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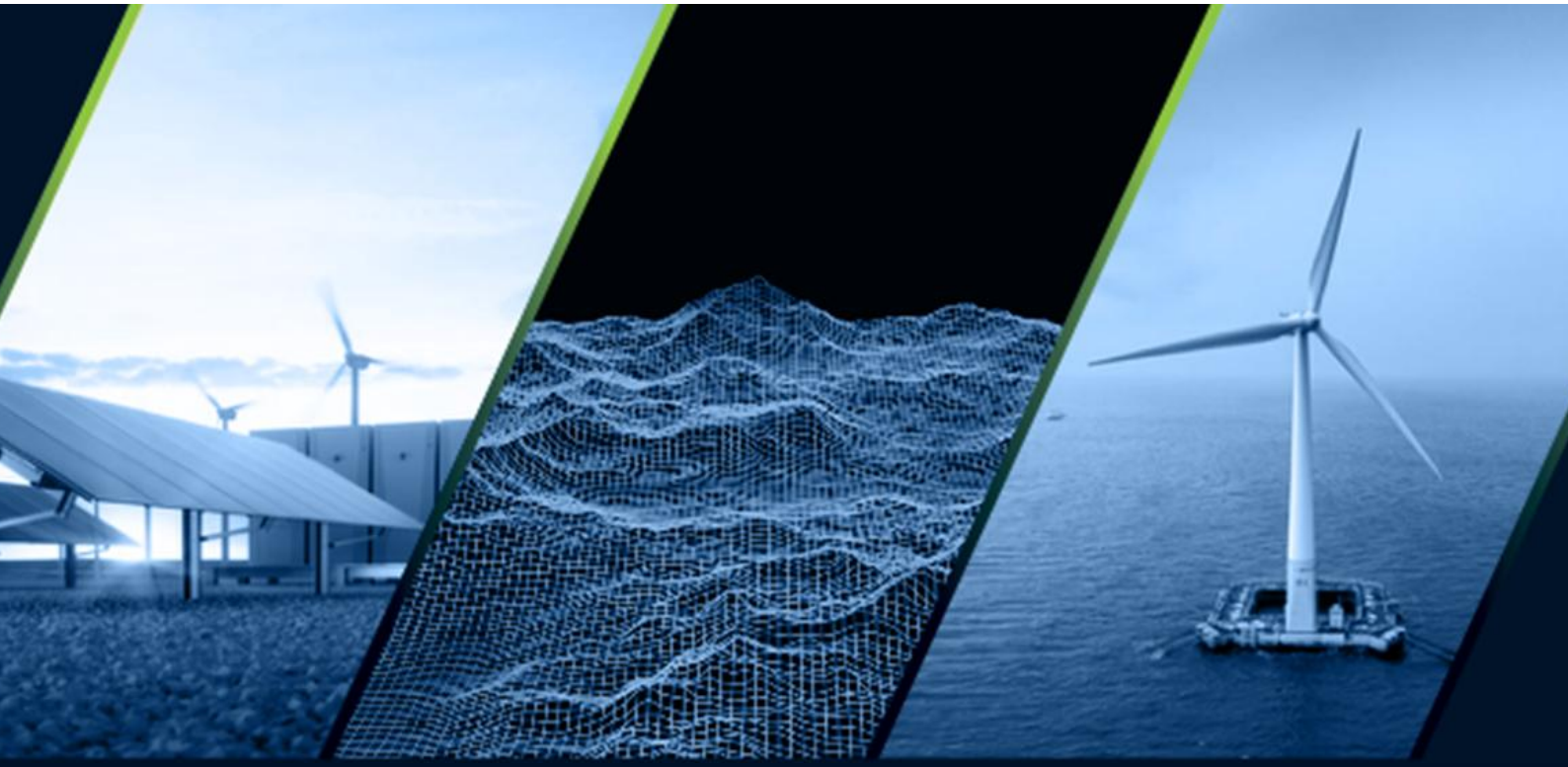

Geotechnical Survey Deposit Marine Licence Supporting Information Document

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Confidentiality Notice and Disclaimer

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Acronyms

Acronym	Full Term
CPT	Cone Penetration Test
EPS	European Protected Species
HRAT	High Resolution Acoustic Televiewer
ICES	International Council for the Exploration of the Sea
JUV	Jack-Up Vessel
LOA	Length Overall
MCA	Maritime and Coastguard Agency
MD-LOT	Marine Directorate Licensing and Operations Team
MPA	Marine Protected Area
NMR	Nuclear Magnetic Resonance
NLB	Northern Lighthouse Board
NTM	Notice to Mariners
OWF	Offshore Wind Farm
pUXO	Potential Unexploded Ordnance
SAC	Special Area of Conservation
SID	Supporting Information Document
SPA	Special Protected Area
TWP	Thistle Wind Partners
USBL	Ultra Short Baseline

1 Introduction

1.1 General

In 2020, Crown Estate Scotland (CES) launched the ScotWind leasing process to facilitate the increase in offshore wind capacity to support the Scottish Government's 2045 Net Zero target. Following the ScotWind leasing round in 2022, Thistle Wind Partners (TWP), as the development company for Bowdun Offshore Wind Farm Limited (BOWFL) (the 'Applicant'), were successful in securing the option to develop a commercial scale Offshore Wind Farm (OWF) project in the E3 Plan Option Area (POA) as defined in the Scottish Government's Sectoral Marine Plan (SMP) for Offshore Wind Energy. BOWFL entered into an Option to Lease Agreement (OLA) with CES, to secure the rights to develop within the POA.

