Supporting Information for Screening for Appropriate Assessment

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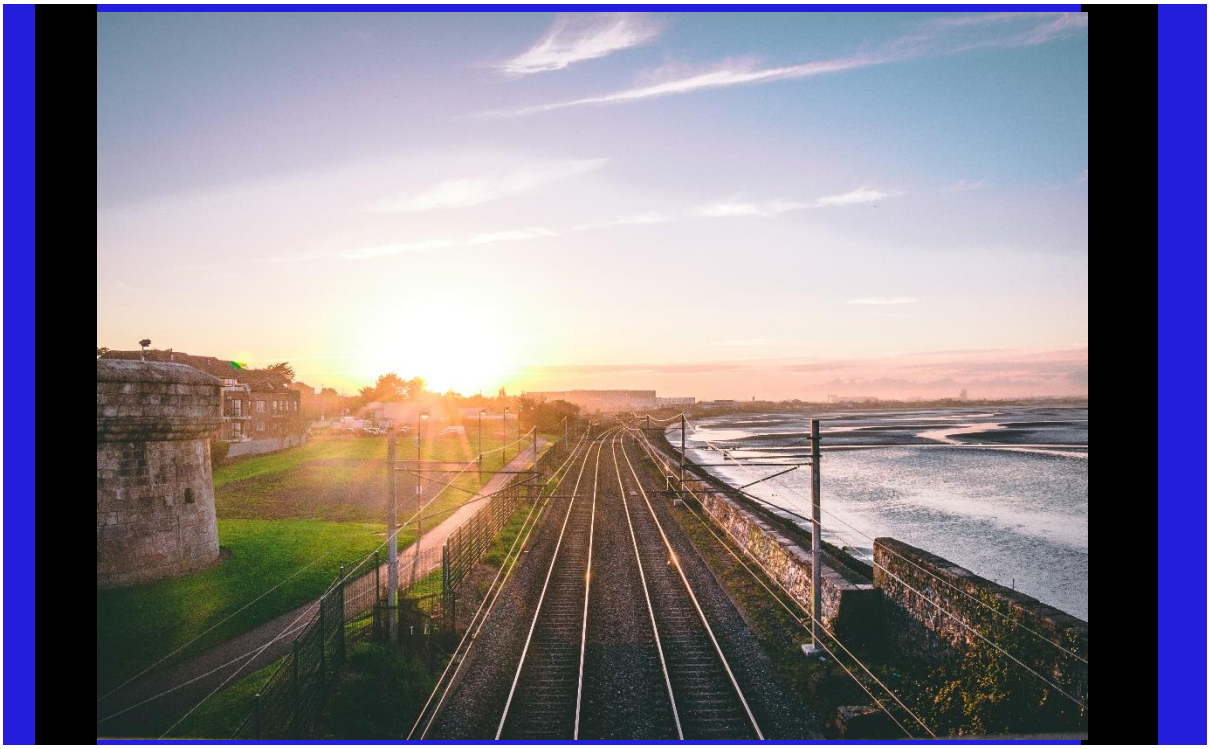
Iarnród Éireann

East Coast Railway Infrastructure Protection Project

March 2025



Executive Summary

The east coast of Ireland is prone to coastal erosion due to the nature of the geology forming the coastline and the generally low-lying topography between headlands. Along the coast, Iarnród Éireann Irish Rail (IÉ) operates and maintains a safe rail network. The section of railway between Dublin and Wicklow is situated close to the high tide mark, except at Bray Head and Killiney where it is raised up onto, and occasionally tunnelled through, the cliff faces. Disruption to train services caused by storm events and the resultant damage to infrastructure is becoming increasingly common; with climate change and related sea level rise in sea level expected to be a contributing factor, with disruption predicted to significantly increase in the future. Maintenance works carried out to respond to the effects of coastal erosion and flooding on the railway line and supporting infrastructure result in increasing disruption to existing services and may render the line unviable in this area in the future. If left unattended, there is a risk that the railway route and surrounding land will be lost to the sea.

Recognising the urgency of taking action and the need for a strategic approach, IÉ established the East Coast Railway Infrastructure Protection Projects (ECRIPP). The primary aim of ECRIPP is to provide improved coastal protection works against predicted climate change effects of sea level rise and coastal erosion on the east coast railway corridor between Merrion Gates (Co. Dublin) and Wicklow Harbour (Co. Wicklow). Five key locations along the railway route (known as Coastal Cell Areas (CCAs)) were identified as requiring increase resilience to coastal erosion and coastal flooding as a result of climate change.

A network of protected areas for certain habitats and species of conservation importance has been established by European Union (EU) member states under the Habitats and Birds Directives (Council Directive 92/43/EEC and Directive 2009/147/EC); these areas are known as European sites.

The EU Habitats Directive (92/43/EEC) has been transposed into Irish law by the Planning and Development Act 2000 (as amended) and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites. Appropriate Assessment of the implications must be made by the decision-making authority (or Competent Authority) if the project is likely to have a significant effect on a European site alone or in-combination with other plans or projects. Appropriate Assessment is a two-stage process of determining impacts to European sites which are Stage 1 Screening and Stage 2 Appropriate Assessment.

This Supporting Information for Screening Appropriate Assessment (SISAA) Report has been undertaken in relation to proposed site investigation and environmental surveys required in support of ECRIPP. These surveys include ground investigation (GI), geophysical surveys, archaeological surveys, bathymetric surveys, benthic ecology surveys, breeding bird and bat surveys (hereafter referred to as the 'Survey Works').

This document summarises the findings of the studies undertaken to inform Stage 1 Appropriate Assessment Screening of the AA process.

The conclusion of the Screening for AA is that, in the absence of mitigation measures, the following LSE alone have the potential to undermine the conservation objectives (COs) of 58 European sites and therefore cannot be excluded:

- Habitat loss / degradation- temporary
- Habitat degradation – changes in land quality
- Habitat degradation – spread of invasive species
- Disturbance of species

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Acronyms and abbreviations

Term, Abbreviation or Acronym	Description
AA	Appropriate Assessment
ACIEEM	Associate Member of the Chartered Institute of Ecology and Environmental Management
CCA	Coastal Cell Area
CEMP	Construction Environmental Management Plans
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objectives
DoEHLG	Department of Environment, Heritage and Local Government
ECJ	European Court of Justice
EC	European Commission
EPA	Environmental Protection Agency
GI	Geotechnical Investigation
IROPI	Imperative Reasons of Overriding Public Interest
LSE	Likely Significant Effects
MCIEEM	Member of the Chartered Institute of Ecology and Environmental Management
MUL	Maritime Usage Licence
NBDC	National Biodiversity Data Centre
NIS	Natura Impact Statement
NPAD	National Planning Application Database
NPWS	National Parks and Wildlife Service
NRA	National Roads Authority
OPR	Office of the Public Regulator
QI	Qualifying Interest
SAC	Special Areas of Conservation
SCI	Special Conservation Interest
SISAA	Supporting Information for Screening Appropriate Assessment
SPA	Special Protection Areas
WFD	Water Framework Directive
ZoI	Zone of Influence

1. Introduction

1.1 Background

Iarnród Éireann Irish Rail (IÉ) operates and maintains a safe rail network on the east coast of Ireland. The Dublin to Wicklow section of this line is a critical part of the rail network, with southside DART, Gorey commuter and Rosslare Europort Intercity services operating along this scenic route. The railway is situated along the coast close to the high tide mark, except at Bray Head and Killiney where it is raised up onto, and occasionally tunnelled through, the cliff faces. The east coast of Ireland is prone to coastal erosion due to the nature of the unconsolidated glacial till forming the coastline and cliffs as well as the generally low-lying topography between headlands. This has been demonstrated through a number of technical studies over the years carried out by IÉ, the Office of Public Works and the affected County Councils. The frequency of erosion events as well as wave overtopping has increased in the last 20 years. These incidents have had significant impacts on performance and safety of the railway. Other effects have included major losses of land and impacts on habitats and species using these areas.

Site investigations and environmental baseline surveys (hereby referred to as Survey Works) are required to inform the development of the ECRIPP design as well as to inform the environmental impact assessment for the project. These surveys include a geotechnical investigation (GI), geophysical survey, marine archaeology surveys, bathymetric surveys, benthic ecology surveys and ecological surveys.

This Supporting Information for Screening Appropriate Assessment (SISAA) Report has been undertaken in relation to the Survey Works required in support of ECRIPP, to support the Maritime Usage Licence (MUL) required for the Survey Works.

This document summarises the findings of the studies undertaken to inform Stage 1 Appropriate Assessment Screening of the AA process. Full details and methodologies of the Survey Works are provided in Section 2 'Description of the Survey Works'.

1.1.1 Licence Areas

The future ECRIPP scheme is located along the east coast railway line in Ireland. As part of ECRIPP, five Coastal Cell Areas (CCA's) have been identified as vulnerable to coastal erosion and climate change effects. As part of this assessment of the Survey Works and throughout the MUL documentation these will be referenced as "Licence Areas". These Licence Areas as they relate to the CCA's can be seen in Table 1.1, and are shown in Appendix A, Figures 1, 2 and 3.

Table 1.1: Licence Areas

CCA	Description	Licence Area
1	Merrion Gates to Dun Laoghaire	A
2/3	Dalkey Tunnel to Killiney South	B
5	Bray Head to Greystones North Beach	C
6.1	Greystones South to Newcastle	D
6.2	Newcastle to Wicklow	D

For the purpose of this assessment, CCA6.1 and CCA6.2 are combined into one – Licence Area D. It should be noted that no protection measures are proposed as part of ECRIPP in CCA4 and therefore no Survey Works are to be carried out in this CCA and as such this CCA is not included in the assessment.

Licence Map Areas have been developed and accompany this licence application in Appendix A.

1.2 Purpose of this Report

1.2.1 Informing Appropriate Assessment Screening

In the context of Article 6(3) of the Habitats Directive and Section 177U(1) of Planning and Development Act 2000 (as amended), Maritime Area Regulatory Authority (MARA) as the Competent Authority for this Proposed Development, must carry out Screening for Appropriate Assessment (AA) of the Survey Works to assess whether, on the basis of objective scientific information, the Proposed Development, individually or in-combination with other plans or projects, is likely to have a significant effect on the COs of any European sites. This report presents the information required for the Competent Authority to undertake Screening for AA for the Survey Works.

1.2.2 Legislative Context to Appropriate Assessment

Habitats and species of European importance are provided legal protection under Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (hereafter referred to as the Habitats Directive) and Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds (hereafter referred to as the Birds Directive). The Habitats Directive protects habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as the Natura 2000 network (hereafter referred to as European sites, as the term Natura 2000 network was replaced by 'European site' under S.I. No. 473 of 2011 – European Union (Environmental Impact Assessment and Habitats) Regulations 2011). European sites comprise Special Areas of Conservation (SACs) and Special Protection Areas. Candidate SACs (cSACs) and potential SPAs (pSPAs) are afforded the same protection as SACs and SPAs and are therefore assessed in the same manner within this AA Screening Report.

The Habitats Directive has been transposed into Irish law by Number 30 of 2000 - Planning and Development Act, 2000 (as amended) and S.I. No. 477/2011 - European Communities (Birds and Natural Habitats) Regulations 2011 (hereafter referred to as the Birds and Habitats Regulations). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect European sites.

Article 6(3) establishes the requirement for AA:

> *'Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in-combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.'*

Article 6(4) states:

> *'If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.'*

The Habitats Directive was transposed into Irish law from a planning perspective through Part XAB of the Planning and Development Act 2000 (as amended). The circumstances under which an AA is required, the

stages of that assessment which must be undertaken and the responsibilities of the Competent Authority in considering whether or not to approve consent for proposed plans or projects are outlined in the Act.

Section 177U(1) states that:

> *"A screening for appropriate assessment of a draft Land use plan or application for consent for proposed development shall be carried out by the competent authority to assess, in view of best scientific knowledge, if that Land use plan or proposed development, individually or in combination with another plan or project is likely to have a significant effect on the European site."*

Where likely significant effects upon a European site are predicted, or cannot be ruled out, it is the responsibility of the Competent Authority to undertake an AA under Article 6(3) of the Habitats Directive, informed through an Natura Impact Statement (NIS), to determine whether or not the proposed plan in combination with any other plan or project would adversely affect the integrity of a European site in light of its COs.

