk Information Biology: Fish (EA, 2023).	20
Table 3.8: Offshore Specific Risk Information: Water Quality (EA, 2023).	21
Table 3.9: Offshore Specific Risk Information: WFD Protected Areas (EA, 2023).....	24
Table 3.10: Offshore Specific Risk Information: INNS (EA, 2023).....	26
Table 3.11: Potential risks scoped into Stage 3 Impact Assessment upon the Tyne and Wear Coastal Waterbody.....	27

List of figures

Figure 3.1: WFD Coastal and Transitional Waterbodies in the vicinity of the MHPGC Project and relevant sediment sample locations..... 11

Figure 3.2: WFD protected areas within the Offshore WFD Assessment Area..... 25

Glossary

Term	Meaning
Applicant	The legal entity making the applications for consent; Morven Offshore Wind Limited (MvOWL).
Assessment Area	Specific WFD Assessment Area defined for the purposes of the offshore assessments for potential impacts on the relevant receptors.
Bathing Waters	Waters designated under the Bathing Water Regulations 2013 (SI 2013/1675) for the purpose of protecting public health, where water quality is routinely monitored for bacteria levels and the results are published.
Cable protection	Measures used to protect subsea cables where burial is not possible, due to seabed conditions or at cable crossings, to ensure cable stability and reduce risks from anchors, fishing gear and environmental forces.
Climate change	A change in global or regional climate patterns, in particular a change apparent from the mid to late 20th century onwards and attributed largely to the increased levels of atmospheric carbon dioxide produced by the use of fossil fuels.
Commitments	Measures (embedded mitigation and secondary) to be adopted during the construction, operation and maintenance, and decommissioning phases of the MHPGC Project.
Construction	Used to refer to the whole construction phase of a project.
Cumulative effect	The combined effect of the MHPGC Project in combined with the effects from other proposed developments, on the same receptor or resource.
Cumulative effects assessment	Assessment of likely significant effects arising from the MHPGC Project alongside the likely effects arising from other proposed developments on the same receptor or resource.
Embedded mitigation	Measures included as part of the project design. Includes both primary and tertiary mitigation.
Environment Agency (EA)	The EA is the public body responsible for protecting and improving the environment in England, including regulating activities that affect land, water, and biodiversity. For a Development Consent Order (DCO), the EA acts as a statutory consultee, advising on flood risk, water quality and ecological impacts.
Environmental Impact Assessment (EIA)	The process of identifying and assessing the significant effects likely to arise from a project. This requires consideration of the likely changes to the environment, where these arise as a consequence of a project, through comparison with the existing and projected future baseline conditions.
Good Ecological Status	Is the status of a body of surface water and is defined as a slight variation from undisturbed conditions.
High Voltage Direct Current (HVDC)	A HVDC electric power transmission system uses direct current for electric power transmission, in contrast to the more common alternating current systems. Most HVDC links use voltages between 100 kilovolts (kV) and 800kV.

Term	Meaning
Impact	A change caused by an action that occurs during a project's lifetime.
Landfall	The area in which the offshore export cables make landfall (come onshore) and the transitional area between the offshore cabling and the onshore cabling. This term applies to the entire landfall area between the trenchless technique exit pits and the transition joint bay inclusive of all construction works.
Lowest Astronomical Tide (LAT)	The lowest tide level that can be expected to occur under average meteorological conditions and under any combination of astronomical conditions.
Magnitude	A combination of the spatial extent, duration, frequency and reversibility of an impact
Marine Directorate Licensing Operations Team (MD-LOT)	The part of the Scottish Government's Marine Directorate responsible for assessing and administering applications for marine licences and Section 36 consent (offshore) in Scotland.
Marine licence	A marine licence permits the undertaking of different activities in the marine environment, including construction, the deposition or removal of substances or objects from the seabed, and dredging. The Marine and Coastal Access Act 2009 requires a marine licence to be obtained for licensable marine activities within the Scottish offshore region (12nm – 200nm) and in English offshore and inshore regions (noting that deemed marine licences will be included within the Development Consent Order application).
Marine Management Organisation (MMO)	The MMO, as a UK government body, is responsible for licensing, regulating and overseeing activities in the marine environment for English waters. For a DCO and deemed marine licence, MMO acts as a statutory consultee, advising on marine planning, environmental impacts, habitats and compliance with marine licensing regulations.
Maximum design scenario (MDS)	The realistic worst case scenario, selected on a topic-specific and impact specific basis, from a range of potential parameters for the MHPGC Project.
Mean High Water Springs (MHWS)	The most inshore level location reached by the sea at high tide during mean high water spring tide. This is defined as the average tidal height throughout the year, of two successive high waters, during a 24-hour period in each month when the range of the tide is at its greatest.
Mean Low Water Springs (MLWS)	The average height of the low water levels of each pair of successive low waters during the periods of about 24 hours when the tidal range is at its greatest.
MHPGC Project Environmental Statement (ES)	The document presenting the results of the Environmental Impact Assessment process.
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.

Term	Meaning
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 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.
MHPGC Project Scoping Opinions	Separate scoping opinions received from the Planning Inspectorate (on behalf of the Secretary of State) and MD-LOT (on behalf of the Scottish Ministers) in response to the MHPGC Scoping Report. The MHPGC Scoping Opinions contain the range of issues that the PINS, and MD-LOT in consultation with statutory stakeholders, have identified should be considered within the EIA process.
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.
Morven North Offshore Wind Array Project ('Morven North')	The Morven North Offshore Wind Array Project which includes the wind turbines and foundations, Offshore Substation Platforms and foundations, inter-array and interconnector cables and associated infrastructure located within the Morven North Boundary.
Morven North Offshore Wind Array Project and Morven South Offshore Wind Array Project	Morven North and Morven South comprises the Morven North Offshore Wind Array Project and the Morven South Offshore Wind Array Projects collectively.
Morven South Offshore Wind Array Project ('Morven South')	The Morven South Offshore Wind Array Project, which includes the wind turbines and foundations, Offshore Substation Platforms and foundations, inter-array and interconnector cables and associated infrastructure located within the Morven South Boundary.
National Policy Statement (NPS)	Policy statements published by the Department for Energy Security and Net Zero and designated under the Planning Act 2008, setting out national policy for Nationally Significant Infrastructure Projects.
Natural England (NE)	NE is the UK Government's statutory adviser on the natural environment, focusing on conserving biodiversity, landscapes, and access to nature. For a DCO and marine licence, NE provides statutory and technical advice to competent authorities on potential effects on designated sites, habitats and protected species, supporting environmental assessment and decision-making.
NatureScot (NS)	NS is the Scottish Government's nature agency responsible for protecting and promoting Scotland's natural heritage. For a marine

Term	Meaning
	licence in Scottish waters, NS advises on impacts to Scottish habitats, species and designated sites.
Offshore export cables	HVDC cables which bring electricity from either the Morven North Offshore Substation Platform or the Morven South Offshore Substation Platform to the transition joint bay (TJB) at landfall.
Offshore export cable corridor	The proposed corridor in which the offshore export cables will be located, from either the Morven North or Morven South offshore substation platform to the transition joint bay (TJB) at landfall.
Offshore substation platforms (OSPs)	OSP(s) comprise the support structure, topside and electrical components used for collecting the electricity generated by the wind turbine generators for the passage or transmission to landfall. These OSP(s) can be divided into two types: HVAC collector substations; HVDC converter substations.
Operations and maintenance phase (O&M)	The operational and maintenance phase of the MHPGC Project.
Outline Cable Specification and Installation Plan (CSIP)	An outline plan describing cable installation, burial, protection and monitoring, including a Cable Burial Risk Assessment. The CSIP is intended to manage interactions with the seabed and other marine receptors, including navigation, the environment, and other legitimate sea users such as commercial fisheries.
Outline Marine Pollution Contingency Plan	Outline plan to establish emergency response procedures for accidental marine pollution incidents, detailing methods and procedures, reporting and remediation actions.
Planning Inspectorate (PINS)	The PINS is an executive agency of the UK Government responsible for administering and examining DCO applications for NSIPs in England. PINS manages the application process, oversees consultation and examination, and makes a recommendation to the relevant Secretary of State on whether consent should be granted.
Polycyclic Aromatic Hydrocarbons (PAH)	A class of chemicals that occur naturally in coal, crude oil, and gasoline.
Polychlorinated biphenyls (PCB)	They belong to a broad family of human-created organic chemicals known as chlorinated hydrocarbons. Although most were banned in 1986, they linger on in detectable levels in animals, fish and humans.
Primary mitigation	Measures included as part of the location or design of the MHPGC Project made during the pre-application phase that are an inherent part of the MHPGC Project and do not require additional action to be taken. This includes modifications arising through the iterative design process. These measures will be secured through the consent itself through the description of the MHPGC Project, the parameters and associated commitments secured by the DCO and marine licence, or both.
Quality Elements	Quality elements allow ecological status to be determined for rivers, lakes, and transitional and coastal waters. Biological quality elements include phytoplankton, macrophytes, phytobenthos, benthic invertebrate fauna and fish. Physico-chemical quality elements include nutrients, oxygen condition, temperature, transparency, salinity and river basin specific pollutants.

Term	Meaning
	Hydromorphological quality elements include morphological conditions and the hydrological regime.
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.
River Basin Management Plan (RBMP)	RBMPs set the legally binding locally specific environmental objectives that underpin water regulation and planning activities.
Scottish Environment Protection Agency	Scotland's environmental regulator, responsible for protecting and improving the environment and regulating activities that may affect water, land and air quality. SEPA is a statutory consultee for major developments and advises on flood risk, water environment impacts and environmental permitting requirements.
Secondary mitigation	Actions that will require further activity to achieve the anticipated outcome and may be imposed as part of the planning consent, or through inclusion in the ES. These include measures required to reduce the significance of environmental effects and may be secured through an environmental management plan. For secondary mitigation measures, both pre-mitigation and residual effects are presented.
Significance	Effect factor that is determined by the magnitude of impact along with the sensitivity of the receptor.
Surface water	Inland water bodies present on the Earth's surface, including rivers, streams, lakes and transitional waters, and, for regulatory purposes, extending to certain coastal waters.
Tertiary mitigation	Actions that would occur with or without input from the EIA process feeding into the design process. These include actions that will be undertaken to meet other existing legislative requirements, or actions that are considered to be standard practices used to manage commonly occurring environmental effects.
Tidal cycle	One high tide plus a successive low tide.
Trenchless techniques	Construction methods used to install underground or sub-surface infrastructure without the need for continuous open trench excavation, thereby avoiding or minimising disturbance to surface features, habitats and existing land users.
Water bodies	The WFD 'water environment' includes rivers, lakes, transitional waters, groundwater and coastal waters out to 3nm for Scottish waters and 1nm for English waters (12nm for chemical status, i.e. for territorial waters). These waters are divided into units called water bodies.
Water Framework Directive (WFD)	The WFD (Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy) was published in December 2000 and is transposed into English and Welsh law by the Water Environment (England and Wales) Regulations 2017 (as amended). Under Section 2 of the European Union (Withdrawal) Act 2018, the 2017 Regulations continue to have effect in domestic law following the UK's withdrawal from the European Union. The WFD

Term	Meaning
	provides rules to protect water in Europe with the aim of achieving 'Good' status for lakes, rivers and groundwater.

Acronyms

Acronym	Meaning
ABPmer	Associated British Ports Marine Environmental Research
AL	Action Level
AEoI	Adverse Effect on Integrity
BAC	Background Assessment Concentration
BGS	British Geological Survey
CBRA	Cable Burial Risk Assessment
Cefas	Centre for Environment, Fisheries and Aquaculture Science
CEQG	Canadian Environmental Quality Guidelines
CFE	Controlled Flow Excavation
CLV	Cable Lay Vessel
CMS	Construction Method Statement
CPT	Cone Penetration Test
CSIP	Cable Specification and Installation Plan
CTV	Crew Transfer Vessel
DCO	Development Consent Order
DDSCP	Dredging and Disposal Site Characterisation Plan
Defra	Department for Environment, Food and Rural Affairs
DSV	Dive Support Vessel
E. Coli	Escherichia coli
EA	Environment Agency
EIA	Environmental Impact Assessment
EMF	Electromagnetic Field
EMP	Environmental Management Plan
EQSD	Environmental Quality Standards Directive
ES	Environmental Statement
FLCP	Fisheries Liaison and Coexistence Plan
GES	Good Environmental Status
GV	Guard Vessel
HDD	Horizontal Directional Drilling
HRA	Habitats Regulations Assessment (England)/ Appraisal (Scotland)
HVDC	High Voltage Direct Current

Acronym	Meaning
IE	Intestinal Enterococci
IMO	International Maritime Organisation
INNS	Invasive Non-Native Species
IQI	Infaunal Quality Index
ISV	Installation Support Vessel
LAT	Lowest Astronomical Tide
LSE	Likely Significant Effect
MarESA	Marine Evidence-based Sensitivity Assessment
MARPOL	Maritime Organisation and International Convention for the Prevention of Pollution from Ships
MBP	Marine Biosecurity Plan
MD-LOT	Marine Directorate – Licensing Operations Team
MDS	Maximum Design Scenario
MFE	Mass Flow Excavation
MHPGC	Morven Hawthorn Pit Grid Connection
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
MMO	Marine Management Organisation
MPCP	Marine Pollution Contingency Plan
NBN	National Biodiversity Network
NE	Natural England
NS	NatureScot
O&M	Operations and Maintenance
OEMP	Offshore Environment Management Plan
OSP	Offshore Substation Platform
OSPAR	Oslo and Paris Conventions
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PLGR	Pre-lay Grapnel Run
RBD	River Basin District
RBMP	River Basin Management Plan
RIAA	Report to Inform Appropriate Assessment
SAC	Special Area of Conservation
SEPA	Scottish Environment Protection Agency

Acronym	Meaning
SoS	Secretary of State
SPA	Special Protection Area
SPZ	Source Protection Zone
SSC	Suspended Sediment Concentrations
THC	Total Hydrocarbon Content
TJB	Transition Joint Bay
TraC	Transitional and Coastal
TSV	Trenching Support Vessel
UWWTD	Urban Wastewater Treatment Directive
UXO	Unexploded Ordnance
WFD	Water Framework Directive
ZoI	Zone of Influence

Units

Unit	Meaning
%	Per cent
km	Kilometre
m	Metre
m ²	Square metre
m ³	Cubic metre
m/hr	Metre per hour
mg/l	Milligram per litre
mm	Millimetre
nm	Nautical miles

Executive Summary

This Report provides an offshore assessment under the Water Framework Directive (WFD) (Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy). This directive is transposed into English and Welsh law by the Water Environment (England and Wales) Regulations 2017 (as amended) (2017 Regulations). This Report presents the Offshore Water Framework Directive (WFD) Assessment for the Morven Hawthorn Pit Grid Connection Project (hereafter 'the MHPGC Project').