1.2 Document Purpose

This Supporting Information Document (SID) has been prepared in relation to the proposed backfilling of two geotechnical survey boreholes with grout, to be undertaken in relation to the Bowdun OWF.

The geotechnical survey aims to characterise the seabed and underlying geology, including properties such as soil bearing capacity, to inform the engineering design for the trenchless solution for the export cable. Following the completion of downhole geotechnical testing, the boreholes will be backfilled with a bentonite/cement grout mix. A description of the proposed survey activities is detailed in Section 2.

The Applicant has commissioned OWC to prepare this SID, which will provide the necessary information to support a Marine Licence Application for Construction Projects to be submitted to the Marine Directorate - Licence and Operations Team (MD-LOT) for the backfilling of two geotechnical survey boreholes with grout.

1.3 Requirement for a Marine Licence

On 18 August 2025, the Applicant provided MD-LOT with notification of intention to undertake these geotechnical activities under Article 18(B) of The Marine Licensing (Exempted Activities) (Scottish Inshore Region) Order 2011. Confirmation that the described works met the criteria of Article 18(B) was received on 28 August 2025.

A Marine Licence is now sought for these activities due to proposed changes to the methodology which includes the deposition of bentonite grout to backfill the two nearshore boreholes described within this SID. As a result of these changes, the works constitute a licensable activity under Section 21 of the Marine Scotland Act (2010) which states a Marine Licence is required:

To deposit any substance or object within the Scottish marine area, either in the sea or on or under the seabed, from any of the following—

(a)a vehicle, vessel, aircraft or marine structure,

(b)a container floating in the sea, or

(c)a structure on land constructed or adapted wholly or mainly for the purpose of depositing solids in the sea.

The Applicant considers that the geotechnical survey activities still meet the criteria of the Marine Licence Exemption confirmed by MD-LOT, and this SID applies only to the marine licensable activity of depositing grout within the two geotechnical boreholes.

EPS licences are already in place (09 December 2025) to cover activities undertaken as part of the wider geophysical and geotechnical survey campaigns.

1.4 Stakeholder Consultation

Prior to the submission of the Marine Licence application, TWP have undertaken stakeholder consultation with key consultees, detailing the proposed works, via emails dated 02 February 2026. Details of this engagement and stakeholder responses are provided in Table 1-1.

Table 1-1: Details of stakeholder consultation undertaken prior to the submission of the Marine Licence Application

Consultee	Date Consulted	Date Response Received	Response
Maritime Coastguard Agency (MCA)	02/02/2026	04/02/2026	"We would likely say that with the implementation of the conditions and advisory in the previous email that the overall risk to navigation and shipping in the area around the works would be low on this occasion. We may also add the following: *CONDITION - A notification must be sent to The Source Data Receipt team, UK Hydrographic Office (email: sdr@ukho.gov.uk) of commencement of the licensed activities, at least 10 days before commencement of the works. The information supplied must include the start date and end date, a description of the works, positions of the work area (WGS84), and details of any marking arrangements. A copy of the notification must be sent to MD-LOT within 5 working days of the notification being sent. "*
Northern Lighthouse Board (NLB)	02/02/2026	03/02/2026	"Thank you for sending over details of the proposed geotechnical survey at a site approximately 1.2nM south of Doolie Ness, Aberdeenshire. NLB have no objection to the proposed works, and do not consider them to pose an undue hazard to navigation. NLB do request that a Notice to Mariners (NTM) is distributed to local harbours ahead of the works."
NatureScot	02/02/2026	06/02/2026	Referred to previous NatureScot advice provided in August 2025 in relation to the geotechnical Marine Licence exemption as referenced in Section 1.3 above.

2 Proposed Activities

2.1 Location and Timescale

The two geotechnical boreholes to be backfilled will be located in the nearshore area located between Johnshaven and Gourdon (Figure 2.1). The survey will be conducted within the nearshore area located between the mean high water spring (MHWS) and -15 m LAT.

The geotechnical survey is planned to commence on 17 May 2026, subject to suitable weather for the Jack-Up Vessel (JUV) to transit to site. While the collection of two borehole samples is anticipated to take three days. The backfilling of the two boreholes will be undertaken within an estimated survey window of up to 28 days, which is required to provide contingency for weather downtime and unforeseen delays.

It is important to note that the final locations of the two proposed boreholes may be subject to change based on the results of a geophysical data. The geophysical data will be assessed for potential unexploded ordnance (pUXO) and any unsuitable ground conditions which may limit safe jack-up operations, potentially resulting in adjustment to the final borehole locations. While target locations have been identified (Table 2.1), a 75 m buffer (Figure 2.1) has been applied to the target borehole locations to account for micro siting of the final borehole location (75 m in any direction from the target location). As such, the coordinates for this buffer zone are used for the purposes of this Marine Licence application.