Section 177T(1) states that:

> *"(a) A Natura impact report means a statement for the purposes of Article 6 of the Habitats Directive, of the implications of a Land use plan, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites.*
>
> *(b) A Natura impact statement means a statement, for the purposes of Article 6 of the Habitats Directive, of the implications of a proposed development, on its own or in combination with other plans or projects, for one or more than one European site, in view of the conservation objectives of the site or sites."*

Section 177T(2) states that:

> *"Without prejudice to the generality of subsection (1), a Natura impact report or a Natura impact statement, as the case may be, shall include a report of a scientific examination of evidence and data, carried out by competent persons to identify and classify any implications for one or more than one European site in view of the conservation objectives of the site or sites."*

1.2.3 Guiding Principles and Case Law

Appropriate Assessment Screening for Development Management (OPR Practice Note PN01) is the most recent Irish guidance in relation to AA and was published in 2021 by the OPR (OPR 2021). This document provides information and guidance on the Irish planning application.

A number of cases have been brought to both the National and European courts in relation to the AA process. Therefore, relevant case law, European Court of Justice (ECJ) rulings and European Commission publications have also been considered in the preparation of this AA Screening.

1.2.4 Stages of Appropriate Assessment

The purpose of AA Screening is to identify whether, activities associated with plans or projects, either acting individually or in-combination with other plans or projects result in likely significant effects (LSEs) on any European sites. All potential effects between activities associated with the plans or projects and the ecological components of European sites must be considered. This includes potential effects on mobile species, notably birds, mammals, invertebrates and migratory fish using functionally linked land outside the designated boundary of a European site.

If the prospect of LSEs occurring cannot be excluded on the basis of objective information or is uncertain, the plan or project is taken forward to the next stage of the process i.e. AA. At Screening, the burden of evidence is to show, on the basis of objective information, and beyond reasonable scientific doubt, that the proposed plan

or project will have no LSEs on a European site. An overview of the Appropriate Assessment process is outlined below:

- Stage 1 Screening: Screening determines whether an AA is required by determining if the project or plan is likely to have a significant effect on any European site(s) either individually or in-combination with other plans or projects, in light of the site's COs.
- Stage 2 Appropriate Assessment: If the screening has determined that AA is required, the competent authority then considers the effect of the project or plan on the integrity of the European site(s). Specifically it must be determined if the project or plan will adversely affect the integrity of a European site(s) either individually or in-combination with other plans and projects in view of the conservation objectives of the site(s). Where potential adverse effects on site integrity (AESI) are identified, mitigation measures are proposed to avoid adverse effects, as appropriate. For projects, the AA process is documented within a Natura Impact Statement (NIS).

Following AA, including mitigation proposals, if AESI remain, or uncertainty remains and the project/plan is to be progressed, an Assessment of Alternative Solutions is required under the provisions of Article 6(4) of the Habitats Directive. This process examines the alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the European site. If no alternatives exist, or all alternatives would result in adverse effects on the integrity of a European site, and the project/plan is progressed, the process moves to the next stage.

Where an Assessment of Alternative Solutions fails to identify any suitable alternatives, for a project or plan to be progressed it must demonstrate that there are Imperative Reasons for Overriding Public Interest (IROPI).

If, following an assessment of IROPI, it is deemed that the project or plan can proceed, compensatory measures must be secured to maintain the coherence of the European site network despite adverse effects to the integrity of the site(s).

1.2.5 Authors Qualifications and Expertise

This report has been prepared by [redacted] and [redacted] and reviewed by [redacted]

[redacted] is an Ecologist in Jacobs with 2.5 years' experience in ecological consultancy and 0.5 years' experience in conservation. She holds a first-class honours degree in Zoology from University College Dublin. [redacted]s a qualifying member of the Chartered Institute of Ecology and Environmental Management (CIEEM) and has authored AA Screening Reports, NISs, Construction Environmental Management Plans (CEMP), and Preliminary Ecological Constraints Reports (PECR). [redacted] has carried out multiple field surveys for protected species and habitats on a variety of large and small infrastructure projects.

[redacted] is a Senior Ecologist and holds a BSc (Hons) in Conservation Biology and Ecology from Exeter University. He has four years of pure consultancy associated project experience including Preliminary Ecological Appraisals (PEA), Environmental Impact Assessments (EIA), AA Screening Reports and Natura Impact Statements (NIS). [redacted] has a strong background in ornithology and is well practiced in a range of survey techniques.

[redacted] is a Chartered Environmentalist and Senior Associate Director of Ecology and has over 20 years of experience of supporting infrastructure projects in ecological assessment, specialising in Habitats Regulations Assessment. Before this, he spent 18 years developing land management, team / project management and stakeholder engagement skills in the nature conservation field. [redacted] experience has been in the voluntary, public and private sectors and has included infrastructure projects including new nuclear build, trunk roads, pipelines, electricity transmission and waste management facilities, as well as development of decision-making processes and strategic assessments in the government sector.

2. Description of the Survey Works

Full methodologies for all Survey Works and their locations are described below and summarised in Table 2.1.

Table 2.1: Summary of works to be undertaken in each Licence Area

Licence Area	Works to be undertaken	
	Foreshore and intertidal zone (land-based)	Intertidal and subtidal zone (boat-based)
A	Geotechnical investigations, geophysical investigations, bathymetric surveys, benthic ecology surveys (intertidal cores and transects), licenced metal detection surveys	Bathymetric surveys
B	Licenced metal detection surveys, bathymetric surveys, benthic ecology surveys (intertidal transects and subtidal day grabs)	Bathymetric surveys
C	Licenced metal detection surveys, bathymetric surveys, benthic ecology surveys (intertidal transects and subtidal day grabs)	Bathymetric surveys, breeding bird surveys, drop down camera surveys, bat surveys, subtidal day grabs
D	Licenced metal detection surveys, bathymetric surveys, benthic ecology surveys (intertidal transects)	Bathymetric surveys, subtidal day grabs

2.1 Geotechnical and Geophysical Investigations

GI works will be carried out along the upper shore of Licence Area A (Appendix A, Figure 2), as follows:

- 22 borehole surveys (4 no. windows samples and 18 no. windowless samples);
- 19 Trial pits (one hand dug pit and 18 machine excavated pits ("slit trenches"));
- One Dynamic Cone Penetrometer (DCP) test;
- One sediment sample for particle size analysis of beach material; and
- Geophysical surveys comprising two techniques Seismic Refraction Tomography (SRT) and Multichannel Analysis of Surface Waves (MASW).

Access to GI locations will be via public access routes to South Dublin Bay and along the beach thereafter. Specifically, for Licence Area A this will be via Merrion Gates (northern section) and Dun Laoghaire West Pier. The proposed access route for the drilling rig and excavator onto the beach will be via the R131 adjacent to Merrion Strand to the north-west of Blackrock Station (see plans in Annex A). The proposed route towards Booterstown and Blackrock Stations will be along the northern section of the spit formation, along the flat sandy area of the beach. The intertidal area is considered suitable and should be capable of supporting a 3T Excavator or Terrier Rig. There will be one channel crossing necessary, but it is narrow and shallow in nature. Any rigs travelling along the beach will stay as close to the coastal embankment wall as possible (where the ground is less saturated and therefore will provide more support for travelling rigs).

Works areas will be reinstated to their original state as directed by an on-site Ecological Clerk of Works (ECoW), which will typically involve reinstatement of backfill material.

A temporary mobile portacabin will be provided for the duration of the works in a self-contained facility, which will be parked on roads in public areas outside of any SAC / SPA boundary.

2.1.1 Window Sample Boreholes

2.1.1.1 Windowless Sampler

The percussive window or windowless sampling method involves driving cylindrical steel tubes into the ground using a hydraulic hammer (Figure 2.1). The resulting samples will have a maximum surface diameter of 100mm and a maximum depth of 8m. The drilling rig will be mounted onto rubber tracks to minimise disturbance and ensure the method is suitable for use on environmentally sensitive sites. Each windowless sample will take between 1 to 4 hours to complete depending on ground conditions. The backfilling of locations on the beach will be made using the extracted soil horizons. Any additional backfill material required will comprise bentonite pellets.

Figure 2.1. Windowless sampler example

2.1.1.2 Window Sampler

A further four window samples will be drilled on the slope of the existing revetment. This method is similar to the windowless samples described above, with one initial additional step due to the need to core through the hard strata before commencing with the windowless sample technique. The initial upper layers in the revetment will be cored using the coring application on the drill rig. This core-drilling is designed to produce cores up to 150mm diameter from asphalt, concrete and similar materials. The backfilling of locations on the revetment face will be used via a combination of bentonite pellets, and bentonite grout cement. The cored coping stone will then be placed back into the hole and grouted in place.

2.1.2 Trial Pits

2.1.2.1 Hand-dug Trial Pit

A single foundation inspection pit will be excavated using hand digging tools up to 1m long by 1m in width and excavated to a maximum depth of 2m below ground level. The pit will take approximately 30 minutes to complete, and the contractors will backfill the pit on the same day. This pit will be dug by hand due to access restrictions for an excavator.

2.1.2.2 Slit Trench Works

A slit trench is a long narrow trench commonly used to determine the position of existing services (Figure 2.2). Eighteen trenches will be excavated up to 4m long by up to 1m in width and to a maximum depth of 2m below

ground level using a tracked excavator or a wheeler back-hoe excavator. This method typically takes 1-2 hours to complete depending on ground conditions. These trial pits will be backfilled with the beach sediment or soil arisings as appropriate by the contractors on the same day. Generally, the material will be backfilled in the order it was excavated so as to reinstate the different horizons/ layers to their prior locations. In order to achieve this, during excavation any soil risings/spoil will be placed adjacent to the pit on a tarpaulin or similar material.

Figure 2.2. Slit trench example

2.1.3 Dynamic Cone Penetrometer test

A single Dynamic Cone Penetrometer (DCP) will be undertaken. The DCP test involves driving a steel cone vertically into the ground using a sliding hammer and will take approximately 5-10 minutes to carry out. The number of blows required for each 100mm of penetration will be measured and used to determine the strength and thickness of unbound pavement layers. The resulting depth profile is useful for identifying anomalously weak layers.

2.1.4 Sediment Sampling

Sediment sampling will be undertaken with the use of hand excavation tools. A bag of sediment will be collected for subsequent particle size analysis with one sample taken from the mean high water spring, mean sea level and mean low water spring. This will be taken at a maximum depth of 0.5m and typically takes under an hour to complete.

2.2 Geophysical Surveys

These surveys comprising Seismic Refraction Tomography (SRT) and Multichannel Analysis of Surface Waves (MASW) will be undertaken at two locations within Licence Area A, as shown in Appendix A.

2.2.1 Seismic Refraction Tomography

The SRT technique is based on the refraction of seismic energy at the interfaces of geological layers of different velocity (Figure 2.3). A geophysics technician will use a drop weight such as a hammer to transmit a series of

signals into the ground[1]. These geophysical signals will be detected by a series of receivers which will be laid out along a transect line at a set distance, with each receiver connected to a control box. These receivers comprise of geophones with 100mm metal spikes that are inserted into the ground. The signals received by these receivers helps determine velocity of these input signals and infer the depth of underlying objects/interface between layers.

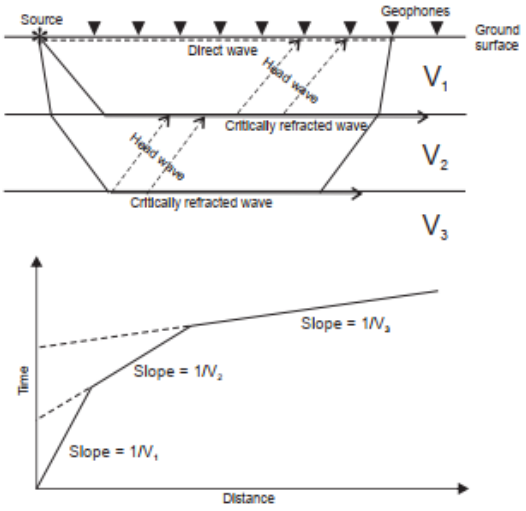

Figure 2.3. SRT Set-Up

2.2.2 Multichannel Analysis of Surface Waves

The MASW technique generates surface waves, which allow the measurement of the variation in soil stiffness with depth (Figure 2.4). A geophysics technician will use a drop weight such as a hammer to transmit a series of signals into the ground. These geophysical signals will be detected by a series of receivers which will be laid out along a transect line at a set distance, with each receiver connected to a control box. These receivers comprise of geophones with 100mm metal spikes that are inserted into the ground. The signals received are used to determine the velocity of surface waves generated. A stiffness profile can be generated, and ground properties determined at different depths. A transect line can be numbered at 0.5m, or 1m intervals, all the way along its length. This line will be laid across the study area. This method allows for 15m-70m length of geophysical transect per hour.

[1] Typical noise levels for a hammer onto solid item are around 120dBA.