The purpose of the WFD is to establish a framework for protecting and enhancing ecological status of inland surface waters, coastal waters, and groundwater, in line with River Basin Management Plans (RBMPs). The Report specifically addresses the potential impacts of the MHPGC Project on designated WFD waters through a three-stage approach: screening, scoping, and impact assessment.

Key findings of the Offshore WFD assessment include:

- Screening Stage: Identified water bodies, within the Northumbria RBMP, potentially impacted by the MHPGC Project included one offshore waterbody (Tyne and Wear Coastal Waterbody)
- Scoping Stage: Determined the potential impacts to receptors such as hydromorphology, biology (habitats and fish), water quality, WFD protected areas and invasive non-native species. The assessment scoped in habitats, water quality and WFD protected areas to the impact assessment.
- Impact Assessment Stage: Evaluated potential effects from the construction, operations and maintenance, and decommissioning phases of the MHPGC Project. Findings indicate the MHPGC Project will not prevent the Tyne and Wear Coastal Waterbody or WFD protected areas from maintaining the objectives or cause a deterioration from the current classification of Good Ecological Status due to short-lived and localised potential impacts. Therefore, complying with the RBMP objectives.
- Compliance with Mitigation Measures: The MHPGC Project will not jeopardise existing WFD mitigation measures for any relevant WFD water bodies, supporting the Northumbria RBMP.

Overall, the MHPGC Project complies with the requirements of the WFD for the relevant water bodies without impairing the objectives set out in the Northumbria RBMP.

1 Introduction

1.1 Overview

- 1.1.1.1 This Report presents the Offshore Water Framework Directive (WFD) Assessment for the Morven Hawthorn Pit Grid Connection Project (hereafter 'the MHPGC Project'). It forms **Volume 2, Annex 2.1: Offshore Water Framework Directive Assessment, of the Preliminary Environmental Information Report (PEIR)** prepared for the MHPGC Project and supports **Volume 2, Chapter 2: Offshore Water and Sediment Quality, of the PEIR**.
- 1.1.1.2 A separate Onshore WFD Assessment for the MHPGC Project has been produced and forms **Volume 3, Annex 2.3: Onshore Water Framework Directive Assessment, 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;**
 - **Volume 2, Chapter 1: Physical Processes, of the PEIR;**
 - **Volume 2, Chapter 2: Offshore Sediment and Water Quality, of the PEIR;**
 - **Volume 2, Chapter 3: Benthic Subtidal and Intertidal Ecology, of the PEIR;**
 - **Volume 2, Chapter 4: Fish and Shellfish Ecology, of the PEIR;**
 - **Volume 3, Chapter 1: Geology, Hydrogeology and Ground Conditions, of the PEIR;**
 - **Volume 3, Chapter 2: Water Resources and Flood Risk, of the PEIR;**
 - **Volume 3, Chapter 3: Terrestrial Ecology and Terrestrial and Intertidal Ornithology, of the PEIR.**
- 1.1.1.4 The chapter also draws on information contained within the following annexes:
- **Volume 2, Annex 1.2: Model Design, Validation and Results, of the PEIR;**
 - **Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR;**
 - **Volume 2, Annex 4.1: Herring and Sandeel Assessment, of the PEIR;**
 - **MHPGC Project Habitats Regulations Appraisal/ Habitats Regulations Assessment (HRA) Screening Report, prepared to accompany the PEIR;**
 - **MHPGC Project Report to Inform Appropriate Assessment (RIAA), prepared to accompany the PEIR.**

1.2 Legislative and policy context

- 1.2.1.1 The WFD (Council Directive 2000/60/EC establishing a framework for Community action in the field of water policy) was published in December 2000 and is transposed into English and Welsh law by the Water Environment (England and Wales) Regulations 2017 (as amended) (2017 Regulations). Under Section 2 of the European Union (Withdrawal) Act 2018, the 2017 Regulations continue to have effect in domestic law following the UK's withdrawal from the European Union. The WFD is transposed into Scottish law through the Water Environment and Water Services (Scotland) Act 2003 (Scottish Government, 2003) and the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (Scottish Government, 2011), more commonly known as the Controlled Activity Regulations.
- 1.2.1.2 The implementation of the WFD establishes a legislative framework for the prevention of deterioration and the protection of surface water (coastal waters, rivers, lakes, transitional waters, estuaries, man-made docks and canals) and groundwater out to 3 nautical miles (nm) in Scotland and 1nm in England. Given the location of the Scottish based elements of the MHPGC Project in Scottish offshore waters only, there are no Scottish-based water bodies that could be affected. As a result, no Scottish baseline is presented or considered further by this Offshore WFD assessment.
- 1.2.1.3 The purpose of the WFD is to establish a framework for the protection and enhancement of ecological status of inland surface waters, transitional waters, coastal waters and groundwaters. The WFD aims to prevent further deterioration in, and enhance, water quality, and promote sustainable water use while addressing a wide range of the aspects of the water environment including:

- Hydromorphological: specifically assesses elements such as water flow, sediment composition and movement, continuity and structure of the habitat against reference or 'largely undisturbed conditions';
- Biological: including biological quality elements such as the abundance of fish, invertebrates or aquatic flora and by the presence of invasive species;
- Physio-chemical: including environmental standards for supporting physio-chemical conditions, such as dissolved oxygen, phosphorus and ammonia;
- Chemical: defined by compliance with environmental standards for chemicals that are 'priority substances' and/or 'priority hazardous substances' in accordance with the Environmental Quality Standards Directive (2008/105/EC);
- Specific pollutants: assessing compliance with environmental standards for concentrations of pollutants such as zinc, cypermethrin or arsenic.

1.2.1.4 The environmental objectives of the WFD (Directive 2000/60/EC) are to:

- to enhance the status and prevent further deterioration of surface water bodies, groundwater bodies and their ecosystem;
- to ensure progressive reduction of groundwater pollution;
- to reduce water pollution, especially by Priority Substances and Certain Other Pollutants under Annex II of the Environmental Quality Standards Directive 2008/105/EC;
- to support mitigating the effects of floods and droughts;
- to achieve at least good surface water status for all surface water bodies and good chemical status in groundwater bodies by 2015 (Article 4), or good ecological potential for artificial or heavily modified water bodies;
- to support sustainable water use.

1.2.1.5 Under the WFD, water bodies are the basic management units forming part of a larger River Basin District (RBD), for which RBMP are used to summarise baseline conditions and set broad improvement objectives. The 2017 Regulations require the 'appropriate agency' (i.e. in England, the Environment Agency (EA)) to prepare the RBMP for each RBD.

1.2.1.6 The WFD aims to protect and enhance (or improve) the ecological status/potential of all WFD water bodies including surface water bodies and groundwater bodies. As such, it requires all natural water bodies to achieve both Good Chemical Status and Good Ecological Status (as defined by the WFD) and all artificial and heavily modified water bodies to achieve Good Ecological Potential. There is also a requirement to view the water environment holistically, integrating water quality, quantity and physical habitat with ecological indicators.

1.2.1.7 The Offshore WFD assessment has been undertaken in accordance with the guidance Nationally Significant Infrastructure Projects: Advice on the Water Framework Directive (Planning Inspectorate (PINS), 2025), which superseded Advice Note 18: The Water Framework Directive (PINS, 2017). The potential impact on transitional and coastal water bodies has been assessed using the 'Clearing the waters for All' guidance (EA, 2023).

1.2.1.8 The Offshore WFD assessment has been undertaken with regard to National Policy Statement (NPS) EN-1. Sections 5.16.7, 5.16.13 and 5.16.15 of NPS EN-1 state:

- The ES should in particular describe the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges;
- The ES should in particular describe any impacts of the proposed project on water bodies or protected areas (including shellfish protected areas) under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 and source protection zones (SPZs) around potable groundwater abstractions.
- The Secretary of State will need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017; and
- The Secretary of State should be satisfied that a proposal has regard to current River Basin Management Plans and meets the requirements of the Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (including regulation 19). The specific

objectives for particular river basins are set out in River Basin Management Plans. The Secretary of State must refuse development consent where a project is likely to cause deterioration of a water body or its failure to achieve good status or good potential, unless the requirements set out in regulation 19 are met. A project may be approved in the absence of a qualifying Overriding Public Interest test only if there is sufficient certainty that it will not cause deterioration or compromise the achievement of good status or good potential.

1.2.1.9 Section 3 of this WFD Assessment considers the potential impact of the MHPGC Project upon the six receptor groups stated in the EA (2023) guidance. The following receptors are considered for the identified waterbodies and taken forward for assessment in **Section 3.5** where required:

- Hydromorphology.
- Biology – habitats.
- Biology – Fish.
- Water quality.
- Protected areas.
- Invasive non-native species.

1.3 Consultation and engagement

1.3.1 Scoping

1.3.1.1 A Scoping Report for the MHPGC Project was issued to PINS and MD-LOT in February 2025 (RPS, 2025). Following consultation with the appropriate statutory bodies, PINS (on behalf of the SoS) and MD-LOT both provided Scoping Opinions in March 2025 (PINS, 2025; MD-LOT, 2025, respectively).

Table 1.1: Summary of Scoping Responses relevant to the WFD Assessment

Comment		How and where considered in the PEIR
Offshore		
Environment Agency	Bathing waters have been omitted from list of key constraints considered, despite being subsequently referred to in Table 6.2. The MHPGC Project must not compromise areas protected by WFD (i.e. bathing waters). Failure to consider bathing waters as part of the site selection process may mean that inappropriate sites are pursued and mean that the Applicant does not comply with WFD. Include bathing waters in the list of key constraints considered as part of the options appraisal and ensure that bathing waters are given due consideration when assessing impacts from changes in water quality associated with the MHPGC Project. Two designated bathing waters are located immediately to the north of Seaham.	Bathing waters that fall within the Offshore WFD Assessment Area have been identified in Section 3.1.2. An assessment of the potential impacts to the relevant bathing waters have been considered as a WFD Protected Area in the WFD Scoping in Section 3.3 and assessed further in the WFD Impact Assessment in Section 3.5 of this Offshore WFD Assessment. Further information on bathing waters can be found in Volume 2, Chapter 2: Offshore Water and Sediment Quality, of the PEIR.
	Not all impacts to fish have been considered. Changes to suspended sediment concentration (SSC) is not the only potential source of disturbance to fish. Noise (during construction or decommissioning) and electro-magnetic fields (EMF) and riverbed heating during operation may also cause disturbance to migrating fish (and to other receptors sensitive to these variables).	Potential impacts to fish, including potential impacts from increased SSC, underwater sound, EMF and seabed thermal effects have been considered in the WFD Scoping in Section 3.3 of this Offshore WFD Assessment. Further information on potential impacts to fish can be found in Volume 2, Chapter 4: Fish and Shellfish Ecology, of the PEIR, Volume 2; Annex 4.1: Herring and Sandeel Assessment, of the PEIR and MHPGC Project HRA Screening Report, prepared to accompany the PEIR. Impacts associated with EMF and thermal emissions from subsea cables are only associated with the Operations and Maintenance (O&M) phase and

Comment		How and where considered in the PEIR
		were screened out of further assessment for construction and decommissioning within the HRA Screening Assessment and Environment Impact Assessment (EIA).
MD-LOT	The Applicant has proposed to scope out all potential water quality impacts from the EIA Report and Table 7.12 details the justification for this approach. The Scottish Ministers are content with the Applicant's proposal to scope water quality out of the EIA Report on the basis that any proposed impacts will be considered further under specific receptor topics. The Scottish Ministers, draw the Applicant's attention to the Scottish Environment Protection Agency (SEPA) standing advice with particular regard to the WFD, Invasive non-native Species (INNS) and pollution prevention, and advise that these be given consideration in the EIA Report.	Given the location of the MHPGC Project, there are no Scottish-based water bodies that could be affected. Therefore, this Offshore WFD assessment is only relevant to English waters. Further information on INNS can be found in Volume 2, Chapter 3: Benthic Subtidal and Intertidal Ecology and Volume 3 and Chapter 3: Terrestrial Ecology and Terrestrial and Intertidal Ornithology, of the PEIR. As set out in Volume 2, Chapter 2: Offshore Water and Sediment Quality, of the PEIR, the accidental release of pollutants has been scoped out of the assessment for all phases of the MHPGC Project on the basis that control and management measures will be set out and implemented through embedded commitments (Table 3.3) (e.g. Environmental Management Plan (EMP) (CoT06), including a Marine Pollution Contingency Plan (MPCP) (CoT37)). Outline management plans are to be provided with the Environmental Statement (ES) submitted as part of the application for development consent and Marine Licence(s) to the Scottish Ministers. Details of mitigation and post-consent plans are provided in Volume 1, Annex 4.1: Draft Commitments Register, of the PEIR.