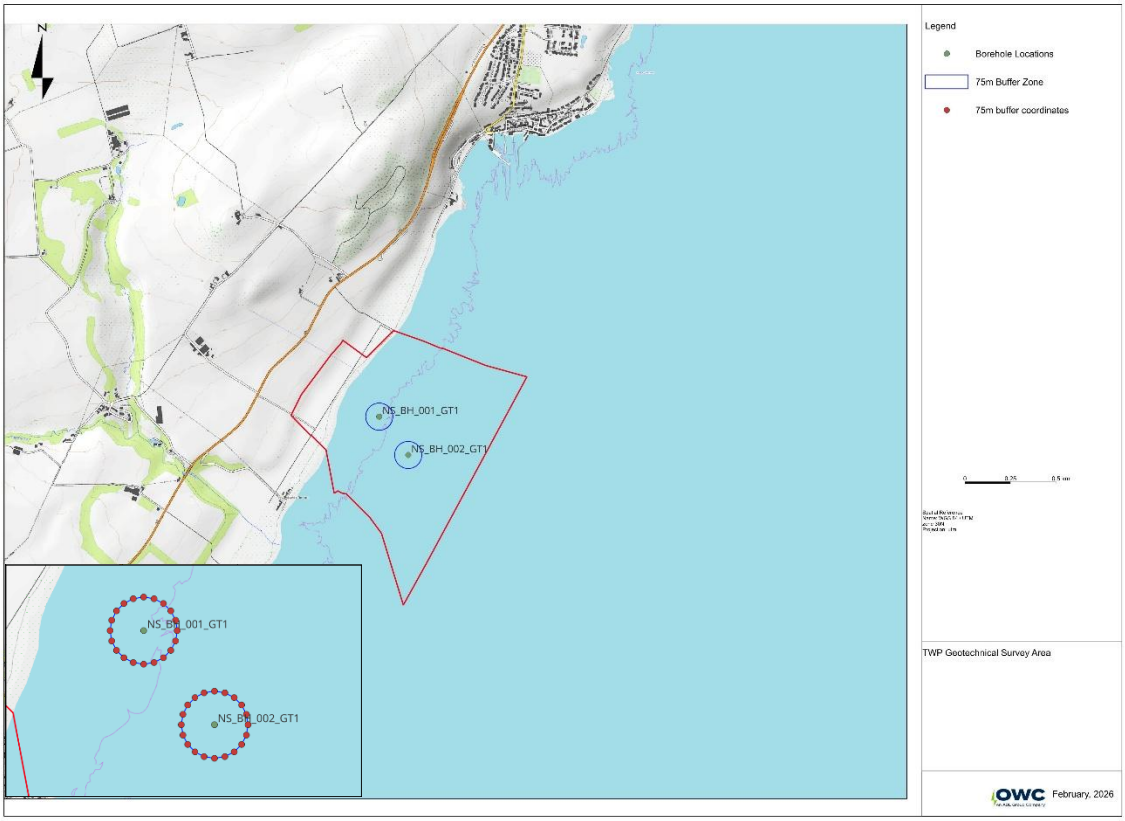

Figure 2.1: Location of proposed boreholes NS_S_BH_001_GT1 and NS_S_BH_002_GT1 with 75 m buffer to be backfilled as part of the Marine Licence application.

Both geotechnical borehole locations will be backfilled with a 3:1 cement bentonite grout following sampling. Further details are provided in Table 2-1.

For context only, of the overall survey activities, prior to backfilling the following tests may be undertaken with each borehole:

- Core Penetration Testing (CPT);
- Double Packer testing
- Downhole High-Resolution Acoustic (HRAT) logging;
- Downhole compression (P) and shear (S) logging;
- Downhole calliper testing; and
- Downhole Nuclear Magnetic Resonance (NMR).

Table 2-1: Details of two proposed boreholes to be backfilled with bentonite grout (target locations).

Location Name	Depth (m)	Easting (m)	Northing (m)	Lat Long (WGS84)	Volume per sample (m^3)	Area of borehole at seabed (m^2)
NS_S_BH_001_GT1	20	542812.76	6296910.90	56° 48' 845" N, 002° 17' 923" W	0.39	0.029
NS_S_BH_002_GT1	20	542971.87	6296700.54	56° 48' 731" N, 002° 17' 769" W	0.39	0.029

2.2 Vessels

A single JUV will be used to collect borehole samples as part of the geotechnical survey campaign. One tugboat will be used to tow the JUV to and from the geotechnical survey area. The JUV is supported by four circular legs, each with a diameter of 0.76 m. At each borehole location, all four legs will penetrate the seabed, resulting in a seabed footprint from the JUV of 1.82 m^2 per location, and 3.64 m^2 across both locations. As referenced in Section 1.3, the use of the JUV and collection of borehole samples is exempt from the need for a marine licence.

3 Environmental Considerations

3.1 Physical Processes

3.1.1 Summary of baseline

Marine physical processes and tidal ranges within the nearshore area are informed by the Aberdeen tidal monitoring station, with mean spring tidal range of up to 3.5 m, and a mean low water spring tide of 0.8 m [1] [2].

Water currents in the region are of moderate strength, with mean spring peak current speeds rarely exceeding 0.7 ms^{-1}. Currents are strongest near to landfall. Spring tidal excursion distances tend to be between 9 and 11 km, running north northeast to south southwest. Suspended sediment transport typical of the region are low, ranging between 2-10 mg l^{-1} in the winter, and 1-4 mg l^{-1} in the summer.