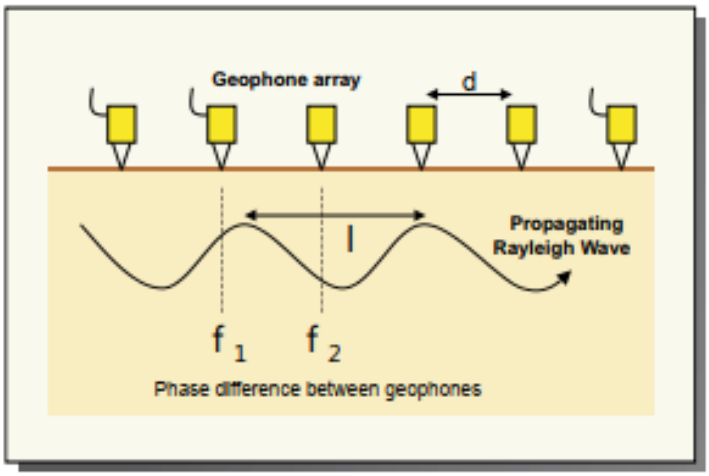

Figure 2.4. MASW Set-Up

2.3 Marine Archaeology Surveys

2.3.1 Licenced Metal Detection Surveys

These will involve a two-person intertidal (foreshore) walkover survey using a metal detector, as and where appropriate in the footprint of future ECRIPP works and areas affected by the proposed GI.

2.3.2 Other Archaeological Considerations

Archaeological considerations will be integrated with the planning and execution of the proposed geotechnical and geophysical site investigations (see Sections 2.1 and 2.2) and the resultant data will be assessed for archaeological purposes, as appropriate. Any additional survey requirements agreed in consultation with the Underwater Unit of the National Monuments Service.

2.4 Bathymetric Surveys

The bathymetric and sub-bottom profiling (SBP) surveys are proposed to be carried out within the areas identified. The survey works will require mobilisation of survey vessel(s) with survey equipment on board.

The survey team shall mobilise the survey equipment and carry out all necessary calibrations and verifications of the survey set. Following satisfactory completion of the calibrations and verifications, survey lines shall commence along the planned line plans for the vessel(s).

A qualified and experienced marine mammal observer (MMO) will be appointed to monitor for marine mammals on each survey vessel, to log all relevant events using standardised data forms.

2.4.1 Offshore Bathymetric Surveys

The bathymetric survey will be undertaken with the following parameters:

- A sura nominal planned main line spacing of 20m in water depths below -6m OD.
- A nominal planned main line spacing of 40m in water depths between -6m OD and -10m OD.
- A cross line spacing of 250m, perpendicular to main lines.

In practice, in extreme shallows, lines will be spaced closer than 20m, and around water depths of between 4 - 6m, line spacing may be greater than 20m. Therefore, a line spacing of 20m has been assumed to be a mean

line spacing in this region. Line spacing shall be modified in real time whilst on site in order to ensure 100% coverage in the most efficient manner, whilst achieving the project specifications.

Bathymetric survey coverage will be continually assessed and line planning will be adjusted in real time in order to ensure 100% coverage. In order to ensure maximum bathymetric coverage as close as possible up towards mean high water, shoreline survey lines will be carried out during periods of high water. This line will progress simultaneously while collecting bathymetric coverage.

2.4.2 Sub-bottom Profiling Surveys

For the SBP, it is proposed to carry out a single SBP line, in each of the six areas of Multi-Beam Echo Sounder data capture at 300 ±50m offshore of mean high water. In general, shallow-water MBESs operate at a frequency between 100 and 700kHz. A single line of sub-bottom profiler data shall be conducted, around 300m +/-50m from mean high water. These lines have been planned to have the following lengths:

- Licence Area A; SBP Line – 6.4km length
- Licence Area B; SBP Line – 4.1km length
- Licence Area C; SBP Line – 5.5km length
- Licence Area D; SBP Line – 9.1km length
- Licence Area D; SBP Line – 10.4km length

2.5 Ecology Surveys

2.5.1 Breeding Birds – Boat Counts

The sea cliffs in Licence Area C between Bray and Greystones have a high ecological value for coastal birds and their prey. These cliffs are a *key* breeding site for coastal bird species including herring gull (Larus argentatus), common gull (*Larus* canus), black-headed gull (*Chroicocephalus ridibundus*), greater black-backed gull (*Larus marinus*), lesser black-backed gull (*Larus fuscus*), kittiwake (*Rissa tridactyla*), fulmar (Fulmarus *glacialis*), guillemot (*Uria aalge*), black guillemot (*Cepphus* grylle), razorbill (*Alca torda*), shag (*Gulosus aristotelis*) and cormorant (*Phalacrocorax carbo*). Additionally, the coastal waters at the base of the cliffs are a key foraging site for these bird species and additional *species* which breed in *the* vicinity which may include arctic tern (*Sterna paradisaea*), common tern (*Sterna hirundo*), little tern (*Sterna albifrons*) and roseate tern (*Sterna dougallii*).

When determining the breeding activity on the cliff face, it is required that at least three surveys are completed between the months of April and August, however the ideal period is between May and June. The survey will be conducted in daylight hours between 07:00 and 18:00. The entire length of the cliff face from grid reference: O 27668 17934 to grid reference O 28717 15209 shall be surveyed which is approximately 3.3km long.

The boat will be driven 100-200m from the cliff face, with surveyors keeping an eye for bird disturbance as this will not allow for an accurate assessment of breeding activity. If the boat is causing disturbance, surveys will move out to a maximum of 400m.

Surveyors will stop approximately every 300m and will spend up to one hour surveying the stretch of cliff face at each point. These distances may be adjusted on site if the aspect of the cliff face blocks the field of view for surveyors. Surveyors will first survey for breeding activity on the cliff face, looking for nesting sites and resting birds. If time allows, then a count of birds foraging in the waters at the base of the cliff will be conducted.

Species, breeding activity and number of birds will be drawn onto the printed maps/ iPad mapping app. The entire length of the cliff face will be photographed using a high-quality camera.

It is preferred that surveyors do in situ counts of breeding bird activity. Photographs taken on the day may only be used for counts if the surveyors first check for the accuracy of the photography. However, this method is not

recommended as accuracy tends to be low. This can be done by taking a sample count of 200 birds then photographing the area immediately and repeating this five times. Subsequently, at the desk the photographs can be analysed for accuracy and all other photographs can be used for completing counts with this error reported alongside the count data.

2.5.2 Drop Down Camera Work

During one of the boat survey trips, the drop-down camera work will be conducted. These surveys will be conducted on a day with calm weather conditions to reduce turbidity in the water and allow for maximum camera clarity. A waterproof camera will be lowered to just above the sea floor and images gathered to check for the presence or absence of sandy substrate. The camera will be dropped and will be above the substrate travelling along the entire length of Licence Area C as close to the cliff face as is safe following the boat crew's advice. The camera work will be conducted after the breeding bird surveys are complete to prevent any potential disturbance from effecting those surveys. Footage will be assessed during a desk-based assessment.

2.5.3 Bat Roosting Assessment

During one of the boat-survey trips a bat roosting assessment will be undertaken to examine the cliffs for caves and cracks above the sea level and assess these areas for bat roost potential. Upon completion of the breeding bird surveys on the return trip the bat roosting assessment will take place. The boat will drive at a pace guided by ecologists so that all features can be recorded and photographed. Ecologists will instruct the boat crew to stop if required. Potential roosts will be mapped on the iPad and photographs will be taken.

2.5.4 Benthic Ecology Surveys

2.5.4.1 Intertidal Cores

In Licence Area A and B, six replicates will be taken at 15 intertidal core sites, with 75 replicates in total for infaunal analysis and 15 replicates for sediment particle size and chemistry. Each intertidal core will cover an area of approximately 0.01m2, and the core will be taken to a depth of 20cm, sieved and infaunal preserved for laboratory identification. The cores are proposed to be undertaken in September to replicate the overwintering bird period.

2.5.4.2 Intertidal Transects

Intertidal transects are proposed from the high-water mark to the low water mark with quadrats undertaken to allow for accurate biotope mapping to be established. Between two and four transects are proposed per 1km of frontage, with up to eight transects completed in one day per team. Where intertidal areas are homogenous then a lower number of transects may be required (>500m apart). In Licence Area A, up to ten intertidal transects are proposed, up to13 in Licence area B, up to three in Licence Area D and up to 88 intertidal transects in Licence Area D.

2.5.4.3 Subtidal Day Grabs

In Licence Area C, up to six 0.1m subtidal day grabs (or equivalent) are proposed to allow the collection of benthic fauna and to allow habitat categorisation, with three replicates for each sample (and up to 18 replicates in total). In Licence Area D, up to three 0.1m subtidal day grabs (or equivalent) are proposed (up to nine replicates in total). The subtidal day grabs would be undertaken by hand between May and August.

3. Methodology

3.1 Guideline Information

3.2 Guidance Documents

This Screening for AA was undertaken taking cognisance of the following guidance:

- Office of the Planning Regulator (2021). Appropriate Assessment Screening for Development Management. OPR Practice Note PN01;
- Appropriate Assessment of Plans and Proposed Schemes in Ireland. Guidance for Planning Authorities (Department of Environment, Heritage and Local Government (DoEHLG) 2010);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 Sites – Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2021a);
- Communication from the Commission on the Precautionary Principle (EC, 2000);
- Guidance Document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: Alternative Solutions, Imperative Reasons of Overriding Public Interest, Compensatory Measures, Overall Coherence, Opinion of the Commission (EC, 2007);
- Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (EC, 2018); and
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive (EC, 2021b).

3.3 Screening Methodology

The steps required for screening include the following:

- Determination of whether a project or plan is directly connected with or necessary to the conservation management of any European sites (the Proposed Development is not directly connected with or necessary to the conservation management of any European sites);
- Description of the details of the project/ plan (including the site characteristics/ plan area);
- Description of the characteristics of European sites that might be affected i.e. identification of qualifying interests (QI) and CO's that could be affected by the project/ plan;
- Assessment of LSEs on relevant European sites in view of the sites' CO, either individually or in-combination with other plans and projects; and
- A screening assessment to determine if the project/ plan individually or in-combination with other plans and projects could undermine the CO of the site(s) and give rise to LSEs. The assessment of LSEs must be undertaken in the absence of mitigation measures.

3.4 Potential Pathways Used in the Assessment

When assessing the Survey Works, the 'source-pathway-receptor' model is applied taking consideration of all potential impact pathways connecting elements of the Survey Works to European sites in view of their COs.

The source-pathway-receptor conceptual model is a standard tool in environmental assessment to identify and assess potential impact pathways. In order for an effect to occur, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the pathway means that there is no likelihood for the effect to occur (e.g. no potential for LSEs). Potential impact pathways assessed are:

- Habitat loss including supporting habitat[2] and functionally linked habitat[3] – permanent
- Habitat loss including supporting habitat and functionally linked habitat – temporary
- Habitat degradation – changes in water quality
- Habitat degradation – changes in air quality
- Habitat degradation – hydrological changes
- Habitat degradation –hydrogeological changes
- Habitat degradation – spread of invasive species
- Disturbance of species
- Mortality

The source-pathway-receptor model is focused solely on the QIs for which European sites are designated as per the latest COs from the National Parks and Wildlife Service (NPWS) website[4].

The ZoI is the area over which effects could occur to ecological features from a project. The determination of a ZoI for a project should be identified on a case-by-case basis as there may be an effect on European sites that are at a distance from the works. For example, such an effect may arise where there is a hydrological link between the development site and a European site.

Key considerations in determining the potential ZoI for the Survey Works included:

- Ecological features within and in proximity to the Survey Works;
- Migratory / mobile species of the area;
- Construction activities that may cause an LSE; and
- Linkages to European sites or sensitive habitats connected to those sites.

The source-pathway-receptor model is focused solely on the QIs for which European sites are designated as per the latest COs from the NPWS website[5].

Table 3.1 defines the source / pathway / receptor model, the zones of influence and the extents of sensitivity of QIs for each potential impact pathway used in the assessment.

2 Supporting habitat is habitat within a protected site (SPA, SAC or NHA) which supports a QI species which is designated by a separate protected site (SPA, SAC or NHA).

3 Functionally linked habitat is habitat within unprotected land which supports QI species designated by a protected site (SPA, SAC or NHA) in the vicinity of said land.

4 https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives.

5 https://www.npws.ie/protected-sites/conservation-management-planning/conservation-objectives.