1.3.2 Further consultation and engagement

- 1.3.2.1 There has been no consultation undertaken specifically on the offshore WFD Assessment since receipt of the Scoping Opinions. However, matters relevant to the WFD Assessment have been discussed through the wider MHPGC Project consultation and Evidence Plan process, including the Hydrology and Flood Risk Expert Working Group (EWG) (for further detail see **Volume 3, Annex 2.3: Onshore Water Framework Directive Assessment, of the PEIR**) and the Physical Processes EWG (for further detail see **Volume 2, Chapter 2: Offshore Water and Sediment Quality Chapter, of the PEIR**).
- 1.3.2.2 There has been no further consultation and engagement relevant to the Offshore WFD Assessment.

2 Methodology

2.1 Water Framework Directive Assessment approach

- 2.1.1.1 Works within or with the potential to impact coastal or transitional waterbodies must comply with the requirements of the WFD and a compliance assessment must be carried out demonstrating that the project will not lead to deterioration in waterbody status. Alongside this, all practicable steps should be taken to prevent any future deterioration of the status of waters as a result of the works. This WFD assessment focuses on those elements of the MHPGC Project relevant to the transitional and coastal areas required to be assessed against the objectives for each relevant WFD waterbody as set out in the RBMP (EA, 2022). In the 'Clearing the Waters for All' Guidance (EA, 2023), which applies under English legislation, WFD coastal waterbodies extend up to 1nm from Mean High Water Springs (MHWS).
- 2.1.1.2 A WFD assessment can comprise up to three stages, with the need to undertake latter stages dependent on the outcomes of the preceding stages. These three stages are:
- Stage 1: Screening – This stage identifies the waterbodies and activities of the MHPGC Project that could impact them. Any activities with the potential for impact to the water environment will be screened in for further assessment. Any activities where there is no pathway for impact do not need further assessment and can be screened out at this stage;
 - Stage 2: Scoping – The receptors that are potentially at risk from the MHPGC Project are identified and carried forward for further detailed assessment in stage 3. If no receptors are identified as being at risk, the WFD assessment is complete; and
 - Stage 3: Impact Assessment – Considers the potential impacts (for example, extent and severity) of project activity on the receptors identified in Stage 2, and identify ways to avoid, reduce or mitigate these impacts. This stage concludes whether the activity may prevent the identified waterbodies and any protected areas from achieving their objectives, or cause deterioration in waterbody status.
- 2.1.1.3 In instances where the potential for deterioration of waterbodies is identified in the impact assessment and mitigation is not possible to limit impacts to avoid deterioration, the MHPGC Project would need to be assessed against the criteria set out in Article 4.7 of the WFD, i.e. derogation under Regulation 19 of the 2017 WFD Regulations.

2.2 Data Sources

- 2.2.1.1 Numerous publicly available resources and site-specific surveys were utilised to inform the WFD assessments including:
- Catchment Data Explorer (EA, 2025);
 - Bathing Water Quality (Department for Environment, Food and Rural Affairs (Defra), 2025);
 - Multi-Agency Geographic Information for the Countryside Map (MAGIC, 2025);
 - British Geological Survey (BGS) offshore geoindex (BGS, 2025);
 - European Marine Observation and Data Network (EMODnet, 2025);
 - Marine Renewables Atlas (ABPmer, 2008); and
 - Environmental Baseline Reports (**Appendix C and Appendix E of Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR** (Gardline 2024; 2025))

2.3 WFD Screening

- 2.3.1.1 According to the EA's 'Clearing the Waters for All' guidance (EA, 2023) screening is required in order to identify any low-risk activities. Such activities are exempt from the scoping or impact assessment stages and are not considered further in the assessment. Examples of low-risk activities include:
- Maintaining pumps at pumping stations;
 - Removing blockages within 10m of an existing structure;
 - Replacing or removing existing pipes; and
 - 'Over water' replacement or repairs such as bridges, piers, jetties etc.

2.4 WFD Scoping

2.4.1.1 The scoping stage identifies the receptors that are potentially at risk from the activities of the MHPGC Project and, therefore, may need to be subject to an impact assessment. At the scoping stage, it is necessary to identify all potential risks to each receptor associated with the MHPGC Project. The EA (2023) guidance defines the receptors as:

- Hydromorphology;
- Biology: Habitats;
- Biology: Fish;
- Water Quality;
- Protected areas; and
- INNS.

2.5 WFD Impact Assessment

2.5.1.1 Following the scoping stage, if it is determined that the impact assessment stage is required (such as when a receptor cannot be scoped out), the EA (2023) guidance sets out that an impact assessment should be undertaken for each receptor identified as being at risk from the activity. The impact assessment should consider what (if any) pressures the activity may create on the marine environment and specifically the receptors identified. The key aim of the impact assessment is to determine whether there is potential for deterioration in the status of any waterbody.

2.5.1.2 In addition to assessing the potential for deterioration of the current status of a waterbody, the impact assessment must consider the risk of jeopardising 'Good' status. Every waterbody has a target status that it is expected to achieve, with an expected date by when this should be achieved as set out in the RBMPs. Where the status of a waterbody or quality element is less than 'Good', the impact assessment should consider whether the activity may jeopardise the waterbody achieving 'Good status' in the future. These may include activities which reduce the effectiveness of improvement activities currently underway or prevent improvement activities taking place in the future. Details of these activities or measures are set out in the RBMPs.

3 Water Framework Directive Assessment

3.1 Stage 1 - Water Framework Directive Screening

3.1.1 Offshore Water Framework Directive Assessment Area

- 3.1.1.1 The implementation of the WFD establishes a legislative framework for the prevention of deterioration and the protection of surface water (including rivers, lakes, transitional waters and coastal waters) out to 3nm in Scotland and 1nm in England. Given the offshore location of the Scottish based elements of the MHPGC Project, there are no Scottish-based water bodies that could be affected.
- 3.1.1.2 Construction, O&M and decommissioning activities that take place within the MHPGC Project PEIR Red Line Boundary within 1nm of MHWS will result in direct interaction with WFD waterbodies. Numerical modelling undertaken for the assessment of potential impacts upon physical processes is described in **Volume 2, Annex 2.2: Model Design Validation and Results, of the PEIR**. This numerical modelling indicates a precautionary maximum Zol of up to 9km, which represents the greatest tidal excursion across the entire MHPGC Project. As presented on **Figure 1.1 within Volume 2, Chapter 1: Physical Processes, of the PEIR** the tidal ellipse extent in reality is not consistently 9km across the MHPGC Project PEIR Red Line Boundary but rather variable ranging between 5km and 9km.
- 3.1.1.3 To allow for a conservative assessment, an Offshore WFD Assessment Area including the extent of the WFD coastal waterbodies out to 1nm from MHWS and a buffer extending 9km north and south of the MHPGC Project PEIR Red Line Boundary along the coast, has been applied. This buffer is considered to be a highly precautionary maximum to allow for a conservative assessment of effects to occur.

3.1.2 Identification of Waterbodies

- 3.1.2.1 As required under the EA (2023) guidance, coastal and transitional waterbodies are identified based on whether the MHPGC Project may have an impact on the immediate as well as any linked waterbodies.
- 3.1.2.2 The MHPGC Project has the potential to directly impact the following waterbodies within the Northumbria Transitional and Coastal (TraC) Management Catchment (Environment Agency, 2025a):
- Tyne and Wear Coastal Waterbody; located within the MHPGC Project PEIR Red Line Boundary;
 - Tees Coastal Waterbody; located within the Offshore WFD Assessment Area.
- 3.1.2.3 As shown on **Figure 3.1**, the MHPGC Project PEIR Red Line Boundary directly transects the Tyne and Wear Coastal Waterbody. The north east extent of the Tees Coastal Waterbody is within the 9km buffer and may theoretically be affected by the MHPGC Project. Sediment sampling locations undertaken by Gardline (2025) within the Tyne and Wear Coastal Waterbody are also presented on **Figure 3.1**.
- 3.1.2.4 No further coastal waterbodies or any transitional waterbodies were identified within the Offshore WFD Assessment Area and as such, this report considers impacts to the Tyne and Wear Coastal Waterbody and Tees Coastal Waterbody only. The spatial location of both waterbodies in relation to the MHPGC Project is presented on **Figure 3.1**.

Tyne and Wear Coastal Waterbody

- 3.1.2.5 The Tyne and Wear Coastal Waterbody (**Figure 3.1**) is a 126.6km² coastal waterbody located within the Northumbria River Basin District. The Tyne and Wear Coastal Waterbody is not currently designated as a heavily modified or artificial waterbody. In the most recent classification reported for 2022, this waterbody is classified as 'Good' ecological status (EA, 2025).
- 3.1.2.6 The Tyne and Wear Coastal Waterbody target status was to achieve 'Good' by 2015 which is currently maintained.

3.1.2.7 A summary of the Tyne and Wear Coastal Waterbody's qualifying elements is provided in **Table 3.1**

Table 3.1: Summary of the Tyne and Wear Coastal Waterbody Qualifying Elements (EA, 2025)

Tyne and Wear Coastal Waterbody			
Waterbody Attributes			
Waterbody ID	GB650301500002		
River basin district name	Northumbria		
Management Catchment	Northumbria TraC		
Waterbody type	Coastal		
Heavily Modified	No		
Parameters	Current Status	Target Status	Target Date
Ecological Status	Good	Good	2015
Biological Quality Elements	Good	Good	2015
Invertebrates	Good	Good	2015
Imposex Assessment	Good		
Physico-chemical Quality Elements	High	Good	2015
Dissolved Inorganic Nitrogen	High	Good	2015
Dissolved Oxygen	High	Good	2015
Hydromorphological Supporting Elements	Not High	Not Assessed	2015
Morphology	Not High	Not Assessed	2015
Specific pollutants	High	High	2015
Iron	High	High	2015
Toluene	High	High	2015
Chemical	Does not require assessment	Good	2063
Priority Hazardous Substances	Does not require assessment	Good	2063

Tees Coastal Waterbody

3.1.2.8 The Tees Coastal Waterbody is an 88.44km² coastal waterbody located within the Northumbria River Basin District. The Tees Coastal Waterbody is currently designated as a heavily modified. In the most recent classification reported for 2022, this waterbody is classified as 'Moderate' ecological status (EA, 2025).