The geotechnical survey area lies within the Southern Upland Fault Zone. Surficial sediments overlie the local Quaternary units, which include glacial, glaciomarine, and post−glacial marine settings. In the nearshore these sediments are present only in localised pockets but increase in depth moving offshore.

The Firth of Forth Banks Complex Marine Protected Area (MPA) is located 20.6 km from the geotechnical survey area (Figure 3-1), and is designated for two physical features, including Shelf Banks and Mounds, and Quaternary of Scotland – Moraines. Shelf Banks and Mounds are known to create nutrient rich habitats and providing shelter for marine species. Moraines are ice-marginal landforms produced by advances, or re-advances, or stillstands of a glacier margin.

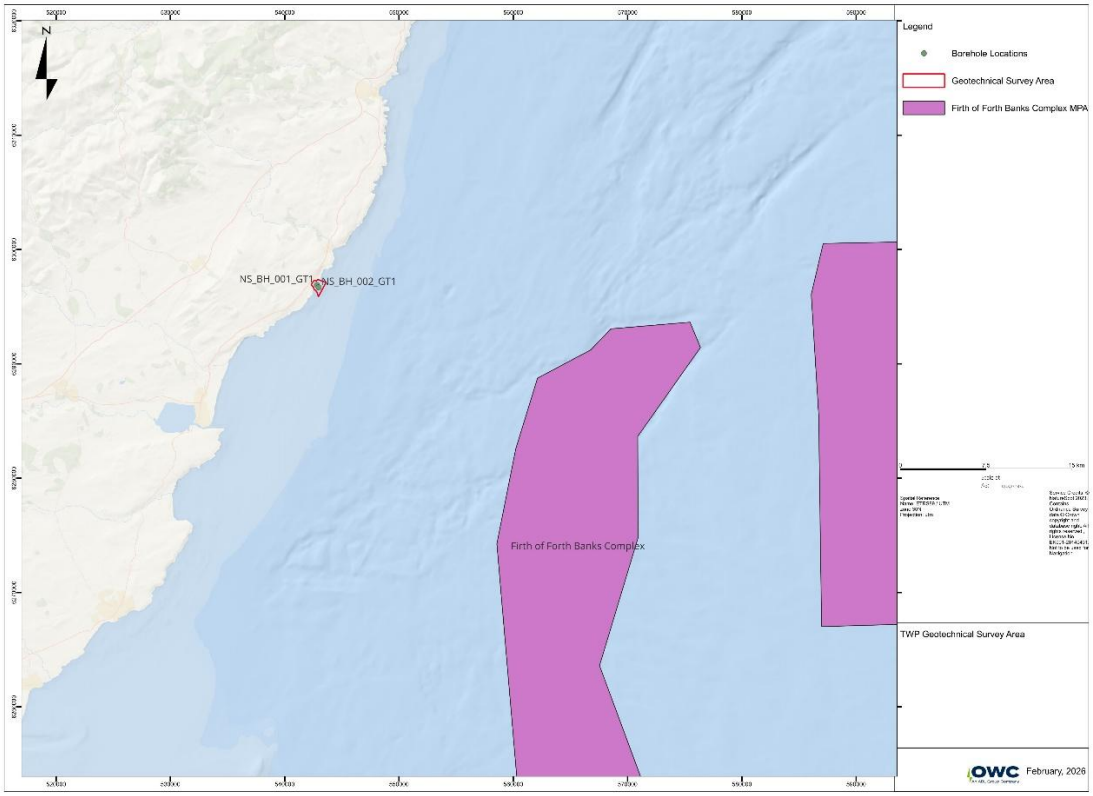

Figure 3-1: Firth of Forth Banks Complex MPA in relation to the two geotechnical boreholes to be backfilled.

3.1.2 Assessment of Potential Effects

Potential effects on Physical Processes associated with the proposed works are limited to the disturbance of sediment associated with the two boreholes and with the JUV legs. The extent of sediment disturbance is limited to 3.70 m^2 (3.64 m^2 JUV footprint; 0.06 m^2 boreholes).

The recovery period associated with seabed disturbance varies by sediment type [3]. Sandy and gravelly sediments have been shown to recover relatively rapidly due to their higher mobility during the course of standard tidal cycles. Coarse, mixed, and muddy sediments have been shown to recover at reduced rates. Seabed within the geotechnical survey area is indicated to comprise rock, however sampling will only be taken where sediments compatible with the borehole equipment is available, most likely sediment of predominantly sand components. In some cases, disturbance associated with the installation of offshore cables showed evidence of disturbance for a number of years following works, in the form of shallow depressions in the order of tens of centimetres. The spatial scale of the proposed survey works is minimal (3.70 m^2), and so recovery periods are anticipated to be more rapid that those associated with cable installation. Seabed recovery to pre-works conditions will be further aided by the backfilling of boreholes using bentonite grout. Whilst areas of coarse, mixed, and muddy seabed may have reduced recovery times, any changes to the Physical Processes baseline within the geophysical study area are considered **negligible**.