Table 3.1: Potential Effect Pathways

Pathway Name	Source / Pathway / Receptors Model	Zone of Influence	Extent of Sensitivity of Receptors
Habitat loss - permanent	The provision of new infrastructure or permanent change of habitat from a project could result in direct loss of QI habitat or supporting habitat for QI species in a European site, or functionally linked land associated with mobile QI species outside the boundaries of European sites.	▪ The ZoI assessed is within the footprint of the Survey Works. Physical loss of habitat is only possible within the boundary of a European site, or within an area of functionally linked land habitat outside of the European site.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Habitat loss - temporary	▪ Activities including temporary works areas and access routes of a project could result in the temporary loss or degradation of habitats, potentially affecting QI habitat or supporting habitat for QI species in a European site, or functionally linked land associated with mobile QI species outside the boundaries of European sites. Temporary habitat loss could occur from rutting from tyres/tracks, substrate compaction or substrate removal.	▪ The ZoI assessed is within the footprint of the Survey Works. Physical loss of habitat is only possible within the boundary of a European site, or within an area of functionally linked land habitat outside of the European site.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive within suitable habitat that is within the range of the QI species from their designated site.
Habitat degradation – changes in water quality	Survey Works, works traffic, including sea vessels and changes in drainage can release oils, chemicals, heavy metals, silt etc. This can directly affect QI species or habitats or affect them indirectly through loss of aquatic prey species, or through changes in their habitats.	▪ The ZoI assessed is within the footprint of the Survey Works or within hydrologically linked areas (to the point where effects would be imperceptible such as within the open sea). 1km has been considered as the ZoI for changes in water quality given the coastal and small-scale nature of the Survey Works.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Habitat degradation – changes in land quality	▪ Land quality can be impacted by oil, chemicals, etc during Survey Works. ▪ Land quality can also be affected by sedimentation or silt through run-off during	▪ The ZoI assessed is within the footprint of the Survey Works. Changes in land quality could directly affect QI species or habitats or affect QI species indirectly	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site.

Pathway Name	Source / Pathway / Receptors Model	Zone of Influence	Extent of Sensitivity of Receptors
	Survey Works and compaction through use by heavy plant. Importing new material into a site has the potential to impact land quality through nourishment and pH changes.	through loss of prey species, or through changes in their habitat.	Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Habitat degradation – changes in air quality	Plant and vehicles emit exhausts containing pollutants that can deposit on QI habitats, which can cause direct toxic effects on QI species and habitats or degradation of QI habitat.	▪ The ZoI assessed is within 200m of the footprint of the project. ▪ Pollutant deposition from vehicles is thought to occur in insignificant amounts beyond 200m from the source. The levels of emissions created during the Survey Works will be inconsequential and therefore there will be no pathways to any effects.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Habitat degradation – hydrological changes	▪ In-stream structures or changes to drainage from a project can cause changes in hydrology, which can alter water volumes and flows, which can in turn change the wetness of habitats or cause erosion or deposition of materials. Such changes can affect QI habitats or supporting and functionally linked habitats of QI species.	▪ The ZoI assessed is within surface water catchments that the footprint of the project lies within. ▪ Surface water changes can occur within catchments as changes in one location affect other locations via watercourses for example. Given the location of the Survey Works within the intertidal zone changes in hydrology will be inconsequential and therefore there will be no pathway to an effect.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Habitat degradation – hydrogeological changes	Activities such as groundworks, excavations and drainage and permanent changes to drainage and abstraction can cause changes to groundwater volumes and flows, which can change the hydrogeology of QI habitats and supporting or functionally linked habitats of QI species	▪ The ZoI assessed is within groundwater catchments that the footprint of the project lies within. Groundwater changes can occur within catchments as changes in one location affect other locations	▪ QI habitats are sensitive within the boundary of their designated site ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site

Pathway Name	Source / Pathway / Receptors Model	Zone of Influence	Extent of Sensitivity of Receptors
Habitat degradation – spread of invasive species	Activities can cause the spread of invasive species already within a site (through transfer on plant or within materials moved during earthworks), or by importing materials from outside a site (on sea vessels, on the wheels of plant or delivery vehicles, etc). This can cause the degradation of QI habitats or supporting and functionally linked habitats of QI species.	▪ The ZoI assessed is within the permanent and temporary footprint of the Survey Works. The spread or importing of invasive species can only occur within the boundaries of the Survey Works.	▪ QI habitats are sensitive within the boundary of their designated site. ▪ Supporting habitats of QI species are sensitive within the boundary of their designated site. Functionally linked habitats of QI species are sensitive where suitable habitat is present within the range of the QI species from their designated site.
Disturbance of species	▪ Survey Works could result in disturbance of QI species through changes in noise, vibration, movement (of people and/or vehicles) and lighting. Disturbance may lead to the abandonment of breeding, foraging or resting sites by QI species, potentially resulting in increased energy expenditure, reduced fitness and inability to complete lifecycle stages.	▪ The ZoI assessed depends on the species being assessed. ▪ 300m is considered to be an appropriate distance to assess disturbance of QI bird species as they are unlikely to be significantly disturbed beyond this distance. 500m is considered to be the distance at which marine mammals are disturbed by load works, such as piling, due to their heightened senses underwater.	▪ QI species are sensitive within the boundary of their designated site (in supporting habitat) or within functionally linked habitats where suitable habitat is present within the range of the QI species from their designated site. The foraging ranges of mobile species was used to identify European designated sites with functionally linked or supporting habitat within the ZoI of the Survey Works.
Mortality	Mortality of individuals of QI species could occur directly through killing of individuals by Survey Works or indirectly through death of individuals on roads because their existing commuting routes have been severed or as a result of pollution entering a watercourse and reducing prey count.	▪ The ZoI assessed is within the footprint of the Survey Works, within linked watercourses and along any transport routes including boats. Direct mortality from activities can only occur within the Survey Works footprint. Indirect mortality can occur within watercourses via pollution events or within habitats that sever species commuting routes.	▪ QI species are sensitive within the boundary of their designated site (in supporting habitat) or within functionally linked habitats where suitable habitat is present within the range of the QI species from their designated site. The foraging ranges of mobile species was used to identify European designated sites with functionally linked or supporting habitat within the ZoI of the Survey Works.

3.4.1 Establishing a Zone of Influence of Disturbance

3.4.1.1 Qualifying Interest Mammal Species

The ZoI for noise and visual disturbances demarcates the area within which marine mammal species could be disturbed/displaced by bathometric surveys. NPWS guidance (2014a) states that underwater sound can have a number of impacts on marine mammals, including behavioural, physical, stress and indirect effects. There are a range of factors involved in determining the impact.

- Frequency, bandwidth, duration, duty cycle and directionality of the sound;
- A sounds energy output, rise time and persistence
- Sound Pressure Level (SPL) –the amplitude of a sound's waveform;
- Sound Exposure Level (SEL) – A measure of sound energy over a given duration;
- Sound Received Level (RL) – the pressure level measured at the receiver, e.g., mammal;
- Ambient sound - i.e., background sound levels from all sources including natural sources; and
- Water depth, stratification and seabed characteristics – e.g., topography, substrate type, slope.

Different species have different levels of hearing with harbour porpoise being the most at risk from high frequency noise. Species will also differ in periods of sensitivity, for example during the breeding season. NPWS (2014a) guidance states that for multibeam, single beam, side-scan sonar and sub-bottom profiler surveys a 500m radial distance of the sound source is required.

How far species could travel to use the habitats within the ZoI also needs to be taken into account. It was concluded that the mean maximum foraging distances of grey seal and harbour as defined in Carter *et al*. (2022) would detail which SACs have the potential for disturbance within the SAC itself and/or supporting and functionally linked habitats. These distances are 448km for grey seal and 273km for harbour seal.

The Inter-Agency Marine Mammal Working Group (IAMMWG) on behalf of the Joint Nature Conservation Committee (JNCC) created management units of cetacean species (IAMMWG, 2023). These are used to identify meta-populations and therefore, which SACs are functionally linked to the Survey Works.

3.4.1.2 Qualifying Interest Bird Species

The ZoI for noise and visual disturbances demarcates the area within which birds could be disturbed/displaced by all Survey Works. The breeding and wintering bird data (Tables 5.5 and 5.6) shows the numbers of birds within this ZoI which could be disturbed or displaced, the locations at which aggregations of birds occur, during which period of the year and at what tidal state. To establish a ZoI around visual and noise disturbances, and potential impacts to qualifying species, an understanding of potential disturbance distances for individual species is required.

How far species could travel to use the habitats within the ZoI of disturbance also needs to be taken into account. It was concluded that the mean maximum foraging distances of bird species as defined in Woodward *et al*. (2019) and Scottish Natural Heritage (2016) would detail which QIs of SPAs have the potential to be disturbed within their SPAs, supporting and/or functionally linked habitats.

Cutts *et al*. (2013) at a strategic level, suggests a 300m ZoI for noise and visual disturbances. As part of the ornithological investigation of this assessment the suitability of this 300m ZoI distance has been tested for each of the qualifying species individually by investigating all available literature. A summary of this review and the thresholds for each qualifying species based on a range of academic literature and research studies can be found in Table 3.2.

Table 3.2: Disturbance distance / response threshold for QI species of SPAs within the ZoI.

Species	Disturbance distance/ response threshold range (m)	Description	Citation(s)
Brent goose	200-400m	High sensitivity.	Cutts *et al.*, 2013
Greylag goose	200-600m	Medium sensitivity.	Goodship and Furness, 2022
Shelduck	200-300m	High sensitivity. Wary species highly sensitive to visual disturbances during construction activities. Noted as a moderate to low response level to disturbance during wintering months and shows signs of habituation.	Goodship and Furness, 2022
Wigeon	100-250m	Less tolerant of some disturbances than other duck species.	Goodship and Furness, 2022
Teal	50m	Low sensitivity.	Ross and Liley, 2014
Pintail	100 – 250m	Medium sensitivity.	Goodship and Furness, 2022
Shoveler	150 – 250m	Moderate sensitivity to noise and visual disturbances.	Bregnballe *et al.*, 2009
Common scoter	1-4km	Foraging and roosting flocks have high sensitivity especially due to large watercraft.	Goodship and Furness, 2022
Red-breasted merganser	50-300m	Limited research. High degree of sensitivity to marine traffic.	Liley *et al.*, 2011 Gittings and O'Donoghue, 2016 Goodship and Furness, 2019
Red-throated diver	Up to 1000m	High sensitivity	Goodship and Furness, 2022
Great northern diver	100-350m	Medium to high sensitivity	Goodship and Furness, 2022
Cormorant	100-200m	Cormorants tolerate high levels of human activity and the presence of artificial structures, so are less vulnerable to disturbance (i.e. noise, visual).	Bregnballe *et al.* 2009 Dierschke *et al.*, 2016 Goodship and Furness, 2019
Shag	200-500m	Shags are more sensitive to disturbance than cormorant.	Goodship and Furness, 2019
Oystercatcher	100-200m	Moderate sensitivity. Relatively tolerant and will habituate to activity.	Goodship and Furness, 2022
Curlew	300m	Moderate sensitivity. Curlew is a wary species that does not habituate to works rapidly and is also particularly intolerant of people, allowing approach to a range of 120-300m before flushing when confronted with a lone walker on a mudflat. More tolerant of vehicle movements.	Cutts *et al.*, 2013 Goodship and Furness, 2022

Species	Disturbance distance/ response threshold range (m)	Description	Citation(s)
Dunlin	75-300m	Low sensitivity. Dunlin is a relatively tolerant species in comparison to other wader species.	Goodship and Furness, 2022
Knot	100-200m	Moderate sensitivity	Goodship and Furness, 2022
Sanderling	50-100m	Low sensitivity	Cutts *et al.*, 2013
Golden plover	100-300m	Moderate sensitivity. Little research however noted to exhibit more tolerance to moderate level visual disturbance than other waders.	Goodship and Furness, 2022
Grey plover	250-300m	Moderate sensitivity. Considered relatively tolerant of disturbances. Lack of studies available.	Laursen *et al.*, 2005 Cutts *et al.*, 2013 Goodship and Furness, 2022
Ringed plover	50-100m	Low sensitivity. Quick to habituate, however nesting will often be abandoned in areas of consistently high human disturbance.	Liley and Sutherland, 2007 Cutts *et al.*, 2013 Goodship and Furness, 2022
Bar-tailed godwit	150-200m	Moderate sensitivity. Bar-tailed godwits are likely to be absent in highly disturbed areas and those that are present are likely to be highly stressed. Birds are particularly sensitive to disturbance at roost sites.	Laursen *et al.*, 2005 Cutts *et al.*, 2013 Goodship and Furness, 2022
Black-tailed godwit	100-200m	Moderate sensitivity to noise and visual disturbances.	Ross and Liley, 2014; Cutts *et al.*, 2013 Goodship and Furness, 2022
Redshank	115-300m	Low sensitivity. Although highly sensitive to noise stimuli redshank are relatively tolerant to visual disturbances. May be displaced by workers at mudflat level and where facilitation occurs (i.e. when multiple stimuli occur at the same time).	Laursen *et al.*, 2005 Cutts *et al.*, 2013 Goodship and Furness, 2022
Turnstone	50-100m	Low sensitivity.	Cutts *et al.*, 2013
Black-headed gull	100m	Low sensitivity.	Goodship and Furness, 2019
Little gull	120m	Limited research. Considered to have a low to moderate sensitivity to human disturbances.	Goodship and Furness, 2019
Kittiwake	120m	Limited research. Considered to have a low to moderate sensitivity to human disturbances.	Goodship and Furness, 2019
Common gull	120m	Limited research. Considered to have a low to moderate sensitivity to human disturbances.	Goodship and Furness, 2019
Herring gull	25m	Low sensitivity to human disturbances	Goodship and Furness, 2019
Lesser black-backed gull	25m	Low sensitivity to human disturbances	Goodship and Furness, 2019
Great black-backed gull	100m	Lower sensitivity to human disturbance	Goodship and Furness, 2019