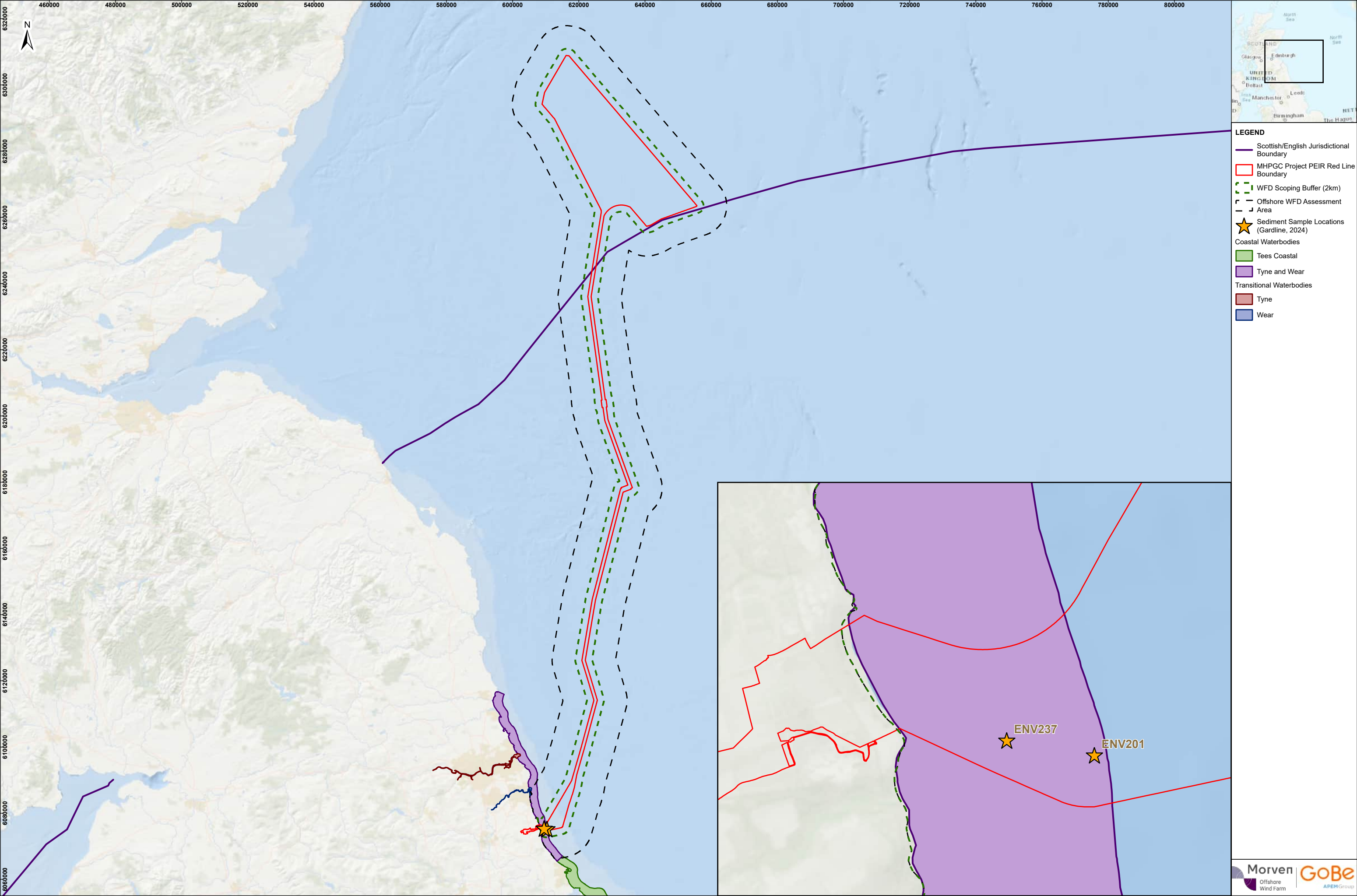
3.1.2.9 The Tees Coastal Waterbody target status was to achieve 'Good' by 2027. Currently there is low confidence in achieving this goal on the basis that it is disproportionately expensive.

3.1.2.10 A summary of the Tees Coastal Waterbody's qualifying elements is provided in **Table 3.2**.

Table 3.2 Summary of the Tees Coastal Waterbody Qualifying Elements (EA, 2025)

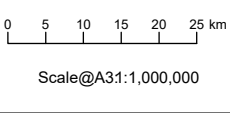
Tees Coastal Waterbody	
Waterbody Attributes	
Waterbody ID	GB650301500005
River basin district name	Northumbria

Tees Coastal Waterbody			
Waterbody Attributes			
Management Catchment	Northumbria TraC		
Waterbody type	Coastal		
Heavily Modified	Yes		
Parameters	Current Status	Target Status	Target Date
Ecological Status	Moderate	Good	2027
Biological Quality Elements	High	Good	2015
Invertebrates	High	Good	2015
Imposex Assessment	High	N/A	N/A
Physico-chemical Quality Elements	High	Good	2015
Dissolved Oxygen	High	Good	2015
Hydromorphological Supporting Elements	Not Assessed	N/A	N/A
Supporting Elements (Surface Water)	Moderate	Good	2027
Mitigation Measures Assessment	Moderate or less	Good	2027
Specific pollutants	High	High	2015
Arsenic	High	High	2015
Chromium	High	High	2015
Copper	High	High	2015
Iron	High	High	2015
Zinc	High	High	2015
Chemical	Does not require assessment	Good	2063
Priority Hazardous Substances	Does not require assessment	Good	2063



Project Name:
MORVEN HAWTHORN PIT GRID
CONNECTION PROJECT

Drawing Title:
WATER FRAMEWORK DIRECTIVE COASTAL AND TRANSITIONAL WATERBODIES
IN THE VICINITY OF THE MHPGC PROJECT AND RELEVANT SEDIMENT SAMPLE
LOCATIONS



Geodetic Information:
Datum: European 1950
Projection: ED 1950 UTM Zone 30N

Data Sources:
BP, Ordnance Survey

Service Layer Credits:
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS
World Ocean Base: Esri, Garmin, NaturalVue

Drawing Number:				
FIGURE 3-1				
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3.2 Proposed Activities for Consideration

3.2.1 Overview

- 3.2.1.1 This Offshore WFD Assessment centres on the elements of the MHPGC Project relevant to offshore areas designated for WFD consideration. The elements of the MHPGC Project relevant to onshore areas designated for WFD consideration are assessed within **Volume 3, Annex 2.3: Onshore Water Framework Directive Assessment, of the PEIR**. Therefore, this Offshore WFD Assessment considers the relevant construction, O&M and decommissioning activities within the MHPGC Project PEIR Red Line Boundary below MHWS (including trenchless techniques at the landfall) that may impact waters within the 1nm extent of WFD coastal waterbodies. Full topic specific Maximum Design Scenarios (MDS) are presented within the relevant chapters of the MHPGC Project PEIR Application.
- 3.2.1.2 As the MHPGC Project does not meet the low-risk activities criteria set out in the EA (2023) guidance (see **Section 2.3**), this WFD Compliance Assessment undertakes scoping and where required, subsequent impact assessment for the waterbodies identified in **Section 3.1.2**. The following sections set out the proposed activities for consideration across the lifespan of the MHPGC Project.

3.2.2 Construction

- 3.2.2.1 The primary activities relevant to this Offshore WFD assessment are the installation of offshore export cables and associated cable protection, landfall works, and offshore vessel activity.
- 3.2.2.2 A maximum of two offshore export cables and two fibre optic cables are considered for the MHPGC Project proposed to make landfall south of Seaham on the County Durham coastline in north-east England. At landfall, trenchless techniques will be implemented such as HDD or direct pipe to install the offshore export cables underneath the intertidal zone. The trenchless installation will commence onshore, above MHWS, with trenchless drill punchout located up to 1660m offshore of MHWS in water depths up to 20m LAT, ensuring no surface cable works occur within the intertidal zone.
- 3.2.2.3 The primary activities associated with the construction phase of the MHPGC Project considered to be relevant to the Offshore WFD assessment are therefore:
- Installation of offshore export cables via a combination of mechanical cutting, jet trenching, ploughing or CFE;
 - Sandwave clearance activities undertaken using MFE;
 - Cable protection including concrete mattresses, rock bags or rock Installation;
 - Trenchless cable installation techniques (landfall);
 - Offshore vessel activity including operational noise; and
 - Unexploded Ordnance (UXO) Clearance.
- 3.2.2.4 There is anticipated to be a maximum of 250 total vessel round trips for installation vessels. The number of these operating within the Offshore WFD Assessment Area will be a fraction of the total provided, and a maximum of 14 vessels may be operational at any one time, at landfall, during the construction phase.
- 3.2.2.5 Due to uncertainties in UXO presence and characteristics prior to details survey, a precautionary approach has been adopted with up to 22 low order clearance events included in the MDS¹. Low order clearance techniques are assumed as the worst-case scenario for the assessment, including the use of small clearance charges and low-yield configurations, as the MPHGC Project is only seeking consenting for low order clearance. Should high order clearance be necessary a separate Marine Licence will be sought from the relevant authority.

¹ The number of these potentially occurring within the Offshore WFD Assessment Area will be a fraction of the total provided

3.2.3 Operation and Maintenance

- 3.2.3.1 During the operational phase of the MHPGC Project, repairs could be required should the cable fail or be damaged. Up to 41 planned repair events and up to 4% of cable requiring remediation may be undertaken across the MHPGC Project with a fraction of these likely to occur within the 1nm extent of the WFD waterbodies. Cable repair events may require elements of the construction methodology alongside reburial/mattressing/placement of rock bags which would disturb the sediment alongside vessel mobilisation.
- 3.2.3.2 Effects during the operational phase of the MHPGC Project are not expected to exceed those identified and assessed during the construction phase. These have been considered in the scoping process where relevant, however no additional effect pathways beyond those identified for construction are likely given the nature and scale of the operation and maintenance activities.

3.2.4 Decommissioning

- 3.2.4.1 It is assumed for the MDS that all offshore export cables and associated cable protection will be removed. Whilst the MDS is for all offshore export cable materials to be removed for decommissioning, in many cases it may be less environmentally impactful to leave assets in place. The decommissioning approach will be reviewed at the time of decommissioning following the most up to date and best available guidance.
- 3.2.4.2 Effects during the decommissioning phase of the MHPGC Project are not expected to exceed those identified and assessed during the construction phase. These have been considered in the scoping process where relevant, however no additional effect pathways beyond those identified for construction are likely given the nature and scale of the decommissioning activities.

3.3 Commitments adopted as part of the MHPGC Project

- 3.3.1.1 As set out in **Volume 1, Chapter 4: Approach to Environmental Impact Assessment, of the PEIR** and **Volume 1, Annex 4.1: Draft Commitments Register, of the PEIR**, measures have been adopted as part of the MHPGC Project to reduce the potential for impacts.
- 3.3.1.2 The embedded measures relevant to the WFD Assessment are outlined in **Table 3.3**. As there is a secured commitment to implementing these measures, they are considered inherently part of the design of the MHPGC Project and have therefore been considered in the WFD Assessment presented in **Section 3**.

Table 3.3: Embedded Commitments relevant to the WFD Assessment implemented as part of the MHPGC Project

Commitment number	Measure adopted	How the measure will be secured
Offshore		
CoT06	An Outline Offshore Environmental Management Plan (OEMP) will be prepared and submitted with the application for development consent and Marine Licence(s) to the Scottish Ministers. A Detailed OEMP will be developed in accordance with the Outline OEMP. The Outline Offshore EMP will include: – an Outline Marine Biosecurity Plan; – an Outline Marine Pollution Contingency Plan; – an Outline Marine Mammal Mitigation Protocol; – an Outline Vessel Traffic Management Plan; – an Outline Navigational Safety Plan; – a chemical risk assessment that includes information such as how chemicals will be used, stored, and transported, in line with recognised best-practice guidance; – a dropped-object protocol will be established to cover the reporting and recovery of any items lost overboard that could endanger other sea users; – a Marine Emergency Action Card outlining the steps to be followed in the case of a marine emergency; – provisions for the handling and disposal of waste.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT07	An Outline Offshore Operations and Maintenance Plan will be prepared and submitted as part of the application for development consent and Marine Licence(s) to the Scottish Ministers. A Detailed Offshore Operations and Maintenance Plan will be produced prior to entering the operation and maintenance phase.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT08	An Outline Offshore Cable Specification and Installation Plan (CSIP) will be prepared and submitted with the application for development consent and Marine Licence(s) to the Scottish Ministers. It will include cable burial to be the preferred option for cable protection, where practicable. A Detailed CSIP will be developed prior to construction in accordance with the Outline CSIP. – The Outline CSIP will include (but is not limited to): – a Cable Burial Risk Assessment (CBRA), which will define burial depths and safeguards, based on seabed conditions and external aggression and climate change hazards, to keep the offshore export cables protected and compliant through all project phases while upholding navigational and environmental safety; – the implementation, management and monitoring of cable protection; – details on the development of the cable installation and protection design within the Farn Deep Nephrops ground, which will seek to maximise cable burial and minimise the requirement for external cable protection, where technically feasible, taking account of cable stability, integrity and other engineering requirements.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)

Commitment number	Measure adopted	How the measure will be secured
CoT13	The Project Description (Volume 1, Chapter 3 of the Environmental Statement) sets out that the installation of the offshore export cables under Durham Coast SSSI and Special Areas of Conservation (SAC) will be undertaken by trenchless technologies. The exit pits associated with the trenchless technologies installation will be at least 100m seaward of the eastern boundary of the Durham Coast SSSI and SAC.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT14/MM-022	An Offshore Construction Method Statement (CMS) will be produced and implemented prior to construction.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT37	An Outline Marine Pollution Contingency Plan (MPCP) will form part of the Outline Offshore Environmental Management Plan (OEMP), which will be prepared and submitted with the application for development consent and Marine Licence(s) to the Scottish Ministers. The Outline MPCP will describe the hazards, response strategies, and step-by-step actions for handling spills, contaminant releases (including details of non-toxic, biodegradable drilling fluids), and vessel collisions during construction or operations below MHWS, and will include all essential emergency contacts and information. A Detailed MPCP will be developed in accordance with the Outline MPCP.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT38	An Outline Marine Biosecurity Plan (MBP) will form part of the OEMP, which will be prepared and submitted with the application for development consent and Marine Licence(s) to the Scottish Ministers. The Outline MBP will include (but is not limited to): – follow the latest INNS guidance issued by the Great Britain Non-Native Species Secretariat; – ensure full compliance with the International Maritime Organisation (IMO) Ballast Water Management Guidelines; and – address biosecurity risks associated with cable installation and any accompanying cable protection measures, acknowledging that materials placed on the seabed could act as new substrates for colonising organisms. A Detailed MBP will be developed in accordance with the Outline MBP.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)
CoT39	Dredge and disposal activity within English Waters will be undertaken in accordance with the Dredge and Disposal Site Characterisation Report that will be prepared and submitted with the application for development consent.	Will be secured via dML condition and/or condition of Scottish Marine Licence(s)

3.4 Stage 2 - Water Framework Directive Scoping

3.4.1 Overview

- 3.4.1.1 A scoping assessment is required to determine the receptors potentially impacted by the MHPGC Project and therefore requiring further evaluation in the Stage 3 impact assessment. These receptors are defined in accordance with the EA guidance (EA, 2023).