3.2 Benthic Ecology

3.2.1 Summary of baseline

A number of marine habitats are found within the region, as presented within EUSeaMap data [4]. Nearshore data where boreholes are proposed indicated seabed comprising Infralittoral rock and other hard substrata (A3); Atlantic and Mediterranean high energy infralittoral rock (A3.1); and Atlantic and Mediterranean high energy circalittoral rock (A4.1). Boreholes will only be taken in softer sediments, likely present within the area but not presented within EUSeaMap data [4] due to limited data resolution. Softer sediment are likely similar to those found further offshore. These sediments comprise a matrix of circalittoral fine sand (A5.25), circalittoral muddy sand (A5.26), circalittoral sandy mud (A5.35), and further deep circalittoral coarse sediment (A5.15) are present to landfall. Each of these habitats are described in more detail within Table 3-1.

Table 3-1: EUNIS benthic habitats present within the proposed geotechnical survey area.

EUNIS Code	Habitat Name	Habitat Description [5]
A5.15	Deep circalittoral coarse sediment	Offshore (deep) circalittoral habitats with coarse sands and gravel or shell. This habitat may cover large areas of the offshore continental shelf although there is relatively little quantitative data available. Such habitats are quite diverse compared to shallower versions of this habitat and generally characterised by robust infaunal polychaete and bivalve species. Animal communities in this habitat are closely related to offshore mixed sediments and in some areas settlement of *Modiolus modiolus* larvae may occur and consequently these habitats may occasionally have large numbers of juvenile *M. modiolus*.
A5.25	Circalittoral fine sand	Clean fine sands with less than 5% silt/clay in deeper water, either on the open coast or in tide-swept channels of marine inlets in depths of over 15 to 20 m. The habitat may also extend offshore and is characterised by a wide range of echinoderms (in some areas including the pea urchin *Echinocyamus pusillus*), polychaetes and bivalves. This

EUNIS Code	Habitat Name	Habitat Description [5]
		habitat is generally more stable than shallower, infralittoral sands and consequently supports a more diverse community.
A5.26	Circalittoral muddy sand	Circalittoral non-cohesive muddy sands with the silt content of the substratum typically ranging from 5% to 20%. This habitat is generally found in water depths of over 15 to20 m and supports animal-dominated communities characterised by a wide variety of polychaetes, bivalves such as *Abra alba* and *Nucula nitidosa*, and echinoderms such as *Amphiura* spp and *Ophiura* spp., and *Astropecten irregularis*. These circalittoral habitats tend to be more stable than their infralittoral counterparts and as such support a richer infaunal community.
A5.35	Circalittoral sandy mud	Circalittoral, cohesive sandy mud, typically with over 20% silt/clay, generally in water depths of over 10 m, with weak or very weak tidal streams. This habitat is generally found in deeper areas of bays and marine inlets or offshore from less wave exposed coasts. Sea pens such as *Virgularia mirabilis* and brittlestars such as *Amphiura* spp. are particularly characteristic of this habitat whilst infaunal species include the tube building polychaetes *Lagis koreni* and *Owenia fusiformis*, and deposit feeding bivalves such as *Mysella bidentata* and *Abra* spp.

The Firth of Forth Banks Complex MPA has two protected features relevant to benthic ecology including ocean quahog aggregations, and Offshore Subtidal Sands and Gravels. Ocean quahog *Arctica islandica*, is a species of clam that is found buried in sandy and muddy sediments. They are slow-growing filter feeders, filtering organic matter from the water column. Offshore Subtidal Sands and Gravels are able to support rich and productive benthic communities. They also have a key role in wider ecosystem functions, such as nutrient cycling and sediment stability.

3.2.2 Assessment of Potential Effects

Potential effects on benthic ecology associated with the proposed works are limited to the temporary disturbance of habitat associated with the two boreholes and with the JUV legs, the deposition of bentonite grout following survey efforts, and the suspension of sediment associated with these works. The extent of sediment disturbance is limited to 3.70 m^2 (3.64 m^2 JUV footprint; 0.06 m^2 boreholes). The total volume of bentonite grout is 0.78 m^3 (0.39 m^3 per borehole).

The recovery period of the habitat itself varies by sediment type [3], with recovery periods for sandy and gravelly sediments having a more rapid recovery rate that coarse, mixed, and muddy sediments. Species identified within the region are regularly exposed to disturbance from tides and currents and are therefore likely to have a high level of tolerance to sediment disturbance. It is therefore anticipated that rapid recovery will occur should any impact on the benthic community take place. The spatial scale of survey works with the potential for temporary benthic disturbance is minimal, and benthic habitat recovery to pre-works conditions will be further aided by the backfilling of boreholes using bentonite grout. Therefore, the impact of seabed disturbance on benthic ecology is considered **negligible**.

Bentonite grout will be used to backfill boreholes following the conclusion of testing. Whilst bentonite grout is non-toxic, it comprises very fine sediments with the potential for long resettlement times if suspended in water, and the potential for the smothering of local seabed. Bentonite grout will be deposited directly into the boreholes, minimising the potential for suspension and resettlement. The total volume to be used throughout works is limited, with

any change in suspended sediment concentration considered highly unlikely to result in a change in baseline conditions beyond the immediate area, and returning to baseline conditions following one tidal cycle. Therefore, the impact of bentonite grout on benthic ecology is considered **negligible**.

3.3 Fish and Shellfish

3.3.1 Summary of baseline

The fish and shellfish community surrounding the geotechnical survey area is typical of the region, comprising species of teleost, elasmobranch, migratory, and shellfish species. The spawning and nursery grounds for a range of species are present within the nearshore survey area and are presented within Table 3-2.