Species	Disturbance distance/ response threshold range (m)	Description	Citation(s)
Common tern	200m-400m	Moderate sensitivity to human disturbance at breeding colonies. Lack of research available.	Goodship and Furness, 2022
Roseate tern	200m-400m	Moderate sensitivity to human disturbance at breeding colonies. Lack of research available.	Goodship and Furness, 2022
Arctic tern	200m-400m	Moderate sensitivity to human disturbance at breeding colonies. Lack of research available.	Goodship and Furness, 2022
Little tern	100-300m	Moderate sensitivity to human disturbance at breeding colonies. Lack of research available.	Goodship and Furness, 2022
Manx shearwater	100-300m	Low sensitivity from general boat traffic. Lack of research available.	Cook and Burton, 2010
Fulmar	100-300m	Low sensitivity from general boat traffic. Lack of research available. Use great black-backed gull as proxy	Goodship and Furness, 2019
Common guillemot	50-100m	Medium sensitivity. Lack of research available.	Goodship and Furness, 2019
Razorbill	50-100m	Medium sensitivity. Lack of research available.	Goodship and Furness, 2019
Puffin	50-100m	Medium sensitivity. Lack of research available. Use common guillemot as proxy.	Goodship and Furness, 2019
Merlin	Up to 200m	Medium sensitivity	Goodship and Furness, 2022
Peregrine	Up to 200m	Medium sensitivity	Goodship and Furness, 2022

The approach of a 300m ZoI suggested by Cutts *et al*. (2013) has been shown to be suitable for the majority of purposes of this AA Screening based on the Survey Works being undertaken. Given the Survey Works area, baseline levels of disturbance and nature of the Survey Works, a ZoI of 300m has been concluded as appropriate for the assessment by reviewing studies on disturbance distance/response thresholds for qualifying species of the European sites identified within this AA Screening Report, South Dublin Bay and Tolka Estuary SPA, The Murrough SPA, Dalkey Island SPA, Wicklow Head SPA, North Bull Island SPA, North West Irish Sea SPA, Wicklow Mountains SPA, Howth Head Coast SPA, Baldoyle Bay SPA, Ireland's Eye SPA, Malahide Estuary SPA, Rogerstown Estuary SPA, Lambay Island SPA, The Skerries SPA, Rockabill SPA and Poulaphouca Reservoir SPA.

3.5 Desk Review

The following resources were analysed to inform the baseline description of the licence areas and surrounding environment:

- Aerial imagery (Google Earth; ESRI 2023) (accessed December 2023);
- Environmental Protection Agency (EPA) rivers and water quality data, Water Framework Directive (WFD) status (accessed December 2023) (EPA, 2023);
- National Parks and Wildlife Service (NPWS) Mapping of European site boundaries (accessed December 2023) (NPWS, 2023a and b);
- Projects from the NPAD (accessed April 2024) (DoEHLG 2023);
- The Status of EU Protected Habitats and Species in Ireland. Volume 1: Summary Overview (NPWS, 2019a);

- The Status of EU Protected Habitats and Species in Ireland. Volume 2: Habitat Assessments (NPWS, 2019b) ;
- The Status of EU Protected Habitats and Species in Ireland. Volume 3: Species Assessments (NPWS, 2019c);
- Online data available on Natura 2000 sites as held by the NPWS, including the Natura 2000 network Data Form; Site Synopsis; Conservation Objective data (accessed March 2025);
- Online data available on Natura 2000 sites as held by the JNCC, including Natura 2000 network data forms; Site Synopsis; Conservation Objectives Data (accessed March, 2025);
- Online data available on Natura 2000 sites as held by the European Environment Agency (EEA), including Natura 2000 network data forms (accessed March, 2025); and
- Protected and invasive species data from the NBDC database (NBDC, ND).

3.6 Site Visit

Ecological site walkover surveys were undertaken in 2023, and relevant information from these surveys used to inform this SISAA Report. Site visits included an assessment for mammal activity (otter (*Lutra lutra*), badger (*Meles meles*, American mink (*Mustela vision*) etc.), invasive species survey and a Fossitt (2000) habitat assessment to determine on-site conditions and to map all features. An additional survey was conducted to record any Annex I habitats and site condition assessments as detailed in Irish Vegetation Classification (Perrin, 2019) undertaken. These surveys were conducted by experienced botanists within all Licence Areas.

Jacobs' ecologists completed monthly wintering bird surveys between October 2022 and March 2023. Further wintering bird surveys are scheduled to be completed between October 2024 and March 2025. The surveys recorded the abundance and distribution of bird species during low and high tide to identify roosting and foraging populations. Particular attention was paid to those species which are QI species for SPAs.

Jacobs' ecologists completed breeding bird surveys from land between April and June 2023. The surveys focused on the abundance and distribution of breeding wildfowl and seabirds.

4. Baseline Characterisation

The results of the desk-based review and site visits are presented in the following sections. Habitat descriptions below are in the past tense, to reflect their accuracy at a point in the recent past.

4.1 Overview of the Baseline Environment

4.1.1 Habitats (including Annex I)

A desk-based review of the NPWS datasets for Annex I habitats was conducted on 2 February 2023 which found a number of protected habitats within the Licence Areas. Habitats include mudflats and sandflats not covered by seawater at low tide, annual vegetation of drift lines, *Salicornia* and other annuals colonising mud and sand, embryonic shifting dunes, European dry heaths, reefs, vegetated sea cliffs of the Atlantic and Baltic coasts, perennial vegetation of stony banks, Atlantic salt meadows, Mediterranean salt meadows, calcareous fens and alkaline fens.

Walkover surveys were completed March to August 2023. These surveys mapped the habitats within the Licence Areas as well as invasive or protected flora and fauna. IVC surveys were completed during July and August 2023 to map more complex and Annex I habitats.

4.1.2 Species (Including Annex I Birds and Annex II Species)

A desk-based review of the NBDC carried out 2 February 2023 found a number of records from the last 20 years of protected bird species within 1km of the Survey Works. Records for all designated QI bird species were returned. A 1km buffer was chosen to capture all flora and fauna species which occur or frequently use habitats under the footprint of the Survey Works. A 1km buffer reflects the typical species array for both mobile and sessile species in the vicinity of the Survey Works. Results are included in Appendix C.

Records from Irish Wetland Bird Surveys (I-WeBS) were received from BirdWatch Ireland. I-WeBS collects data on wintering wildfowl and waders each year at a number of sites across Ireland. Each Licence Area has a corresponding I-WeBS survey site and subsites, as shown in Table 4.1. Peak counts of Annex I and QI bird species during the 2022/23 season are shown in Table 4.2.

Table 4.1: Licence areas and corresponding I-WeBS sites and subsites.

Licence Area	I-WeBS sites	I-WeBS subsites
A	Dublin Bay (OU404)	Merrion Gates – Sydney Parade Ave (OU473) Booterstown – Merrion Gates (OU462) Booterstown Reserve (OU461) Dun Laoghaire – Seapoint (OU460)
B	South Dublin Coastline (OU915)	Killiney Beach and Bay (OU916)
C	Bray Harbour (OT907) Bray Beach (OT913) Greystones (OT905)	Bray Harbour (OT907) Bray Beach (OT913) Greystones (OT905)
D	North Wicklow Coastal Marshes (OT401)	Kilcoole – north fields (OT501) Kilcoole – Newcastle (OT903) Kilcoole - Webbs (OT502) Kilcoole – west fields (OT503) Five Mile Point – Newcastle (OT902) Five Mile Point – Newcastle (offshore) (OT914) Killoughter- Newcastle (Beach & offshore) (OT910) Killoughter – Newcastle (Inland: Marsh & Farmland) (OT911) Broad Lough (OT001)

Table 4.2: I-WeBS peak counts of during the 2022/23 winter season. Species in bold indicate a QI of a European site within the ZoI. A dash (-) has been used where no data was returned.

Species	Designation	I-WeBS sites	2022/23 Peak Count
Bar-tailed godwit (*Limosa lapponica*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	612
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Common tern (*Sterna hirundo*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	6
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Dunlin (*Calidris alpina*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	1386
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	13
Great northern Diver (*Gavia immer*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	1
		Bray Beach and Greystones (Licence Area C)	1
		North Wicklow Coastal Marshes (Licence Area D)	1
Little Gull (*Larus minutus*)	EU Birds Directive: Annex I, Annex II & Annex III species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	3
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Red-throated diver (*Gavia stellata*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	1
		South Dublin Coastline (Licence Area B)	1
		Bray Beach and Greystones (Licence Area C)	2
		North Wicklow Coastal Marshes (Licence Area D)	116
Eurasian curlew (*Numenius arquata*)	EU Birds Directive: Annex II species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	33
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	115
Eurasian teal (*Anas crecca*)	EU Birds Directive: Annex II & Annex III species	Dublin Bay (Licence Area A)	77
		South Dublin Coastline (Licence Area B)	-

Species	Designation	I-WeBS sites	2022/23 Peak Count
	Protected Species: Wildlife Acts	Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	72
Eurasian wigeon (*Mareca penelope*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	714
Greylag goose (*Anser anser*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	91
Northern shoveler (*Spatula clypeata*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	30
Red-breasted merganser (*Mergus serrator*)	EU Habitats Directive: Annex II species Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	19
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Black-headed gull (*Chroicocephalus ridibundus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	627
		South Dublin Coastline (Licence Area B)	16
		Bray Beach and Greystones (Licence Area C)	191
		North Wicklow Coastal Marshes (Licence Area D)	54
Black-legged kittiwake (*Rissa tridactyla*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	1
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Black-tailed godwit (*Limosa limosa*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	680
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	14

Species	Designation	I-WeBS sites	2022/23 Peak Count
Brent goose (*Branta bernicla*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	312
		South Dublin Coastline (Licence Area B)	12
		Bray Beach and Greystones (Licence Area C)	88
		North Wicklow Coastal Marshes (Licence Area D)	45
Common gull (*Larus canus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	53
		South Dublin Coastline (Licence Area B)	2
		Bray Beach and Greystones (Licence Area C)	2
		North Wicklow Coastal Marshes (Licence Area D)	5
Common redshank (*Tringa totanus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	246
		South Dublin Coastline (Licence Area B)	2
		Bray Beach and Greystones (Licence Area C)	2
		North Wicklow Coastal Marshes (Licence Area D)	25
Common scoter (*Melanitta nigra*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	1
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	2
Common shelduck (*Tadorna tadorna*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	9
		South Dublin Coastline (Licence Area B)	4
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	5
Eurasian oystercatcher (*Haematopus ostralegus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	676
		South Dublin Coastline (Licence Area B)	2
		Bray Beach and Greystones (Licence Area C)	110
		North Wicklow Coastal Marshes (Licence Area D)	8
European shag (*Gulosus aristotelis*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	-
		South Dublin Coastline (Licence Area B)	7
		Bray Beach and Greystones (Licence Area C)	74
		North Wicklow Coastal Marshes (Licence Area D)	58
Great black-backed gull (*Larus marinus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	6
		South Dublin Coastline (Licence Area B)	3
		Bray Beach and Greystones (Licence Area C)	12

Species	Designation	I-WeBS sites	2022/23 Peak Count
		North Wicklow Coastal Marshes (Licence Area D)	7
Great cormorant (*Phalacrocorax carbo*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	54
		South Dublin Coastline (Licence Area B)	17
		Bray Beach and Greystones (Licence Area C)	4
		North Wicklow Coastal Marshes (Licence Area D)	55
Grey plover (*Pluvialis squatarola*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	8
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	3
Herring gull (*Larus argentatus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	89
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	68
		North Wicklow Coastal Marshes (Licence Area D)	73
Lesser black-backed gull (*Larus fuscus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	3
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	2
		North Wicklow Coastal Marshes (Licence Area D)	2
Red knot (*Calidris canutus*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	1250
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
Ringed plover (*Charadrius hiaticula*)	Protected Species: Wildlife Acts	Dublin Bay (Licence Area A)	18
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	11
		North Wicklow Coastal Marshes (Licence Area D)	1
Sanderling (*Calidris alba)*	N/A	Dublin Bay (Licence Area A)	23
		South Dublin Coastline (Licence Area B)	-
		Bray Beach and Greystones (Licence Area C)	-
		North Wicklow Coastal Marshes (Licence Area D)	-
**Turnstone (*Arenaria*	N/A	Dublin Bay (Licence Area A)	7
		South Dublin Coastline (Licence Area B)	-

Species	Designation	I-WeBS sites	2022/23 Peak Count
***interpres*)**		Bray Beach and Greystones (Licence Area C)	24
		North Wicklow Coastal Marshes (Licence Area D)	-

Wintering bird surveys were conducted from October 2022 to March 2023 which found a number of QI and Annex I bird species using the habitats in the licence areas. These records are outlined in Appendix D. Breeding bird surveys were conducted from land in April to June 2023 in Licence Areas B, C and D. These results are presented in Appendix E.