3.4.2 Hydromorphology

- 3.4.2.1 Hydromorphology is the physical characteristics of estuaries, coasts, and watercourses. Hydromorphological quality elements include the size, shape and structure of the waterbody, and the flow and quantity of water and sediment. Impacts on hydromorphology include changes to morphological conditions and tidal patterns.
- 3.4.2.2 It has been concluded that hydromorphology has been **scoped out** of Stage 3 Impact Assessment for the Tyne and Wear Coastal Waterbody based on the specific risk information relating to hydromorphology presented in **Table 3.4**:

Table 3.4: Offshore specific risk information: hydromorphology (EA, 2023).

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody
Assess further if the activity could impact on the hydromorphology (for example morphology or tidal patterns) of a waterbody of high status	Scoped out. The Tyne and Wear Coastal Waterbody is currently classified as having 'Good' Ecological Status whilst the current morphology is assessed as 'Not High'. As the Tyne and Wear is not defined by high hydromorphology this risk has been scoped out. Scoped out. The Tees Coastal Waterbody is currently classified as having 'Moderate Ecological Potential' and the morphology is not currently assessed as such this risk has been scoped out.
Assess further if the activity could significantly impact the hydromorphology of any waterbody	Scoped out. Volume 2, Chapter 1: Physical Processes, of the PEIR indicates that the hydromorphology of the Tyne and Wear Coastal Waterbody would not be significantly impacted by the construction, O&M and decommissioning phases of the MHPGC Project with no EIA significant impacts identified to morphology in English waters. Construction activities have the potential to disturb the seabed resulting in limited localised changes to seabed form. Modelling presented in Volume 2, Annex 1.2 Model Design and Validation, of the PEIR demonstrates that effects are localised, disperse rapidly, and return to background levels within approximately three days. During the O&M phase, cable repairs may disturb small areas of seabed. The presence of buried or protected cables may also cause subtle changes in near-bed flows, potentially resulting in small areas of scour or sediment accumulation around cable protection. These effects are restricted to the immediate footprint of the works, and within the range of natural variability already observed in the area. No broader changes to wave climate, tidal patterns or regional sediment transport are predicted. During decommissioning, the removal of cables and any associated protection could temporarily disturb seabed sediments in much the same way as construction activities. Should any cable protection be left in place, the associated physical effects would be the same as the O&M phase.

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody
	Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at the landfall location are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if the activity is in a waterbody that is heavily modified for the same use as your activity	Scoped out. The Tyne and Wear Coastal Waterbody is not currently designated as heavily modified as presented within Table 3.1. As such this risk has been scoped out Scoped out. The Tees Coastal Waterbody is heavily modified for coastal and flood protection alongside navigation where as the MHPGC Project is an offshore wind cable development. As such this impact has been scoped out.

3.4.3 Biology

- 3.4.3.1 The following sections outline the potential impacts to biology that may arise from the MHPGC Project. Potential impacts to biology are split into two sections in accordance with EA (2023) guidance: habitats (relating to potential impacts to higher and lower sensitivity habitats) and fish (relating to any impacts to fish within estuaries, fish behaviour and the potential for fish entrainment and impingement).

Habitats

- 3.4.3.2 The EA (2023) guidance defines certain habitats as higher or lower sensitivity resulting in different considerations based on the classification. The recognised higher and lower sensitivity habitats for consideration in this WFD assessment as described in the EA (2023) guidance are presented in **Table 3.5**.

Table 3.5: WFD Sensitive Habitat Categorisation (EA, 2023)

Higher Sensitivity Habitats	Lower Sensitivity Habitats
Chalk Reef	Cobbles, gravel and shingle
Clam, cockle and oyster beds	Intertidal soft sediments like sand and mud
Intertidal Seagrass	Rocky shore
Maerl	Subtidal boulder fields
Mussel beds, including blue and horse mussel	Subtidal rocky reef
Polychaete Reef	Subtidal soft sediments like sand and mud
Saltmarsh	
Subtidal kelp beds	
Subtidal seagrass	

- 3.4.3.3 The EA (2023) guidance includes datasets of the sensitive habitats as presented on MAGIC (2026). Higher sensitivity biological habitats within the Tyne and Wear Coastal Waterbody includes 3.2km² of polychaete reef, 0.04km² of saltmarsh and 20.16km² of subtidal kelp beds. This waterbody does not contain any of the other higher sensitivity habitats stated in **Table 3.5**.

- 3.4.3.4 Lower sensitivity habitats within the Tyne and Wear Coastal Waterbody are also present with areas of cobbles, gravel and shingle (2.05km²), intertidal soft sediment (4.69km²), rocky shore (2.03km²), subtidal rocky reef (59.23km²), and subtidal soft sediments (72.28km²) present in the waterbody.
- 3.4.3.5 Higher sensitivity biological habitats within the Tees Coastal Waterbody includes 1.22km² of mussel beds and 1.75km² of subtidal kelp beds. This waterbody does not contain any of the other higher sensitivity habitats stated in **Table 3.5**.
- 3.4.3.6 Lower sensitivity habitats within the Tees Coastal Waterbody are also present with areas of cobbles, gravel and shingle (0.03km²), intertidal soft sediment (8.46km²), rocky shore (1.84km²), subtidal rocky reef (71.71km²), and subtidal soft sediments (12.20km²) present in the waterbody.
- 3.4.3.7 It has been concluded that the biology: habitats receptor group has been scoped into the WFD Impact Assessment for the Tyne and Wear Coastal Waterbody based on the specific risk information relating to offshore biology: habitats presented within **Table 3.6**.

Table 3.6: Offshore Specific Risk Information: Habitats (EA, 2023).

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody
Assess further if the footprint of activity is 0.5km ² or larger	Scoped in. The footprint of the MHPGC Project activities falling within the Offshore WFD Assessment Area is larger than 0.5km². As per the particle tracking modelling in Volume 2, Annex 1.2 Model Design and Validation, of the PEIR, increases in SSC and associated deposition as a result of construction activities (detailed in Section 3.2) have the potential to deposit sediment to a depth of up to 1cm in localised areas within 200m of the MHPGC Project activities, and greater depths of up to 5cm within 100m. Finer sediment (i.e. mud and silt, <62.5µm) would remain in suspension past this distance, with any deposition of sediment considered to be negligible. The Tyne and Wear Coastal Waterbody extends 1nm (1,852m) from MHWS within the MHPGC Project PEIR Red Line Boundary. There is a maximum of two cable trenches (up to 2.1m wide) with a maximum of 50m distance between them. Combined with a measurable deposition distance of 200m from the point of activity this equates to a total footprint width of 454.2m (200m + 2.1m + 50m + 2.1m + 200m). Therefore, the maximum footprint is calculated to be 1,852 m x 454.2m resulting in an area of potential disturbance during construction from sediment deposition of 0.84km². This footprint is considered to be highly conservative due to the assumptions made in the calculation. In reality MHPGC Project activities causing deposition would not occur across the entire Tyne and Wear Coastal Waterbody due to the use of trenchless techniques. The exit pits will be located between 700m and 1,660m offshore from MHWS. In this scenario, activities causing sediment disturbance within the Tyne and Wear Coastal Waterbody are reduced from the calculation above that assumes 1nm of cable trenching. Disturbance from other MHPGC Project activities such as boulder clearance and PLGR may occur within the waterbody; however, it is considered likely that these will occur within the above footprint area. Scoped out. There is no physical footprint of activities from the MHPGC Project within the Tees Coastal Waterbody. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at the landfall location are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.

Potential risk	Details
Assess further if the footprint of activity is 1% or more of the waterbody's area	Scoped out. The area of the Tyne and Wear Coastal Waterbody is 126.39km². The maximum footprint of the MHPGC Project from increase in SSC and associated deposition is 0.84km², which equates to 0.67% of the area of the Tyne and Wear Coastal Waterbody. Overall, the MHPGC Project footprint is less than 1% of the area of the Tyne and Wear Coastal Waterbody and as such is scoped out for this risk. Scoped out. There is no physical footprint of activities from the MHPGC Project within the Tees Coastal Waterbody. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if footprint of activity is within 500m of any higher sensitivity habitat.	Scoped out. As shown on MAGIC (2026) areas of subtidal kelp beds are located approximately 5km north of the MHPGC Project PEIR Red Line Boundary, within the Tyne and Wear Coastal Waterbody. Areas of polychaete reef are also identified approximately 3km offshore outside the Tyne and Wear Coastal Waterbody. The footprint of the MHPGC Project activities is calculated to be the area where measurable deposition can occur (1cm in localised areas within 200m of trenching activities). Whilst identified within the 9km Offshore WFD Assessment Area subtidal kelp beds are over 500m away from the maximum calculated extent of the MHPGC Project activity footprint. Any deposition at this distance is determined to be negligible, with any fines remaining in suspension as presented within Volume 2, Chapter 1: Physical Processes of the PEIR. Further consideration of the potential impacts of the MHPGC Project upon benthic habitats is provided in Volume 2, Chapter 3: Benthic Ecology and Volume 2, Annex 3.1 Benthic Ecology Technical Report. Scoped out. There is no physical footprint of activities from the MHPGC Project within the Tees Coastal Waterbody. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody's higher sensitivity habitats is anticipated. As such, this risk has been scoped out.
Assess further if the footprint of activity is 1% or more of any lower sensitivity habitat	Scoped in. The Tyne and Wear Coastal Waterbody comprises the Lower Sensitivity Habitats 'subtidal rocky reef', 'gravel and cobbles', 'intertidal soft sediment', 'rocky shore' although it is predominantly 'subtidal soft sediment', as shown on MAGIC (2026). The MHPGC Project footprint is more than 1% of all of these lower sensitivity habitats, although this relates to impacts from increases in SSC and associated deposition only. Both rocky shore and intertidal soft sediments are located in the intertidal zone. During the construction of the MHPGC Project, there will be no works in the intertidal zone. A trenchless solution such as HDD or direct pipe will be used at the landfall, with the exit pits situated within the subtidal zone. As such, there will be no overlap of the footprint of the activity and these rocky shore and intertidal soft sediment habitats. Therefore these rocky shore and intertidal soft sediments habitats are scoped out. The subtidal rock reef, gravel and cobbles and subtidal soft sediment habitats are scoped in.

Potential risk	Details
	Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody's lower sensitivity habitats is anticipated. As such, this risk has been scoped out.

Fish

- 3.4.3.8 The EA (2023) guidance provides a list of potential risks which may impact fish species within relevant waterbodies. Fish are not classified specifically for coastal waterbodies but have been assessed below in relation to potential implications upon estuaries beyond the Tyne and Wear Coastal Waterbody.
- 3.4.3.9 It has been concluded that fish have been scoped out of the WFD Impact Assessment for the Tyne and Wear Coastal Waterbody based on the specific risk information relating to offshore biology: fish provided in **Table 3.7**.

Table 3.7: Offshore Specific Risk Information Biology: Fish (EA, 2023).

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody
Assess further if the activity is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Scoped out. Nearby transitional estuaries, where diadromous fish are known to be present, are not located within the Offshore WFD Assessment Area. For example, the River Wear is the closest river adjoining the Tyne and Wear Coastal Waterbody but is located approximately 10.2km north of the MHPGC Project PEIR Red Line Boundary. MHPGC Project activities such as increased SSC and deposition, would not delay or prevent fish from migrating through to this estuary due to the reported distance, time frames and magnitude of disturbance. Scoped out. Nearby transitional estuaries such as the Tees Transitional Waterbody hydrologically linked to the Tees Coastal Waterbody are outwith the Offshore WFD Assessment Area and as such no impacts upon fish migration is anticipated. As such this risk has been scoped out.
Assess further if the activity could impact on normal fish behaviour like movement, migration or spawning (e.g. creating a physical barrier, noise, chemical change or a change in depth or flow)	Scoped out. The impact assessment within Volume 2, Chapter 4: Fish and Shellfish Ecology, of the PEIR concludes that there would not be a significant effect on fish as a result of the MHPGC Project. There is not considered to be a potential for barrier effects to fish within the Tyne and Wear Coastal Waterbody or to adjoining estuaries as a result of the Project for migratory fish. Furthermore, there is not considered to be an impact on fish spawning within the Offshore WFD Assessment Area, particularly for herring and sandeel. The Offshore WFD Assessment Area was not identified as having high potential for herring spawning or sandeel habitat (see Volume 2, Annex 4.1: Herring and Sandeel Assessment, of the PEIR), with the habitats present within the MHPGC Project PEIR Red Line Boundary being unsuitable for both. Potential underwater sound effects would also be limited in distance, with a high risk of behavioural disturbance from impulsive sound within tens of metres for most fish species, and a medium risk within hundreds of metres (see Volume 2, Annex 5.1: Underwater Sound Modelling Report, of the PEIR). The nearest

	estuary is identified as the Wear Transitional Waterbody which is approximately 9.4km away from the MHPGC Project PEIR Red Line Boundary. The diadromous fish species identified within the Offshore WFD Assessment Area, such as Atlantic salmon and European smelt are not hearing specialists and do not use their swim bladder for hearing (Popper <i>et al.</i>, 2014). Furthermore, underwater sound effects would be temporary and short-term, with sound from vessel activity and geophysical surveys moving away from landfall over a short period of time. Therefore, there is no potential for underwater sound effects from activities stated in Section 3.2 as a result of MHPGC Project activities to prevent diadromous fish entering the estuaries within linked WFD waterbodies.
	Scoped out. Nearby transitional estuaries such as the Tees Transitional Waterbody hydrologically linked to the Tees Coastal Waterbody are outwith the Offshore WFD Assessment Area and as such no impacts upon fish movement migration or spawning is anticipated. As such this risk has been scoped out.
Assess further if the activity could cause entrainment or impingement of fish	Scoped out. No intakes or outfalls are proposed as part of the MHPGC Project and therefore there is no pathway for entrainment and impingement of fish within the Tyne and Wear Coastal Waterbody.
	Scoped out. No intakes or outfalls are proposed as part of the MHPGC Project and therefore there is no pathway for entrainment and impingement of fish within the Tees Coastal Waterbody.