Table 3-2: Spawning and nursery grounds of fish and shellfish species within the geotechnical survey area. [6]; [7]

Receptor Group	Species	Coull *et al.*, 1998		Ellis *et al.*, 2012	
		Spawning Grounds	Nursery Grounds	Spawning Grounds	Nursery Grounds
Elasmobranch	Common skate	Not Assessed	Not Assessed	Not Assessed	Low
Elasmobranch	Spotted ray	Not Assessed	Not Assessed	Not Assessed	No
Elasmobranch	Spurdog	Not Assessed	Not Assessed	Not Assessed	Low
Elasmobranch	Thornback ray	Not Assessed	Not Assessed	Not Assessed	No
Elasmobranch	Tope shark	Not Assessed	Not Assessed	Not Assessed	Low
Elasmobranch	Undulate ray	Not Assessed	Not Assessed	Not Assessed	No
Shellfish	Nephrops	Not Assessed	Yes	Not Assessed	Not Assessed
Teleost	Anglerfish	Not Assessed	Not Assessed	Not Assessed	Low
Teleost	Blue whiting	No	No	Not Assessed	Low
Teleost	Cod	Not Assessed	Not Assessed	Low	High
Teleost	European hake	Not Assessed	Not Assessed	No	Low
Teleost	Haddock	No	No	Not Assessed	Not Assessed
Teleost	Herring	Not Assessed	Not Assessed	Not Assessed	High
Teleost	Lemon Sole	No	Yes	Not Assessed	Not Assessed
Teleost	Ling	Not Assessed	Not Assessed	No	Low
Teleost	Mackerel	Not Assessed	Not Assessed	No	Low

Receptor Group	Species	Coull *et al.*, 1998		Ellis *et al.*, 2012	
		Spawning Grounds	Nursery Grounds	Spawning Grounds	Nursery Grounds
Teleost	Norway Pout	No	Not Assessed	Not Assessed	Not Assessed
Teleost	Plaice	Not Assessed	Not Assessed	Low	Low
Teleost	Saithe	No	Yes	Not Assessed	Not Assessed
Teleost	Sandeel	Not Assessed	Not Assessed	High	Low
Teleost	Sole	Not Assessed	Not Assessed	No	No
Teleost	Sprat	No	Yes	Not Assessed	Not Assessed
Teleost	Whiting	No	Yes	Low	High

A number of migratory fish species have the potential to move through the geotechnical survey area as they make the transition between freshwater and marine environments. Of note are Atlantic salmon *Salmo salar*, which are a designated feature of the River South Esk Special Area of Conservation (SAC) and River Dee SAC which lie 18.9 km and 39.0 km from the proposed geotechnical survey area respectively.

3.3.2 Assessment of Potential Effects

Potential effects on Fish and Shellfish associated with the proposed works are limited to the temporary disturbance of habitat associated with the two boreholes and with the JUV legs, the deposition of bentonite grout following survey efforts, and the suspension of sediment associated with these works. The extent of sediment disturbance is limited to 3.70 m^2 (3.64 m^2 JUV footprint; 0.06 m^2 boreholes). The total volume of bentonite grout is 0.78 m^3.

Whilst the geotechnical survey area falls within a region utilised as spawning and nursery grounds for a number of fish species, the majority of these species are pelagic spawners with little dependence on the seabed for viable spawning activity to take place. Species including herring and sandeel depend on specific seabed conditions to undertake spawning and for habitat respectively. Muds and fines usually prohibit seabed being appropriate for these species. Whilst they are indicated as being present in the region [7], much of the sediment within the geotechnical survey area itself has a mud component, rendering these areas unsuitable. Sandeel, as well as a number of shellfish species, live within the sediment itself. Whilst it is possible that small numbers of individuals directly within the footprint of works will be impacted during the survey, the limited spatial scale of this impact is unlikely to result in any change at a population level. The limited scale of works is anticipated to facilitate recovery of the seabed, alongside the backfilling of boreholes using bentonite grout. Therefore, the impact of temporary seabed disturbance on Fish and Shellfish is considered **negligible**.

Bentonite grout will be used to backfill boreholes following the conclusion of testing. Whilst bentonite grout is non-toxic, it comprises very fine sediments with the potential for long resettlement times if suspended in water, and the potential for the smothering of local seabed. Bentonite grout will be deposited directly into the boreholes, minimising the potential for suspension and resettlement. The total volume to be used throughout works is limited, with any change in suspended sediment concentration considered highly unlikely to result in a change in baseline conditions beyond the immediate area, and returning to baseline

conditions following one tidal cycle. Therefore, the impact of bentonite grout on Fish and Shellfish is considered **negligible**.

3.4 Offshore Ornithology

3.4.1 Summary of baseline

Wetland bird survey data for Haughs Bay, where the nearshore survey will take place, is available for the five-year period from 2018/2019 to 2022/2023 [8]. These data are presented as annual average counts, and were collected between St Cyrus and Stonehaven, a length of coastline approximately 25 km long. A total of 32 bird species are identified within the data. Species identified include waterfowl, divers, waders, waterbirds, gulls and terns, and a range of seabird species. These data indicate that the area of coast within the geotechnical survey area supports a diversity of bird species typical of the region.