A desk-based review of the NBDC carries out 2 February 2023 found a number of records from the last 20 years of protected species located within 1km of the Licence Areas. These records are outlined in Table 4.3. Additionally, a record of an Annex II species not designated by European sites within the ZoI was returned, namely loggerhead turtle (*Caretta caretta*).

No walkover surveys for other protected species were conducted to inform this SISAA Report.

Table 4.3: Results of the NBDC desk-based review of Annex II species (not including birds). Species in bold indicated a QI of a European Site within the ZoI.

Species	Designation	Licence Area	Number of Records	Most Recent Record
Harbour Porpoise (*Phocoena phocoena*)	EU Habitats Directive: Annex II & Annex IV Protected Species: Wildlife Acts	Licence Area A	7	2018
		Licence Area B	193	2020
		Licence Area C	88	2020
		Licence Area D	44	2021
Common Seal (*Phoca vitulina*)	EU Habitats Directive: Annex II & Annex IV Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	2	2018
		Licence Area C	-	-
		Licence Area D	2	2018
Grey Seal (*Halichoerus grypus*)	EU Habitats Directive: Annex II & Annex IV Protected Species: Wildlife Acts	Licence Area A	7	2021
		Licence Area B	21	2021
		Licence Area C	34	2021
		Licence Area D	39	2022

4.1.3 Aquatic Environment

The Survey Works are in the vicinity of a number of watercourses and bodies of transitional and coastal water. The Irish Sea is hydrologically linked to the licence areas as the works extend from Mean High Water Spring (MHWS) seaward and there is a link via surface water run-off or seepage through the shingle shore, which is highly porous.

Broad Lough and Kilcoole Marsh are located within 100m of the Survey Works and are hydrologically linked through surface water run-off. BREWERY STREAM_010 enters the Dublin Bay within the Survey Works area. KILL OF THE GRANGE STREAM_010, SHANGANAGH_010, KILRUDDERY_DEERPARK_010 and THREE TROUTS

STREAM_010 enter the Southwestern Irish Sea – Killiney Bay (HA10) within the Survey Works area. Kilcoole Stream_010 and NEWCASTLE (WICKLOW)_010 flow adjacent to the Survey Works before flowing into Kilcoole Marsh. Inchanappa_010 flows adjacent to the Survey Works before flowing into Broad Lough. The watercourses, transitional waterbodies and coastal waterbodies crossing or adjacent to the Survey Works are summarised in Table 4.4.

Table 4.4: Summary of watercourses, transitional and coastal waterbodies interacting with the licence areas (EPA, 2016-2021 data set)

Licence Area	Name	European Code	WFD status	Risk status
A	BREWERY STREAM_010	IE_EA_09B130400	Moderate	Under review
A	Dublin Bay	IE_EA_090_0000	Good	Not at risk
B	KILL OF THE GRANGE STREAM_010	IE_EA_10K020200	Poor	At risk
B	SHANGANAGH_010	IE_EA_10S010600	Moderate	Not at risk
B	Irish Sea Dublin (HA 09)	IE_EA_070_0000	Good	Not at risk
B-D	Southwestern Irish Sea – Killiney Bay (HA10)	IE_EA_100_0000	High	Not at risk
C	KILRUDDERY_DEERPARK_010	IE_EA_10K520710	Moderate	Under review
D	Kilcoole Marsh	IE_EA_120_0100	Moderate	Under review
D	THREE TROUTS STREAM_010	IE_EA_10T030580	Good	Not at risk
D	Kilcoole Stream_010	IE_EA_10K010580	Moderate	At risk
D	NEWCASTLE (WICKLOW)_010	IE_EA_10N010600	Moderate	At risk
D	Broad Lough	IE_EA_130_0100	Moderate	At risk
D	Inchanappa_010	IE_EA_10I020430	Good	Under review

4.1.4 Invasive Species

A desk-based review of the NBDC on 2 February 2023 found a number of records of Third Schedule invasive species within 1km of the licence areas. These records are outlined in Table 4.5.

Table 4.5: Results of the NBDC desk-based review of invasive species.

Species	Licence area	Number of records	Most recent record
American skunk-cabbage (*Lysichiton americanus*)	Licence Area A	-	-
	Licence Area B	1	2019
	Licence Area C	-	-
	Licence Area D	-	-
Canadian waterweed (*Elodea canadensis*)	Licence Area A	-	-
	Licence Area B	1	2009
	Licence Area C	-	-
	Licence Area D	-	-
Giant hogweed (*Heracleum mantegazzianum*)	Licence Area A	-	-
	Licence Area B	7	2019

Species	Licence area	Number of records	Most recent record
	Licence Area C	2	2021
	Licence Area D	-	-
Himalayan balsam (*Impatiens glandulifera*)	Licence Area A	1	2019
	Licence Area B	-	-
	Licence Area C	1	2022
	Licence Area D	-	-
Japanese knotweed (*Fallopia japonica*)	Licence Area A	15	2020
	Licence Area B	1	2020
	Licence Area C	-	-
	Licence Area D	6	2022
Nuttall's waterweed (*Elodea nuttallii*)	Licence Area A	-	-
	Licence Area B	2	1992
	Licence Area C	-	-
	Licence Area D	-	-
Rhododendron (*Rhododendron ponticum*)	Licence Area A	-	-
	Licence Area B	-	-
	Licence Area C	-	-
	Licence Area D	2	2018
Sea-buckthorn (*Hippophae rhamnoides*)	Licence Area A	-	-
	Licence Area B	4	2021
	Licence Area C	-	-
	Licence Area D	12	2022
Three-cornered leek (*Allium triquetrum*)	Licence Area A	5	2022
	Licence Area B	12	2022
	Licence Area C	-	-
	Licence Area D	2	2022
Harlequin ladybird (*Harmonia axyridis*)	Licence Area A	2	2022
	Licence Area B	1	2019

Species	Licence area	Number of records	Most recent record
	Licence Area C	-	-
	Licence Area D	-	-
American mink (*Mustela vison*)	Licence Area A	-	-
	Licence Area B	-	-
	Licence Area C	-	-
	Licence Area D	2	2021
Brown rat (*Rattus norvegicus*)	Licence Area A	1	2014
	Licence Area B	1	2012
	Licence Area C	1	2016
	Licence Area D	1	2013
Grey squirrel (*Sciurus carolinensis*)	Licence Area A	26	2022
	Licence Area B	12	2022
	Licence Area C	6	2022
	Licence Area D	4	2022

Records of a number of Third Schedule and other invasive species were recorded during site visits in July 2023. Those recorded within the Licence Areas are detailed in Table 4.6 below.

Table 4.6: Invasive species results from the walkover surveys, in July 2023.

Species	Licence Area(s)	Description
Sea buckthorn (*Hippophae rhamnoides*)	A, D	The invasive species was present along the foreshore but not within the Proposed Survey Work area
Giant hogweed (*Heracleum mantegazzianum*)	A, D	The invasive species was present along the foreshore but not within the Proposed Survey Work area
Three-cornered leek (*Allium triquetrum*)	A, D	The invasive species was present along the foreshore but not within the Proposed Survey Work area

4.2 European Sites Within the ZoI of the Survey Works

The Survey Works were examined with reference to their location to European sites[6] (see Appendix A, Figure 1), and taking account of the potential effect pathways outlined in Table 3.1. The European sites listed below are considered to be within, or have functionally linked or supporting habitat within, the ZoI of the Survey Works.

- South Dublin Bay SAC
- Bray Head SAC
- The Murrough SAC
- North Dublin Bay SAC

6 Distances are calculated to the nearest point of all the schemes.

- Rockabill to Dalkey Island SAC
- Wicklow Mountains SAC
- Lambay Island SAC
- Codling Fault Zone SAC
- Slaney River Valley SAC
- Carnsore Point SAC
- Saltee Islands SAC
- Hook Head SAC
- Roaringwater Bay and Islands SAC
- Kenmare River SAC
- Blasket Islands SAC
- Belgica Mound Province SAC
- Bunduff Lough and Machair / Trawalua / Mullaghmore SAC
- West Connacht Coast SAC
- Inishmore Island SAC
- Kilkieran Bay and Islands SAC
- North Anglesey Marine SAC
- Lleyn Peninsula and the Sarnau SAC
- West Wales Marine SAC
- Murlough SAC
- Strangford Lough SAC
- Cardigan Bay SAC
- North Channel SAC
- Bristol Channel Approaches SAC
- The Maidens SAC
- Mers Celtiques – Talus du golfe de Gascogne SAC
- Nord Bretagne DH SAC
- Ouessant-Molène SAC
- Abers - Côte des légendes SAC
- Côte de Granit rose-Sept-Iles SAC
- Baie de Morlaix SAC
- Tregor Goëlo SAC
- Côtes de Crozon SAC
- Riviére Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC
- Chaussée de Sein SAC
- Récifs du talus du golfe de Gascogne SAC
- Récifs et landes de la Hague SAC
- Anse de Vauville SAC
- Cap d'Erquy-Cap Fréhel SAC
- Banc et récifs de Surtainville SAC
- Baie de Saint-Brieuc SAC Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC
- Chausey SAC
- Estuaire de la Rance SAC
- Baie du Mont Saint-Michel SAC
- South Dublin Bay and River Tolka Estuary SPA
- The Murrough SPA
- Dalkey Islands SPA
- Wicklow Head SPA
- North Bull Island SPA
- North-West Irish Sea SPA
- Wicklow Mountains SPA
- Howth Head Coast SPA
- Baldoyle Bay SPA
- Ireland's Eye SPA
- Malahide Estuary SPA
- Rogerstown Estuary SPA
- Lambay Island SPA
- Skerries Islands SPA
- Rockabill SPA
- Poulaphouca Reservoir SPA

4.2.1 Other European Sites

The following European sites are within the vicinity of the Survey Works but considered outside the ZoI:

- Ballyman Glen SAC (IE000713) is located 2.8km west and 3.2km upstream of the Survey Works via DARGLE_030 and DARGLE_040. It is designated for petrifying springs with tufa formation and alkaline fens (NPWS, 2013h). These are Ballyman Glen SAC does not have species as QI (i.e. no mobile birds and

mammals). The SAC is in a separate bedrock aquifer to the Survey Works. Given the overland distance, lack of hydrological connectivity/ ecological connectivity and nature of the works, this SAC is considered outside the ZoI of the Survey Works.