3.4.4 Water quality

- 3.4.4.1 In accordance with WFD guidance, water quality relates to physical conditions (such as water clarity, temperature, salinity and oxygen levels), biological conditions (such as nutrients or microbial patterns, phytoplankton status and harmful algae) and chemical conditions (such as the presence of chemicals on the Environmental Quality Standards Directive (EQSD) (EA, 2016) or above the Centre for Environment, Fisheries and Aquaculture Science (Cefas) Action Levels (AL) (Marine Management Organisation, 2014)).
- 3.4.4.2 It has been concluded that water quality elements have been scoped into the WFD Impact Assessment for the Tyne and Wear Coastal Waterbody based on the specific risk information relating to offshore water quality provided in **Table 3.8**.

Table 3.8: Offshore Specific Risk Information: Water Quality (EA, 2023).

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody

Potential risk	Details
Assess further if the activity could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Scoped out. Several MHPGC Project activities such as the punch-out of trenchless techniques, sandwave clearance, and spoil disposal have been identified as activities which could cause disturbance to the seabed and are consequently likely to result in the suspension of sediment. This can create a sediment plume in the water column which can travel away from the activity and the MHPGC Project PEIR Red Line Boundary and affect water quality, increasing turbidity and therefore affecting water clarity. The resuspension of sediments into the water column resulting from construction activities would result in short-term increases in SSCs. The extent of sediment disturbance will vary depending on the specific cable installation method used. The modelling presented in Volume 2, Annex 1.2 Model Design and Validation, of the PEIR indicates that impacts to water clarity in English nearshore waters as detailed in the MDS will be undetectable or return to baseline conditions within three days following the cessation of activities. No significant impacts to temperature, salinity, oxygen levels, nutrients or microbial patterns are therefore anticipated. Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if the activity is in a waterbody with a phytoplankton status of moderate, poor or bad	Scoped out. This information is not available for the Tyne and Wear Coastal Waterbody. Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if the activity is in a waterbody with a history of harmful algae	Scoped out. The history of harmful algae is not monitored in the Tyne and Wear Coastal Waterbody. Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if the activity uses or releases chemicals (e.g. through sediment disturbance or building works) and the chemicals are on the EQSD list	Scoped in. The MHPGC Project activities do not include the direct discharge of any chemicals listed under the EQSD list during any stage of the MHPGC Project. Sediment samples within the Tyne and Wear Coastal Waterbody identified concentrations of chemicals on the EQSD list. MHPGC Project activities have the potential to disturb such sediments and as such this risk has been scoped in for further assessment. There is a risk of accidental release of pollution during the MHPGC Project from sources including vessels and equipment/machinery and drilling fluids and other chemicals employed during trenchless construction works. However, the risk will be managed by the implementation of measures set out in standard post-consent plans (e.g. OEMP, including a MPCP; commitment number: CoT06/MM-006; Table 3.3). Outline management plans will be submitted as part of the DCO Application.

Potential risk	Details
	These plans will include planning for control and management of accidental spills and address potential contaminant releases and include key emergency contact details. These plans will also set out industry good practice and Oslo and Paris Conventions (OSPAR), International Maritime Organisation and International Convention for the Prevention of Pollution from Ships (MARPOL) guidelines for preventing pollution at sea. The likelihood of an accidental spill occurring is very low following the implementation of these plans and in the unlikely event that such an event did occur, the magnitude will be minimised through measures outlined in the MPCP (Cot06/MM-006; Table 3.3). As such the impact from accidental pollution events will not be taken forward to the impact assessment stage.
	Scoped out. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Assess further if the activity disturbs sediment with contaminants above Cefas Action Level 1	Scoped in. Baseline sediment quality within the Offshore WFD Assessment Area has been assessed using desk-based information sources and quantitative data from the project specific sampling surveys (Appendix C and Appendix E of Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR Gardline Ltd. 2024 and 2025). Within the Offshore WFD Assessment Area, the sediment sample locations (ENV237 and ENV 201 shown spatially on Figure 3.1) showed there to be elevated concentrations of metals and hydrocarbons above Cefas AL 1. There is a potential for the release of sediment bound contaminants into the water column when seabed disturbance occurs, such as during site preparation activities (see Volume 2, Chapter 2: Offshore Sediment and Water Quality, of the PEIR). Therefore, potential impacts from the release of chemicals through sediment disturbance are taken forward to the impact assessment stage.
	Scoped out. No MHPGC Project activities will occur directly within the Tees Coastal Waterbody. Tidal excursions taken from the UK Renewables Atlas (ABPmer, 2008) and presented on Figure 1.1 of Volume 2, Chapter 1: Physical Processes, of the PEIR show that nearshore maximum spring tidal excursions at landfall are less than 6km and therefore no pathway for interaction from the activities of the MHPGC Project upon the Tees Coastal Waterbody is anticipated. As such, this risk has been scoped out.
Does the activity release chemicals on the EQSD list and has a mixing zone (e.g. a discharge pipeline or outfall)?	Scoped out. There are no point discharges or outfalls associated with the construction, O&M, and decommissioning phases of the MHPGC Project. As such, this risk has been scoped out for the Tyne and Wear Coastal Waterbody
	Scoped out. There are no point discharges or outfalls associated with the construction, O&M, and decommissioning phases of the MHPGC Project. As such, this risk has been scoped out for the Tees Coastal Waterbody

3.4.5 Water Framework Directive Protected Areas

- 3.4.5.1 WFD protected areas include SACs, Special Protection Areas (SPAs), Shellfish Waters, Bathing Waters, and nutrient sensitive areas listed under the Urban Waste Water Treatment Directive

(UWWTD). The protected areas within the Offshore WFD Assessment Area are illustrated in **Figure 3.2.** and include:

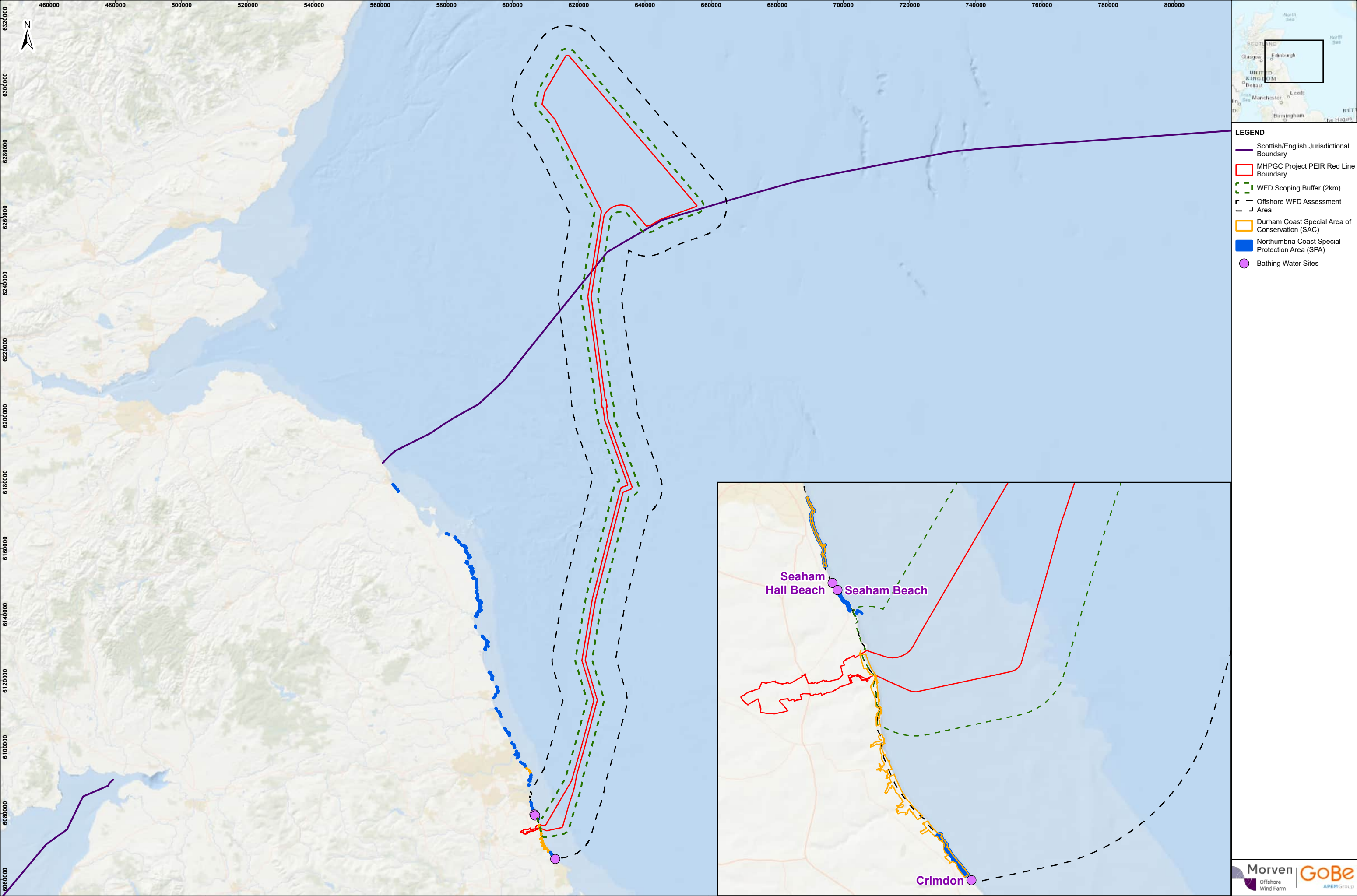
- Seaham Beach Bathing Water;
- Seaham Hall Beach Bathing Water;
- Crimdon Bathing Water;
- Northumbria Coast SPA; and
- Durham Coast SAC.

3.4.5.2 No nutrient sensitive areas or shellfish waters were identified within the EA's (2023) 2km buffer.

3.4.5.3 It has been concluded that protected sites have been scoped in to the Offshore WFD impact assessment based on the specific risk information relating to Offshore WFD protected areas presented in **Table 3.9**..

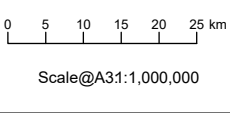
Table 3.9: Offshore Specific Risk Information: WFD Protected Areas (EA, 2023).

Potential risk	Details
Assess further if any WFD protected areas fall within the 2km of the activity.	Scoped in. The EA (2023) guidance states that protected areas need to be considered if they are within 2km of the activity. Two WFD protected areas fall within 2km of the MHPGC Project: • Durham Coast SAC, located within the MHPGC Project PEIR Red Line Boundary; • Northumbria Coast SPA, located approximately 1.3km north of the MHPGC Project PEIR Red Line Boundary. • The three bathing waters identified within the Offshore WFD Assessment Area are outwith the 2km buffer and as such not considered further in this Offshore WFD assessment. The approximate distances from the MHPGC Project PEIR Red Line Boundary are as follows: – Seaham Beach – 3.04km; – Seaham Hall Beach – 3.42km; and – Crimdon – 8.87km.



Project Name:
MORVEN HAWTHORN PIT GRID
CONNECTION PROJECT

Drawing Title:
WATER FRAMEWORK DIRECTIVE PROTECTED AREAS IN RELATION TO THE
MHPGC PROJECT



Geodetic Information:
Datum: European 1950
Projection: ED 1950 UTM Zone 30N

Data Sources:
BP, Ordnance Survey

Service Layer Credits:
World Ocean Base: OceanWise, Esri, Garmin, NaturalVue
World Topographic Map: Esri, HERE, Garmin, FAO, NOAA, USGS
World Ocean Base: OceanWise, Esri, GEBCO, Garmin, NaturalVue

Drawing Number: FIGURE 3-2				
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3.4.6 Invasive non-native species

- 3.4.6.1 Non-native species are plants and animals that have been introduced through human activity into areas they are not native to. Some of these spread rapidly and cause harm to the environment, which are INNS. This section assesses whether the MHPGC Project may pose a potential risk associated with the introduction of INNS.
- 3.4.6.2 It has been concluded that INNS have been scoped out of the Offshore WFD impact assessment based on the specific risk information relating to INNS presented in **Table 3.10**.