The proposed geotechnical survey area is 10.4 km to the south of the Fowlsheugh Special Protected Area (SPA), as presented within Figure 3-2. The Fowlsheugh SPA is located 4 km south of Stonehaven and consists of a stretch of sheer cliffs of heights between 30 m to 60 m and extends 2 km offshore. The site is designated for the protection of breeding northern fulmar *Fulmarus glacialis,* common guillemot *Uria aalge*, herring gull *Larus argentatus,* black-legged kittiwake *Rissa tridactyla,* and razorbill *Alca torda.* The site also supports the overall breeding seabird assemblage.

3.4.2 Assessment of Potential Effects

Potential effects on seabirds associated with the proposed works are limited to the presence of vessels associated with the works, and any reduction in the availability of prey items. Vessel presence has the potential to result in the displacement of bird populations from foraging grounds, whereas a reduction in prey items as a result of wider project impacts may result in a reduction in foraging success.

The proposed survey will be undertaken by a single JUV accompanied by one tugboat over three days within a 28-day survey period within the geotechnical survey area. Whilst it is possible that individual birds may be displaced as a result of the presence of vessels, the availability of similar and equivalent foraging grounds will remain noting that the area in which the survey is proposed is homogenous with the surrounding marine environment. Therefore, impacts on seabirds as a result of visual disturbance from the presence of vessels is considered **negligible**.

As determined within Sections 3.2.2 and 3.3.2, impacts on benthic ecology and fish and shellfish are considered negligible. Therefore, impacts on seabirds as a result of visual disturbance from the presence of vessels, and the reduction in available prey items is considered **negligible**.

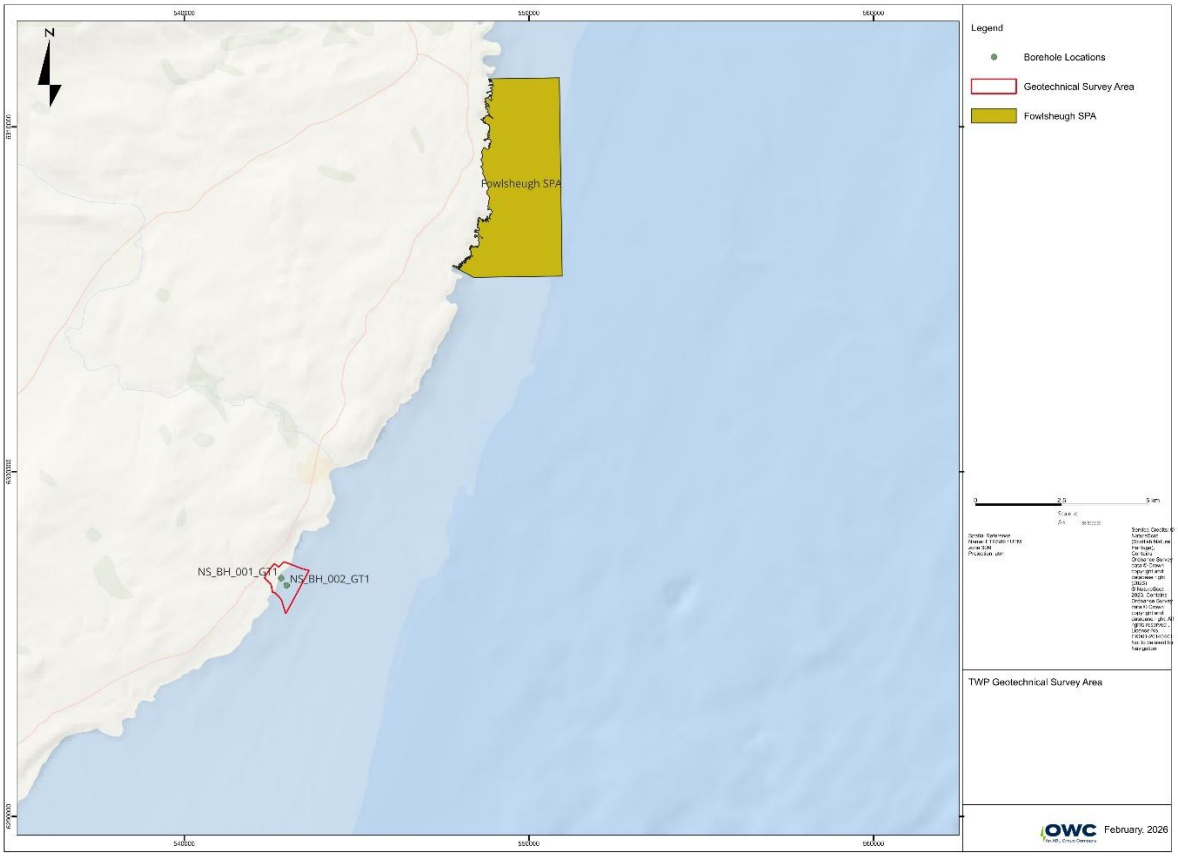

Figure 3-2: Fowlsheugh SPA in relation to the two geotechnical boreholes to be backfilled.

3.5 Marine Mammals

3.5.1 Summary of baseline

The region of the North Sea in which the geotechnical survey area is located support a wide population of marine mammals. Many of these are permanent residents, whilst others are seasonal transients. Resident species include harbour porpoise *Phocoena phocoena*, common bottlenose dolphin *Tursiops truncatus*, white-beaked dolphin *Lagenorhynchus albirostris*, minke whale *Balaenoptera acutorostrata*, grey seal *Halichoerus grypus*, and harbour seal *Phoca vitulina*. Risso's dolphin *Grampus griseus*, humpback whale *Megaptera novaeangliae*, and fin whale *Balaenoptera physalus* occur less frequently across the region.