- Glen of the Downs SAC (IE000719) is located 3.4km west and 4.2km upstream of the Survey Works via THREE TROUTS STREAM_010. It is designated for its old sessile oak woods (NPWS, 2013i). Glen of the Downs SAC does not have species as a QI. Given the overland distance and lack of hydrological connectivity/ ecological connectivity, this SAC is considered outside the ZoI of the Survey Works.
- Wicklow Reef SAC (IE002274) is located 3.8km south east and is hydrological linked over the same distance through the Irish Sea. Wicklow Reef SAC is designated for reefs. It does not have species as a QI. (NPWS, 2013j). Given the hydrological distance and small-scale nature of the works this SAC is considered outside the ZoI of the Survey Works.
- Knocksink Wood SAC (IE000725) is located 5.6km west and 6.1km upstream of the Survey Works via GLENCULLEN_010, GLENVULLEN_020, DARGLE_030 and DARGLE_040. Knocksink Wood SAC is designated for petrifying springs, old sessile oak woods and alluvial forests (NPWS, 2019d). It does not have species as QI. Given the overland distance and lack of hydrological connectivity/ ecological connectivity, this SAC is considered outside the ZoI of the Survey Works.
- Magherabeg Dunes SAC (IE001766) is located 6.8km south and hydrologically linked through the Irish Sea over 8.4km (NPWS, 2017c). It is designated for dune habitats with no species QIs. Given the intervening distance and small-scale nature of the Survey Works, this SAC is considered outside the ZoI of the Survey Works.
- Carriggower Bog SAC (IE000716) is located 7.7km west and 9.9km upstream of the Survey Works via NEWTOWNMOUNTKENNEDY_010 and NEWTOWNMOUNTKENNEDY_020. Carriggower Bog SAC is designated for transition mires and quaking bogs and does not have species as QI (NPWS, 2013l). Given the overland distance and lack of hydrological connectivity/ ecological connectivity, this SAC is considered outside the ZoI of the Survey Works.
- Deputy's Pass Nature Reserve SAC (IE000717) is located 8.5km south west with no hydrological connection. It is designated for old sessile oak woods (NPWS, 2013m). Deputy's Pass Nature Reserve SAC does not have species as QI. Given the overland distance and lack of hydrological connectivity/ ecological connectivity, this SAC is considered outside the ZoI of the Survey Works.
- Howth Head SAC (IE000202) is located 8.7km north east and is hydrological linked over the same distance through the Irish Sea. It is designated for vegetated sea cliffs and coastal heath and does not have species as QI (NPWS, 2013n). Given the overland distance and nature of the designated habitats, this SAC is considered to be outside the ZoI of the Survey Works.
- Baldoyle Bay SAC (IE000199) is located 10.3km north and hydrologically linked over 16.1km through the Irish Sea. It is designated for mudflats and sandflats, annuals colonising mud and sand and Atlantic and Mediterranean salt meadows (NPWS, 2013o). Baldoyle Bay SAC does not have species as QI. It is considered that any potential pollution event within coastal waters will be ecologically inconsequential. Given the overland distance and hydrological distance, this SAC is considered to be outside the ZoI of the Survey Works.
- Ireland's Eye SAC (IE002193) is located 13.1km north east and hydrologically linked over 14.2km through the Irish Sea. It is designated for perennial vegetation of stony banks and vegetated sea cliffs and does not have species as QI (NPWS, 2014b). Given the overland distance and nature of the designated habitats, this SAC is considered to be outside the ZoI of the Survey Works.
- Malahide Estuary SAC (IE000205) is located 14.2km north and hydrologically linked over 20.9km through the Irish Sea. It is designated for mudflats and sandflats, annuals colonising mud and sand, Atlantic and Mediterranean salt meadows, shifting dunes along the shoreline and fixed coastal dunes (NPWS, 2017d). Malahide Estuary SAC does not have species as QI. It is considered that any potential pollution event within coastal waters will be ecologically inconsequential. Given the overland distance and hydrological distance, this SAC is considered to be outside the ZoI of the Survey Works.

- Rogerstown Estuary SAC (IE000208) is located 20.8km north and hydrologically linked over 25.9km through the Irish Sea. It is designated for estuary, mudflats and sandflats, annuals colonising mud and sand, Atlantic and Mediterranean salt meadows, shifting dunes along the shoreline and fixed coastal dunes (NPWS, 2013p). Rogerstown Estuary SAC does not have species as QI. It is considered that any potential pollution event within coastal waters will be ecologically inconsequential. Given the overland distance and hydrological distance, this SAC is considered to be outside the ZoI of the Survey Works.

4.3 Identification of Relevant European Sites and QIs

Table 4.7 identifies the relevant European sites, whose designated area or functionally linked land lies within one or more of the ZoIs and therefore requires consideration for the potential for LSE. No ecological pathway or functional link was identified between the Survey Works and other European sites other than those identified in listed in Table 4.7

Table 4.7: Assessment of the Proposed Survey Works ZoI. QIs in grey text are outside ZoI and won't be assessed further (* indicates a priority habitat under the Habitats Directive).