Table 3.10: Offshore Specific Risk Information: INNS (EA, 2023).

Potential risk	Details
WFD water bodies	Tyne and Wear Coastal Waterbody Tees Coastal Waterbody
Introduce or spread INNS	Scoped out. Volume 2, Chapter 3: Benthic Subtidal and Intertidal Ecology, of the PEIR and Volume 2, Chapter 4: Fish and Shellfish Ecology, of the PEIR indicates that no significant increases to the spread or introduction of INNS would occur from the construction, O&M and decommissioning phases of the MHPGC Project. During construction, O&M and decommissioning, an increased risk of introduction of INNS could occur due to the use of vessels, the release of ballast water, and long-term habitat creation from the placement of cable protection. During a review of NBN Atlas, one INNS record was detected within the nearshore English waters, approximately 1km offshore from Seaham. This was a presence record from 2017 for the orange-tipped sea squirt (<i>Corella eumyota</i>) which is on the UK Marine Non-Indigenous Species Priority List and is listed as invasive by NatureScot (2026). However, it is important to note that the orange-tipped sea squirt is relatively widespread around the coast of England, including the northeast (NBN Atlas, 2026). During MHPGC Project specific subtidal benthic surveys, no INNS were identified. Furthermore, any hard material introduced into the marine environment for use as cable protection will be suitably sourced and clean to prevent the introduction of new INNS (Cot38; Table 3.3) Additionally, all MHPGC Project vessels will adhere to the IMO Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (Biofouling Guidelines 2011), and the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (Ballast Water Management Convention Convention) (Cot38; Table 3.3) Furthermore, the development of an OEMP will include actions to minimise INNS (Cot06/MM-006; Table 3.3). During the construction, O&M and decommissioning phases, with adherence to the embedded mitigation measures set out in Table 3.3, an increased risk of introduction and spread of INNS to the Tyne and Wear or Tees Coastal Waterbody are not anticipated as such this risk has been scoped out.

3.4.7 Scoping summary

Offshore Water Framework Directive Scoping summary

3.4.7.1 Table 3.11: summarises the potential risks to receptors that have been scoped in during Stage 2 of the WFD assessment.

Table 3.11: Potential Risks scoped into Stage 3 Impact Assessment upon the Tyne and Wear Coastal Waterbody

Receptor	Potential Risk to receptor	Reason for scoping decision
Hydromorphology	No	No potential impacts to hydromorphology have been identified during Stage 2: Scoping.
Biology: Habitats	Yes	The MHPGC Project activities footprint was calculated to exceed the 0.5km ² area threshold and 1% of the identified lower sensitivity habitats threshold.
Biology: Fish	No	No potential impacts to biology: fish have been identified during Stage 2: Scoping.
Water Quality	Yes	In the Offshore WFD Assessment Area, elevated concentrations of metals and hydrocarbons were identified. There is a potential for some release of sediment bound contaminants into the water when sediment disturbance is predicted to occur due to MHPGC Project activities.
WFD Protected Areas	Yes	The following WFD protected areas fall within the EA (2023) 2km buffer: • Northumbria Coast SPA, located 1.3km north of the MHPGC Project PEIR Red Line Boundary. • Durham Coast SAC, direct overlap with the MHPGC Project PEIR Red Line Boundary
Invasive Non-native Species	No	No potential impacts from INNS have been identified during Stage 2: Scoping.

3.5 Stage 3 – Offshore Water Framework Directive Impact Assessment

3.5.1 Overview

- 3.5.1.1 The offshore activities associated with the construction, O&M and decommissioning phases of the MHPGC Project, have been assessed for risks to the Tyne and Wear Coastal Waterbody which fall under the Northumbria RBMP.
- 3.5.1.2 The Northumbria RBMP describes the challenges that threaten the water environment and how these challenges can be managed. The environmental objectives of the RBMP as covered within EA (2022) are:
- Preventing deterioration of the status of surface waters and groundwater;
 - Achieving objectives and standards for protected areas;
 - Aiming to achieve good status for all water bodies;
 - Reversing any significant and sustained upward trends in pollutant concentrations in groundwater;
 - Cessation of discharges, emissions and losses of priority hazardous substances into surface waters; and
 - Progressively reducing the pollution of groundwater and preventing or limiting the entry of pollutants.
- 3.5.1.3 This Offshore WFD Assessment is relevant to the first three objectives and does not involve activities that may impact groundwater nor does it involve discharges into surface waters.

3.5.2 Biology: habitats

- 3.5.2.1 The footprint of the MHPGC Project construction activities was calculated to be 0.84 km² encompassing the area within the Tyne and Wear Coastal Waterbody that may be impacted by deposition originating from offshore export cable installation. This footprint is considered to be highly conservative as in reality the length of cable trenching will be limited to the extent of the waterbody seaward of the trenchless technique exit pits rather than the full width of the waterbody.
- 3.5.2.2 Within the Offshore WFD Assessment Area the following lower sensitivity habitats have been considered within this impact assessment, due to their location relevant to the MHPGC Project:
- Subtidal Rocky Reef;
 - Gravels and Cobbles;
 - Subtidal Soft Sediment.
- 3.5.2.3 Rocky Shore and Intertidal soft sediments have not been considered in the assessment due to the use of trenchless techniques such as HDD during construction (CoT13). The exit pits will be located entirely within the subtidal region avoiding these intertidal areas of lower sensitivity habitat. The tides are generally orientated with the coast and impacts from sediment plumes are not anticipated to reach the shoreline based up the particle tracking modelling undertaken within **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR**.
- 3.5.2.4 This section will assess the risks of the following potential impacts to the lower sensitivity habitats,:
- Increased SSCs and associated deposition during construction, O&M and decommissioning phases;
 - Disturbance/remobilisation of sediment bound contaminants during construction, O&M and decommissioning phases.
- 3.5.2.5 A detailed assessment of the effects of the MHPGC Project beyond the extent of the Offshore WFD Assessment Area, including further impact pathways not considered here, is presented in **Volume 2, Chapter 3: Benthic Subtidal and Intertidal Ecology, of the PEIR**.
- Increased suspended sediment concentrations and associated deposition
- 3.5.2.6 The construction activities that will take place within the Offshore WFD Assessment Area (e.g. trenchless techniques punch-out, sandwave clearance and spoil disposal) may result in minor, localised and temporary mobilisation of fine sediments during excavation and trenching. Any effects

on water quality associated with these construction activities would be localised and short term, occurring only during active construction works. As per the sediment modelling presented in **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR**, the sediment would be deposited up to a depth of 1cm within 200m of the MHPGC Project activities, and greater depths of up to 5cm within 100m of the MHPGC Project activities. However, deposition is likely to be localised and dependent on the speed and direction of tidal currents during the dispersion event.

- 3.5.2.7 The lower sensitivity habitats within the Offshore WFD Assessment Area are considered to have a low to negligible sensitivity to increased SSC and deposition based on the Marine Evidence-based Sensitivity Assessment (MarESA) (Tyler-Walters *et al.*, 2023). However, considering the highly dynamic nature of these habitats, a natural elevated level of baseline sediment disturbance is expected to occur due to ocean currents and movement.
- 3.5.2.8 Due to the short-term and temporary nature of the impact and natural movement of sediments through local hydrodynamics, any affected habitats are expected to recover to baseline conditions within a few days of the disturbance. Therefore, such impacts to the lower sensitive habitats identified are not considered to prevent the Tyne and Wear Coastal Waterbody from maintaining the objectives set out in **Table 3.1** or cause a deterioration from the current classification of Good Ecological Status.
- 3.5.2.9 Impacts from any O&M phase activities required will be localised and limited compared to the construction phase activities. Therefore, the impact to lower sensitivity habitats from increased SSC and associated deposition within the Tyne and Wear Coastal Waterbody during the O&M phase is also not considered to result in a deterioration in status from the current classification.
- 3.5.2.10 Impacts from decommissioning phase are anticipated to be similar or no greater than impacts considered at the construction phase. The impact assessment can therefore be considered the same as that defined above for the construction phase.

Disturbance and remobilisation of sediment bound contaminants

- 3.5.2.11 Indirect effects of sediment disturbance from construction phase activities that take place within the Tyne and Wear Coastal Waterbody and Offshore WFD Assessment Area can include the disturbance and/or the remobilisation of sediment bound contaminants into the water column. This can include remobilisation of heavy metals and hydrocarbons resulting in an increase of contaminant concentrations above background levels.
- 3.5.2.12 MHPGC Project-specific subtidal surveys relevant to this assessment were undertaken by Gardline Ltd. as part of the MHPGC Project (**Appendix C and Appendix E of Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR** Gardline Ltd. 2024 and 2025). An initial survey was conducted during June to November 2023, and a further site-specific subtidal survey was undertaken during August and September 2024. The sampling strategy was designed to adequately sample the area to determine seabed characteristics and sediment quality and to characterise the baseline environment within the MHPGC Project PEIR Red Line Boundary.
- 3.5.2.13 Two sample locations (ENV237 and ENV201) are within the Offshore WFD Assessment Area (**Figure 3.1**). The samples were tested for heavy metals, Total Hydrocarbon Content (THC), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs) and Organochlorine pesticides (OCPs).
- 3.5.2.14 In order to assess the contaminant concentrations recorded, the measured concentrations have been compared to sediment quality thresholds in accordance with current guidance. Sediment quality thresholds used are:
- Cefas Action level 1 (Cefas, 2025); and
 - Canadian Environmental Quality Guidelines (CEQGs) Threshold Effect Level (TEL) and Probable Effect Level (PEL).
- 3.5.2.15 The sediment quality thresholds selected all represent concentrations at which there is considered to be potential for effects to marine life. Exceedance of a threshold does not indicate unacceptable risk, just a potentially higher probability of measurable effects.
- 3.5.2.16 The two samples located within the Offshore WFD Assessment Area had several compounds detected above sediment quality thresholds. These are discussed by groups of contaminants below:

- OCPs were all below sediment quality thresholds.
- PCBs were below sediment quality thresholds and Background Assessment Concentration (BAC) when considering the measured and normalised dataset.
- Concentrations of 12 individual PAH compounds were above the TELs at both stations. Four individual PAH compounds (acenaphthene, fluorene, naphthalene and phenanthrene) were above the PELs in ENV201.
- Metals were mostly below Cefas Action Level 1. No exceedance of Action Level 2 was identified for any metal with Action Level 1 exceeded at ENV 237 for Arsenic and at ENV 201 for Lead.

- 3.5.2.17 Based on the chemical analysis results presented in **Volume 2, Annex 3.1 Benthic Ecology Technical Report, of the PEIR**, and the assessment undertaken within **Volume 2, Chapter 3: Benthic Subtidal and Intertidal Ecology** it is not anticipated that sediment disturbance and deposition during construction will result in detectable changes in sediment bound contaminants above background levels and natural variation.
- 3.5.2.18 Sediment bound contaminants are only expected to be disturbed and remobilised on a localised basis from activities within the Offshore WFD Assessment Area and are also expected to be regularly mobilised by natural disturbance such as currents, waves and storm events, and rapidly dispersed following disturbance due to local hydrodynamic conditions (see **Volume 2, Chapter 1, Physical Processes, of the PEIR**). Therefore, any elevated levels of disturbed contaminants above background conditions during construction activities are expected to return to baseline levels rapidly following disturbance. Therefore, the impact to benthic receptors from the disturbance of sediment bound contaminants is not considered to result in a deterioration in status of the biological quality elements of the Tyne and Wear Coastal Waterbody during the construction phase.
- 3.5.2.19 Chemical status of the Tyne and Wear Coastal Waterbody including that of priority hazardous substances and other pollutants such as the indicator PAH Benzo(a)pyrene does not require assessment for the most recent classification. This is attributed to a change of methods alongside an increased evidence base for the 2019 assessment that caused all waterbodies to fail on chemical status. Without the introduction of ubiquitous, persistent, bioaccumulative, and toxic substances (uPBTs), such as mercury and polybrominated diphenyl ethers (PBDEs) chemical status is deemed comparable to previous years assessments. The most recent of which in 2016 deemed the Tyne and Wear to have Good chemical Status.
- 3.5.2.20 Potential impacts from any O&M phase activities will be localised and limited in duration compared to the construction phase activities. Therefore, the impact on benthic receptors from disturbance/remobilisation of sediment bound contaminants is also not considered to result in a deterioration of the biological or chemical quality elements of the Tyne and Wear Coastal Waterbody. or prevent the Tyne and Wear Coastal Waterbody from maintaining the objectives set out in **Section 3.5.1**.
- 3.5.2.21 Potential impacts from the decommissioning phase are anticipated to be similar or no greater than impacts considered at the construction phase. The impact assessment can therefore be considered the same as that defined above for the construction phases where the Tyne and Wear Coastal Waterbody is not considered to be subject to a deterioration in status.
- 3.5.2.22 Deterioration of the status of any qualifying elements of the Tyne and Wear Coastal Waterbody is not anticipated due to the MHPGC Project. Identified potential impacts to lower sensitive habitats are determined to be spatially and temporally limited and will not prevent the Tyne and Wear Coastal Waterbody from maintaining its current classification or achieving 'Good' in the future. The MHPGC Project is therefore considered, in this respect, to be compliant with the requirements of the WFD.