3.5.2 Assessment of Potential Effects

Potential effects on marine mammals associated with the proposed works are limited to the presence of vessels associated with the works, both during works and during the transit to and from the survey area, and a reduction in prey items as a result of wider project impacts.

Marine mammals may experience temporary behavioural effects as a result of both visual and auditory disturbance. This disturbance will occur only whilst the vessel is present and in use, with the baseline returning immediately upon the vessel concluding works and leaving the site. Works within the geotechnical survey area are anticipated to last no longer than three days within a 28-day survey period. Noise associated with works will be low level and non-impulsive. The risk associated with mortality, injury, and permanent or temporary threshold shift are considered unlikely when considering the noise source, the number of vessels, and the time

period over which works will occur. Should behavioural impacts result in marine mammal receptors avoiding the vessels, the availability of appropriate feeding and foraging grounds within the wider region will minimise any impacts at both an individual and population level. As determined within Sections 3.2.2 and 3.3.2, impacts on benthic ecology and fish and shellfish are considered negligible. Therefore, impacts on marine mammals as a result of the presence of vessels, and the reduction of available prey items is considered **negligible**.

3.6 Other Users

3.6.1 Summary of baseline

The geotechnical survey area is located between Gourdon harbour and Johnshaven harbour, both of which are listed on the Aberdeenshire Council website as recreational harbours, with up to date contact information available to prospective users [9].

Recreational sailing and racing in the vicinity of the geotechnical survey area are generally undertaken at weekends and during holiday periods by sailing, boating and motor cruising users. These areas are utilised by nearby sailing clubs and often contain temporary or permanent marker buoys. Racing routes are frequently established on the day of the event and must adhere to customised racing guidelines, while still complying with conventional collision regulations when competing vessels are involved [10]. There is the potential for racing activities to extend into the geotechnical survey area.

The geotechnical survey area is located entirely within the International Council for the Exploration of the Sea (ICES) rectangle 42E7. Between 2020 and 2024, ICES 42E7 was predominantly targeted for shellfish with the total value and quantity of landings in 2024 being £3,107,678 and 645 tonnes. Landings within ICES 42E7 is dominated by small fishing vessels with a Length Overall (LOA) of less than 10 m using static fishing gear (pots and traps). Typically, landings by both value and quantity are greatest in August and September [11].

No subsea infrastructure or resource areas (including pipelines, subsea cables, aggregate extraction areas or dredge and disposal sites) have been identified within the geotechnical survey area.

3.6.2 Assessment of Potential Effects

Vessel activity on site as part of the geotechnical survey will be limited to a single JUV accompanied by one tugboat. Vessel activity will be limited to the geotechnical survey area, with the works expected to be completed over three days within a 28 day survey period. As described in Section 3.6.1, there are no active cables or pipelines within the geotechnical survey area, therefore, there is currently no spatial impact upon cable and pipeline operators.

The limited duration of the vessel presence within the geotechnical survey area is not expected to cause significant disruption to fishing activity. In addition, as requested by NLB, an NTM and Kingfisher Bulletin will be issued prior to the commencement of works, advising of the location, nature and timing of activities, and associated Safety Zones/advisory safe passing distances, ensuring that other vessels operating in the vicinity can plan accordingly. Therefore, the impact to Other Users of the Sea is predicted to be of limited spatial extent and short duration and is considered **negligible**.

4 Conclusion

TWP intends to backfill two geotechnical boreholes as part of a survey to facilitate the development of the Bowdun OWF, which is required to ascertain the physical properties of the seabed and geology, such as soil bearing capacity, in order to inform engineering, and for the trenchless solution for the export cable.

This SID has been produced to provide the necessary information to support a Marine Licence Application for Construction Projects.

The primary potential impacts associated with the exempt activities (two geotechnical borehole samples using a JUV) have been assessed and are limited to:

- Disturbance of sediment limited to 3.70 m^2 (3.64 m^2 JUV footprint; 0.06 m^2 boreholes);
- Temporary displacement for foraging grounds due to vessel presence over three days within a 28-day survey period;
- Potential reduction in availability of prey items for birds and marine mammals should a significant impact on benthic habitat or fish and shellfish occur which is unlikely;
- Temporary displacement of other vessels over a period of three days for geotechnical borehole sampling within a 28-day survey window.

The primary potential impacts associated with the Marine Licensable activities (backfilling of two geotechnical boreholes with a bentonite cement grout) have been also been assessed and are limited to:

- Deposition of bentonite grout within boreholes with a total volume of 0.78 m^3;

Potential impacts associated with the above works are expected to be negligible in all instances. This finding is largely informed by the minimal scale of disturbance associated with the proposed survey activities. Disturbance of the seabed will be minimal and highly localised, and the volume of total bentonite deposition limited to the volume of two boreholes. Works will occur over a short time period, and the number of vessels will be limited throughout. Should changes to the baseline environment occur, these are expected to be temporary and highly localised, with recovery expected to occur rapidly. It is therefore considered that the proposed nearshore works will not have a significant impact on the marine environment.

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