3.5.3 Water quality

- 3.5.3.1 A detailed assessment of water quality is presented in **Volume 2, Chapter 2: Offshore Water and Sediment Quality, of the PEIR**.
- 3.5.3.2 Construction activities within the Offshore WFD Assessment Area (such as sandwave clearance, trenchless techniques punch-out and spoil disposal) have been identified which will cause disturbance to the seabed and are likely to result in the suspension of sediment. This could create a

sediment plume in the water column which may affect water quality in the Tyne and Wear Coastal Waterbody.

- 3.5.3.3 During the construction phase activities that take place within the Offshore WFD Assessment Area (e.g. trenchless techniques punch-out, sandwave clearance and spoil disposal), the disturbance of the seabed will result in increased SSC and transportation of the sediments by the currents. As assessed in further detail throughout **Volume 2, Chapter 2: Offshore Water and Sediment Quality of the PEIR** the presence of elevated SSCs can adversely affect water quality primarily through a reduction in water clarity which subsequently can reduce the penetration depth of natural light within the water column. The increased turbidity may reduce primary productivity and consequently increase bacterial survival rates of *Escherichia coli* (*E. Coli*) and Intestinal Enterococci (IE) (the indicator species for assessing bathing water quality) within the Offshore WFD Assessment Area.
- 3.5.3.4 Sediment resuspension may release nutrients previously bound within the seabed such as nitrogen and phosphorous into the water column. Elevated nutrient concentrations may increase the risk of localised eutrophication occurring through rapid increases to phytoplankton populations and subsequent decreases to dissolved oxygen through the decomposition process following depletion of the nutrients. Dissolved oxygen is a critical indicator of water quality and reduced oxygen levels have the ability to negatively impact marine organisms that rely on oxygen rich environments.
- 3.5.3.5 Numerical modelling presented in **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR** predicts that the increased SSCs associated with the construction activities will be localised and temporary. By the end of the active disturbance for spoil disposal and trenchless technique punch-out, any SSC above negligible concentrations will be limited spatially to within the immediate vicinity of the MHPGC Project PEIR Red Line Boundary.
- 3.5.3.6 For instance, for sandwave clearance, within one day of sediment disturbance, SSCs are predicted to be negligible beyond the MHPGC Project PEIR Red Line Boundary. Within three days of the sediment disturbance arising from sandwave clearance and trenchless technique punch-out activities, the modelling predicts that the suspended sediments will dissipate fully. Therefore, any impact from the construction activities on the Tyne and Wear Coastal Waterbody will be spatially limited and short-lived.
- 3.5.3.7 The numerical modelling presented in **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR** predicts that for all construction activities taking place within the Offshore WFD Assessment Area, the deposition thickness is less than 5mm beyond the MHPGC Project PEIR Red Line Boundary. This thickness is considered to be negligible, therefore no significant effect from deposition is anticipated.
- 3.5.3.8 Baseline sediment quality and a full assessment of sediment quality impacts are provided within **Volume 2, Chapter 2: Offshore Water and Sediment Quality, of the PEIR**.
- 3.5.3.9 MHPGC Project-specific subtidal surveys relevant to this assessment were undertaken by Gardline Ltd. as part of the MHPGC Project (**Appendix C and Appendix E of Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR** Gardline Ltd. 2024 and 2025). An initial survey was conducted during June to November 2023, and a further site-specific subtidal survey was undertaken during August and September 2024. The sampling strategy was designed to adequately sample the area to determine seabed characteristics and sediment quality and to characterise the baseline environment within the MHPGC Project PEIR Red Line Boundary.
- 3.5.3.10 Two sample locations (ENV237 and ENV201) are within the Offshore WFD Assessment Area (**Figure 3.1**) The samples were tested for heavy metals, THC, and PAHs, PCBs and OCPs.
- 3.5.3.11 The sediment quality detailed in **paragraph 3.5.2.14** represent concentrations at which there is considered to be potential for effects to marine life. Exceedance of a threshold does not indicate unacceptable risk, just a potentially higher probability of measurable effects.
- 3.5.3.12 The two samples located within the Offshore WFD Assessment Area had several compounds detected above sediment quality thresholds. These are discussed by groups of contaminants below:
- OCPs were all below sediment quality thresholds.
 - PCBs were below sediment quality thresholds and Background Assessment Concentration (BAC) when considering the measured and normalised dataset.

- Concentrations of 12 individual PAH compounds were above the TELs at both stations. Four individual PAH compounds (acenaphthene, fluorene, naphthalene and phenanthrene) were above the PELs in ENV201.
- Metals were mostly below Cefas Action Level 1. No exceedance of Action Level 2 was identified for any metal with Action Level 1 exceeded at ENV 237 for Arsenic and at ENV 201 for Lead.

- 3.5.3.13 Sediment quality from ENV237 and ENV201 within the Offshore WFD Assessment Area from the Gardline Ltd. surveys (**Appendix C and Appendix E of Volume 2, Annex 3.1: Benthic Ecology Technical Report, of the PEIR**), showed there to be elevated concentrations of metals and hydrocarbons. However, under normal circumstances, very small concentrations of contaminants are expected to enter the dissolved phase, with the vast majority adhering to the sediment particles when temporarily entering suspension in the water column which typically results in a reduction of several orders of magnitude from the concentrations associated with SSC. **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR** predicts suspended sediment dissipation to occur within three days of the sediment disturbance, indicating any impact to water quality or the qualifying chemical elements from contaminant release will be limited and short lived.
- 3.5.3.14 During landfall cable installation, localised and temporary effects on the water quality of the Tyne and Wear Coastal Waterbody from the mobilisation of fine sediments during excavation and trenching may occur. Sediment mobilisation and potential contaminant pathways would be limited to the immediate vicinity of landfall and controlled through standard construction good practice measures, including pollution prevention, sediment control and appropriate management of plant and materials, and occurring only during active construction works (CoT06/MM-006; **Table 3.3**)
- 3.5.3.15 With the implementation of the embedded mitigation detailed in **Section 3.3** and good practice measures, deterioration of the status of any qualifying elements of the Tyne and Wear Coastal Waterbody is not anticipated due to the MHPGC Project. Identified impacts to water quality are determined to be spatially and temporally limited and will not prevent the Tyne and Wear Coastal Waterbody from maintaining its current classification or achieving 'Good' in the future.
- 3.5.3.16 Impacts from O&M phase activities will be localised and limited in duration compared to the construction phase activities. Similarly, impacts from the decommissioning phase are anticipated to be similar to or no greater than impacts considered at the construction phase. The impact assessment can therefore be considered the same as that defined above for the construction phase where the Tyne and Wear Coastal Waterbody is not considered to be subject to a deterioration in status.
- 3.5.3.17 The MHPGC Project is therefore considered, in this respect, to be compliant with the requirements of the WFD.

3.5.4 Water Framework Directive Protected Areas

- 3.5.4.1 The following protected areas are within the Offshore WFD Assessment Area:

- Northumbria Coast SPA located approximately 1.3km from the MHPGC PEIR Red Line Boundary.
- The Durham Coast SAC, located within the MHPGC Project PEIR Red Line Boundary.

Durham Coast Special Area of Conservation

- 3.5.4.2 The Durham Coast SAC, whilst containing marine areas and sea inlets is designated for Annex I habitats (Vegetated sea cliffs of the Atlantic and Baltic Coasts), not for marine features. Due to the proposed MHPGC Project activities (such as trenchless landfall techniques), interaction with the Durham Coast SAC is not anticipated. This designated site is consequently considered within **Volume 3 Annex 2.3: Onshore Water Framework Directive Assessment, of the PEIR** and not considered further in the Offshore WFD assessment.

Northumbria Coast Special Protection Area

- 3.5.4.3 A detailed assessment of potential effects on the Northumbria Coast SPA is presented in **MHPGC Project HRA Screening Report, prepared to accompany the PEIR**, and **MHPGC Project RIAA**,

prepared to accompany the PEIR. Pertinent information for the purposes of this WFD Assessment is presented below.

3.5.4.4 Nearshore construction activities that take place within the Tyne and Wear Coastal Waterbody and Offshore WFD Assessment Area could result in disturbance to SPA qualifying features². The **MHPGC Project HRA Screening Report, prepared to accompany the PEIR** identified potential Likely Significant Effects (LSE(s)) upon ornithology receptors within the Northumbria Coast SPA across all project phases. The **MHPGC Project RIAA, prepared to accompany the PEIR** then assessed the below LSE during the appropriate assessment:

- Disturbance and displacement from airborne noise, underwater sound, and visual disturbance associated with the presence of vessels;
- Indirect impacts from underwater sound affecting prey species; and
- Temporary habitat loss/disturbance from increased SSCs, including indirect impacts on prey species.

3.5.4.5 The temporary habitat loss/disturbance from increased SSCs is considered to be relevant to the WFD with other impact pathways assessed through the HRA and within **Volume 2, Chapter 6: Marine Ornithology, of the PEIR**.

3.5.4.6 Potential increases in SSC could reduce foraging quality temporarily for the qualifying features of the Northumbria Coast SPA. The site provides good foraging and nesting habitat for the qualifying features. The MHPGC Project will utilise a trenchless technique at landfall such as HDD or direct pipe. Both techniques involve an onshore entry point, installing the cable(s) under any intertidal environments, punching out in the nearshore environment (located up to 1660m offshore of MHWS in water depths up to 20m LAT) thereby avoiding direct impacts on the Northumbria Coast SPA. Sediment modelling presented in **Volume 2, Annex 1.2: Model Design and Validation, of the PEIR** indicates that the modelled scenario for trenchless techniques punch-out will not cause impactful SSC levels within the SPA designation. Furthermore, within three days of the sediment disturbance arising from punch-out activities, the modelling predicts that the suspended sediments will dissipate fully therefore any impact from the construction activities in the nearshore area will be limited and short-lived.

3.5.4.7 Impacts from any MHPGC Project O&M activities will be localised and limited compared to the construction phase activities. Impacts from decommissioning phase are anticipated to be similar or no greater than impacts considered at the construction phase. The impact assessment can therefore be considered the same as that defined above for the construction phase where no deterioration in status or impacts to qualifying features of the Northumbria Coast SPA are anticipated. The **MHPGC Project RIAA, prepared to accompany the PEIR** also concludes beyond reasonable scientific doubt that Temporary Habitat Loss/disturbance from increased SSCs, including indirect impacts on prey species will not result in Adverse Effect on Integrity (AEoI) on the Northumbria Coast SPA in view of the site's conservation objectives with respect to all qualifying features from the MHPGC Project alone.

3.5.4.8 The MHPGC Project is therefore considered, in this respect, to be compliant with the requirements of the WFD.

3.5.5 Mitigation measures assessment

Offshore

3.5.5.1 The embedded mitigation set out **Table 3.3** is considered to be sufficient and no additional mitigation is deemed necessary to specifically reduce potential impacts to the Tyne and Wear Coastal Waterbody. The MHPGC Project will not jeopardise the achievement of the environmental

² Qualifying features include: Arctic tern (*Sterna paradisaea*), Breeding, Little tern (*Sternula albifrons*), Breeding, Purple sandpiper (*Calidris maritima*), Non-breeding and Turnstone (*Arenaria interpres*), Non-breeding.

objectives set out in **Section 3.5.1** or cause deterioration to the existing status of the Tyne and Wear Coastal Waterbody.

4 Summary

- 4.1.1.1 This WFD Assessment establishes that the MHPGC Project is compliant with the WFD for the identified designated water bodies within the Offshore WFD Assessment Area. The assessment followed a structured approach through WFD Screening, Scoping, and Impact Assessment, identifying relevant offshore water bodies including the Tyne and Wear Coastal Waterbody and protected areas.
- 4.1.1.2 The WFD Scoping presented in **Section 3.3** scoped out impacts to hydromorphology, fish and INNS for the Tyne and Wear Coastal Waterbody and all receptors groups for the Tees Coastal Waterbody.
- 4.1.1.3 The WFD Impact Assessment for offshore impacts to water quality, habitats and WFD protected areas is presented in **Section 3.5**. For water quality, habitats and WFD protected areas the assessment undertaken demonstrates that any impacts of the MHPGC Project on the Tyne and Wear Coastal Waterbody would be localised and temporary. Additionally, commitments as set out in **Section 3.1.2**, ensure effective management of potential risks.
- 4.1.1.4 It is concluded from the above WFD Impact Assessment that, with implementation of the commitments as set out in **Section 3.3**, the MHPGC Project will not result in deterioration of the Tyne and Wear Coastal Waterbody.
- 4.1.1.5 Additionally, the MHPGC Project will not compromise the delivery of the Northumbria RBMP (EA, 2022) objectives as set out in **Section 3.5.1**. It is thus in compliance with the requirements of the WFD and supports the Northumbria RBMP.

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