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
Special Areas of Conservation				
South Dublin Bay SAC (000210) 0m. Within Survey Works	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] *Salicornia* and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110]	To maintain the favourable conservation condition of Mudflats and sandflats not covered by seawater at low tide in South Dublin Bay SAC, which is defined by the following list of attributes and targets: The permanent habitat area is stable or increasing. Maintain the extent of the *Zostera*-dominated community. Conserve the high quality of the *Zostera*-dominated community. Conserve the following community type in a natural condition: Fine sands with *Angulus tenuis* community complex. No conservation objectives were present Annual vegetation of drift lines [1210] for South Dublin Bay SAC. Conservation objectives listed for The Murrough Wetlands SAC can be used as proxy, which are defined by the following list of attributes and targets: The habitat area is stable or increasing The habitat distribution does not decline The natural circulation of sediment and organic matter is restored Vegetation structure (zonation) is maintained Vegetation composition is as follow: typical species and sub-communities are maintained, cover of native negative indicator species is, non-native species cover is less than 20%
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, the SAC is present within the temporary footprint of the Survey Works.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, the SAC is present within the ZoI for habitat degradation – changes in air quality.**		
	500m from project (Disturbance of species)	N/A. No mobile designated QI species are present.		
	1km from project (Habitat degradation – changes in water quality)	**Yes, SAC is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat	**Yes, the Survey Works are present within the**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrological changes	**same surface water catchment.**		No conservation objectives were present Salicornia and other annuals colonising mud and sand for South Dublin Bay SAC. Conservation objectives listed for North Dublin Bay SAC can be used as proxy and are as follows: To restore the favourable conservation condition of Salicornia and other annuals colonizing mud and sand, which is defined by the following list of attributes and targets: • Habitat area is maintained or increased. • Habitat distribution does not decline or change. • The presence/absence of physical barrier is maintained or restored. • Creeks and pans structure and tidal regime are maintained. • The vegetation structure (zonation, vegetation height) is maintained. • The vegetation cover is maintained higher than 90% outside creeks. • The vegetation composition is maintained (with maintenance of species-poor communities listed in SMP). • Annual spread of *Spartina anglica* has to be maintained lower than 1%. No conservation objectives were present Embryonic shifting dunes for South Dublin Bay SAC. Conservation objectives listed for North Dublin Bay SAC can be used as proxy and are defined by the following list of attributes and targets: • Habitat area is maintained or increased. • Habitat distribution does not decline or change.
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, the Survey Works are present within the same groundwater catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• The presence/absence of physical barrier is maintained or restored. • The vegetation structure (zonation) is maintained. • More than 95% of the vegetation cover of sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) is healthy • The presence of species-poor communities with typical species: sand couch (*Elytrigia juncea*) and/or lyme-grass (*Leymus arenarius*) is maintained • Negative indicator species are maintained at level inferior to the 5% of the cover.
Bray Head SAC (000714) 0m. Within Survey Works	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	To maintain the favourable conservation condition of Vegetated sea cliffs of the Atlantic and Baltic coasts in Bray Head SAC, which is defined by the following list of attributes and targets: • The habitat area is stable. • The habitat distribution does not decline. • No alteration occurs to natural functioning of geomorphological and hydrological processes, due to artificial barriers. • Vegetation structure (zonation, height) are maintained. • Vegetation composition is maintained as follows: typical species and sub-species communities are maintained, negative indicator species cover is less than 5%, bracken and woody species are respectively less than 10% and 20%.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, the SAC is present within the temporary footprint of the Survey Works**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, the SAC is present within the ZoI for habitat degradation – changes in air quality.**		
	500m from project (Disturbance of species)	N/A. No mobile designated QI species are present.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, the SAC is within the ZoI for habitat degradation – changes in water quality.**		To restore the favourable conservation condition of European dry heaths in Bray Head SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline. • Soil nutrients are maintained. • Vegetation community diversity is maintained. • Vegetation composition is as follow: lichen and bryophytes are present at each monitoring stop, the cover of number of positive indicator species is 50% for siliceous dry heath and 50-75% for calcareous dry heath, dwarf shrubs cover is less than 50%, negative indicator species and non-native species covers are both less than 1%, native trees and shrubs are less than 20%, bracken is less than 10%, soft rush is less than 10%. • Vegetation structure shows limited signs of damage (low level of senescent ling and signs of browsing, no signs of burning, all growth phases of ling present, low percentage of disturbed bare ground). • Distribution and population sizes of rare, threatened or scarce species associated with the habitat are not in decline.
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, the Survey Works are present within the same surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, the Survey Works are present within the same groundwater catchment.**		
The Murrough Wetlands SAC (002249) 0m. Within Survey Works	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken at this stage of the Survey Works	Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330]	To restore the favourable conservation condition of Annual vegetation of drift lines in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline.
	Temporary footprint (Habitat loss /	**Yes, the SAC is present within the temporary**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**footprint of the Survey Works**	Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Calcareous fens with *Cladium* mariscus and species of the *Caricion davallianae* [7210]* Alkaline fens [7230]	• The natural circulation of sediment and organic matter is restored. • Vegetation structure (zonation) is maintained. • Vegetation composition is as follow: typical species and sub-communities are maintained, cover of native negative indicator species is low, non-native species cover is less than 20%. To restore the favourable conservation condition of Perennial vegetation of stony banks in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline. • The natural circulation of sediment and organic matter is restored. • Habitat affected by disturbance is less than 20%. • Vegetation structure (zonation) is maintained. • Vegetation composition is as follow: communities and typical species maintained, native and negative indicator species and non-native species covers are low. To restore the favourable conservation condition of Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline. • No occurrence of human disturbance on hydrology. • Vegetation structure is as follow: plant height standard deviation more than 5, cover of disturbed
	200m from project (Habitat degradation – changes in air quality)	**Yes, the SAC is present within the ZoI for habitat degradation – changes in air quality.**		
	500m from project (Disturbance of species)	N/A. No mobile designated QI species are present.		
	1km from project (Habitat degradation – changes in water quality)	**Yes, SAC is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, the SAC is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, the SAC is present within the same groundwater catchment**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				ground less than 5%, zonation is adequate, no loss of natural transitions. • Vegetation composition as follow: Typical species in adequate number (based on Brophy *et al.*, 2019), no establishment of invasive species such as Spartina spp. • No signs of infilling, reclamation, turf-cutting or pollution or other negative indicators. • Distribution or population sizes of rare, threatened or scarce species associated with the habitat does not decline. To restore the favourable conservation condition of Mediterranean salt meadows (*Juncetalia maritimi*) in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is increasing • The habitat distribution does not decline • No occurrence of human disturbance on hydrology • Vegetation structure is as follow: cover of disturbed ground less than 5%, no loss of natural transitions • Vegetation composition is as follow: Minimum number of typical species based on Brophy *et al.*, 2019, no establishment of invasive species such as Spartina spp. • No signs of infilling, reclamation, turf-cutting or pollution or other negative indicators • Distribution or population sizes of rare, threatened or scarce species associated with the habitat does not decline.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				To restore the favourable conservation condition of Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae** in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline. • Soil pH and nutrients status are maintained. • Active peat formation are maintained. • Natural hydrological regimes and drainage conditions are maintained or restored. • Water quality (including pH and nutrient levels) is maintained. • Vegetation composition is as follow: cover of *Cladium mariscus* at least 25%, cover of typical vascular plants is maintained adequate, cover of native negative indicator species is at insignificant levels, cover of non-native species is less than 1%, covered of scattered native trees and shrubs us less than 10%, cover of algae is less than 2%. • The height of live shoots is over 1m. • Disturbed proportion of vegetation cover where tufa is present is less than 1%. • Distribution or population sizes of rare, threatened or scarce species associated with the habitat does not decline, and features of local distinctiveness are maintained. • Transitional areas between fen and adjacent habitats are maintained or restored.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				To restore the favourable conservation condition of Alkaline fens in The Murrough Wetlands SAC, which is defined by the following list of attributes and targets: • The habitat area is stable or increasing. • The habitat distribution does not decline. • Soil pH and nutrients status are maintained. • Active peat formation are maintained. • Natural hydrological regimes and drainage conditions are maintained or restored. • Water quality (including pH and nutrient levels) is maintained. • Community vegetation diversity is maintained. • Vegetation composition is as follow: typical brown mosses and typical vascular plants maintained adequate, native negative indicator species at insignificant level, non-native species cover less than 1%, cover of scattered trees and shrubs less than 10%, algal cover less 2%. • Vegetation structure is as follow: at least 50% of the live leaves/flowering shoots are more than either 5cm or 15cm. • Disturbed bare ground and proportion of vegetation cover where tufa is present are respectively less than 1% and 1%. • Distribution or population sizes of rare, threatened or scarce species associated with the habitat does not decline, and features of local distinctiveness are maintained.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• Transitional areas between fen and adjacent habitats are maintained or restored.
North Dublin Bay SAC (IE000206) 3.2km north direct distance and hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] *Salicornia* and other annuals colonising mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]* Humid dune slacks [2190] Petalwort (*Petalophyllum ralfsii*) [1395] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI.***	No site-specific COs were present for Harbour Porpoise for North Dublin Bay SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Rockabill to Dalkey Island SAC (IE003000) 4km east direct distance and 4.5km east hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Reefs [1170] Harbour Porpoise (*Phocoena phocoena*) [1351]	To maintain the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Roackabill to Dalkey Islands SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
Wicklow Mountains SAC (IE002122) 8.9km west direct distance, 11.8km upstream hydrological connection	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Oligotrophic waters containing very few minerals of sandy plains (*Littorelletalia uniflorae*) [3110] Natural dystrophic lakes and ponds [3160] Northern Atlantic wet heaths with Erica *tetralix* [4010] European dry heaths [4030] Alpine and Boreal heaths [4060] Calaminarian grasslands of the *Violetalia calaminariae* [6130] Species-rich *Nardus* grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) [6230]* Blanket bogs (* if active bog) [7130] Siliceous scree of the montane to snow levels (*Androsacetalia alpinae* and *Galeopsietalia ladani*) [8110] Calcareous rocky slopes with chasmophytic vegetation [8210] Siliceous rocky slopes with chasmophytic vegetation [8220] Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles [91A0] Otter (*Lutra lutra*) [1355]	To maintain the favourable conservation condition of Otter in Wicklow Mountains SAC, which is defined by the following list of attributes and targets: • Species distribution does not decline. • Terrestrial, freshwater (lakes and rivers) habitats supporting the species do not decline. • Couching sites and holts do not decline. • Prey (fish) biomass does not decline. • Barriers connectivity does not increase.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked is present within the ZoI for habitat degradation – changes in air quality.**		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, the SAC and functionally linked habitat is within the surface water catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Lambay Island SAC (IE000204) 21.8km north east direct distance and 23.2km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Harbour Porpoise (*Phocoena phocoena*) [1351] Grey Seal (*Halichoerus grypus*) [1364] Harbour Seal (*Phoca vitulina*) [1365]	To <u>maintain</u> the Favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Lambay Island SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species. To <u>maintain</u> the favourable conservation condition of Grey Seal and Harbour Seal in Lambay Island SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted. • Breeding sites are maintained. • Moult haul-out sites are maintained. • Resting haul-out sites are maintained. • Disturbance correlated to human activities occur at levels that do not affect the species
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked habitat is within the surface water catchment**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Codling Fault Zone SAC (003015) 28.5km north east direct distance and hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Submarine structures made by leaking gases [1180] Harbour Porpoise (*Phocoena phocoena*) [1351]	To <u>maintain</u> the Favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Codling Fault Zone SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers • Disturbance correlated to human activities occur at levels that do not affect the species
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Slaney River Valley SAC (IE000781)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide[1140]	To maintain the favourable conservation condition of Harbour Seal in the Slaney River Valley SAC, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
30km direct distance. 124km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)[1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho- Batrachion* vegetation [3260] Old sessile oakwoods with *Ilex* and *Blechnum* in the British Isles[91A0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnionincanae, Salicionalbae*)[91E0]* Freshwater Pearl Mussel (*Margaritifera margaritifera*) [1029] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] River Lamprey (*Lampetra fluviatilis*) [1099] Atlantic Salmon (*Salmo salar*) [1106] Twaite Shad (*Alosa fallax fallax*) [1103] Otter (*Lutra lutra*) [1355] Harbour Seal (*Phoca vitulina*) [1365]	• Species range within the site is not restricted by artificial barriers. • Breeding sites should be maintained in a natural condition. • Moult/resting haul-out sites should be maintained in a natural condition. Human activities should occur at levels that do not adversely affect the harbour seal population at the site
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Carnsore Point SAC (IE002269) 150km southeast direct distance. 144km hydrological distance.	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Harbour Porpoise (*Phocoena phocoena*) [1351]	To maintain the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Carnsore Point SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Saltee Islands SAC (IE000781) 102km south west direct distance. 180km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not coveed by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Submerged or partially submerged sea caves[8330] Grey Seal (*Halichoerus grypus*) [1364]	To <u>maintain</u> the favourable conservation condition of Grey Seal (*Halichoerus grypus*) in the Saltee Islands SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted. • Breeding sites are maintained. • Moult haul-out sites are maintained. • Resting haul-out sites are maintained. • Population composition includes adult, juvenile and pup cohorts annually • Disturbance correlated to human activities occur at levels that do not affect the species
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Hook Head SAC (IE000764) 102km southwest direct distance.	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]	To maintain the favourable conservation condition of Bottlenose Dolphin (*Tursiops truncatus*) and Harbour Porpoise (*Phocoena phocoena*) and in Hook Head SAC, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
212km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351]	• The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Roaringwater Bay and Islands SAC (IE000101) 280km southwest direct distance. 325km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330] Otter (*Lutra lutra*) [1355] Grey Seal (*Halichoerus grypus*) [1364] Harbour Porpoise (*Phocoena phocoena*) [1351]	To maintain the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Roaringwater Bay and Islands SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Kenmare River SAC (IE002158) 270km southwest direct distance. 398km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]*	No site-specific COs were present for Harbour Porpoise (*Phocena phocena*) for Kenmare River SAC (IE002158).
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.	European dry heaths [4030] *Juniperus communis formations on heaths or calcareous grasslands [5130]* Calaminarian grasslands of the *Violetalia calaminariae* [6130] Submerged or partially submerged sea caves [8330] Narrow-mouthed Whorl Snail *(Vertigo angustior) [1014]* Lesser Horseshoe Bat (*Rhinolophus hipposideros*) *[1303]* Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Harbour Seal (*Phoca vitulina*) [1365]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Blasket Islands SAC (IE002172) 310km southwest direct distance.	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	To <u>maintain</u> the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Blasket Islands SAC, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
455km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	Submerged or partially submerged sea caves [8330] Grey Seal (*Halichoerus grypus*) [1364] Harbour Porpoise (*Phocoena phocoena*) [1351]	• The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Belgica Mound Province SAC (IE002327) 420km south west direct distance. 480km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Reefs [1170] *Tursiops truncatus (Common Bottlenose Dolphin) [1349]* Harbour Porpoise (*Phocoena phocoena*) [1351]	To <u>maintain</u> the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Belgica Mound Province SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. • Disturbance correlated to human activities occur at levels that do not affect the species.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC (IE000625) 195km north west direct distance 495km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]* Humid dune slacks [2190] Machairs (* in Ireland) [21A0] *Juniperus communis* formations on heaths or calcareous grasslands [5130] Semi-natural dry grasslands and scrubland facies on calcareous	No site-specific COs were present for Harbour Porpoise (*Phocoena phocoena*) for Bunduff Lough and Machair/Trawalua/Mullaghmore SAC (IE000625).
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.	substrates (*Festuco- Brometalia*) (* important orchid sites) [6210] Alkaline fens [7230] *Euphydryas aurinia* (Marsh Fritillary) [1065] *Petalophyllum ralfsii* (Petalwort) [1395] Harbour Porpoise (*Phocoena phocoena*) [1351]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
West Connacht Coast SAC (IE002998) 264km north west direct distance.	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351]	To maintain the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in West Connacht Coast SAC, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
540km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		• The access to suitable habitat is not restricted by artificial barriers • Disturbance correlated to human activities occur at levels that do not affect the species.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Inishmore Island SAC (IE000213) 240km west direct distance. 590km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Coastal lagoons [1150]* Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) [2120] Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]* Dunes with *Salix repens* ssp. *argentea* (Salicion arenariae) [2170] Humid dune slacks [2190] Machairs (* in Ireland) [21A0] European dry heaths [4030] Alpine and Boreal heaths [4060] Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco- Brometalia*) (* important orchid sites) [6210]	To maintain the favourable conservation condition of Harbour Porpoise (*Phocoena phocoena*) in Inishmore Island SAC, which is defined by the following list of attributes and targets: • The access to suitable habitat is not restricted by artificial barriers. Disturbance correlated to human activities occur at levels that do not affect the species.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.	Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510] Limestone pavements [8240]* Submerged or partially submerged sea caves [8330] Narrow-mouthed Whorl Snail (*Vertigo angustior*) [1014] Harbour Porpoise (*Phocoena phocoena*) [1351]	
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Kilkieran Bay and Islands SAC (IE002111) 240km west direct distance. 600km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150]* Large shallow inlets and bays [1160] Reefs [1170] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Machairs (* in Ireland) [21A0] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130]	No site-specific COs were present for Harbour Porpoise for Kilkieran Bay SAC (IE002111).
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.	Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510] Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Harbour Seal (*Phoca vitulina*) [1365] Slender Naiad (*Najas flexilis*) [1833]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
International Sites				
North Anglesey Marine SAC (UK0030398)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Harbour Porpoise (*Phocoena phocoena*) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
55km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		• Harbour porpoise is a viable component of the site; • There is no significant disturbance of the species; and The condition of supporting habitats and processes, and the availability of prey is maintained.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Lleyn Peninsula and the Sarnau SAC (UK0013117) 135km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoon [1150]* Large shallow inlets and bays [1160] Reefs [1170] *Salicornia* and other annuals colonizing mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Submerged or partially submerged sea caves [8330] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Otter (*Lutra lutra*) [1355] Grey Seal (*Halichoerus grypus*) [1364]	To achieve favourable conservation status of Bottlenose Dolphin and Grey Seal all the following, subject to natural processes, need to be fulfilled and maintained in the long-term. If these objectives are not met restoration measures will be needed to achieve favourable conservation status. • The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. • The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. • The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations dynamics of the species within the site and population beyond the site is stable or increasing.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
West Wales Marine SAC (UK0030397) 141km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Harbour Porpoise (*Phocoena phocoena*) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that: • Harbour porpoise is a viable component of the site; • There is no significant disturbance of the species; and • The condition of supporting habitats and processes, and the availability of prey is maintained.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Murlough SAC (UK0016612) 161km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Mudflats and sandflats not covered by seawater at low tide [1140]	To maintain (or restore where appropriate) the Harbour Seal to favourable condition. • Maintain (and if feasible enhance) population numbers and distribution of Harbour Seal.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120] Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130]* Atlantic decalcified fixed dunes (*Calluno-Ulicetea*) [2150] Dunes with *Salix repens* ssp. *argentea* (*Salicion arenariae*) [2170] Marsh Fritillary (*Euphydryas aurinia*) [1065] Harbour Seal (*Phoca vitulina*) [1365]	• Maintain and enhance, as appropriate, physical features used by Harbour Seals within the site.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Strangford Lough SAC (UK0016608) 179km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150]* Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] *Salicornia* and other annuals colonizing mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Harbour Seal (*Phoca vitulina*) [1365]	To maintain (or restore where appropriate) the Harbour Seal to favourable condition. • Maintain (and if feasible enhance) population numbers and distribution of Harbour Seal. • Maintain and enhance, as appropriate, physical features used by Harbour Seals within the site.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Cardigan Bay SAC (UK0012712) 183km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170] Submerged or partially submerged sea caves [8330] Sea Lamprey (*Petromyzon marinus*) [1095] River Lamprey (*Lampetra fluviatilis*) [1099] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Grey Seal (*Halichoerus grypus*) [1364]	To achieve favourable conservation status of Bottlenose Dolphin and Grey Seal all the following, subject to natural processes, need to be fulfilled and maintained in the long-term. If these objectives are not met restoration measures will be needed to achieve favourable conservation status. • The population is maintaining itself on a long-term basis as a viable component of its natural habitat. Important elements are population size, structure, production, and condition of the species within the site. • The species population within the site is such that the natural range of the population is not being reduced or likely to be reduced for the foreseeable future. • The presence, abundance, condition and diversity of habitats and species required to support this species is such that the distribution, abundance and populations
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.		dynamics of the species within the site and population beyond the site is stable or increasing.
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
North Channel SAC (UK0030399) 187km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Harbour Porpoise (*Phocoena phocoena*) [1351]	To ensure that the integrity of the site is maintained and that it makes the best possible contribution to maintaining Favourable Conservation Status (FCS) for Harbour Porpoise in UK waters. In the context of natural change, this will be achieved by ensuring that:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		• Harbour porpoise is a viable component of the site; • There is no significant disturbance of the species; and • The condition of supporting habitats and processes, and the availability of prey is maintained.
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Bristol Channel Approaches SAC (UK0030396) 326km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Harbour Porpoise (*Phocoena phocoena*) [1351]	To avoid deterioration of the habitats of the Harbour Porpoise or significant disturbance to the Harbour Porpoise, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for the UK harbour porpoise. To ensure for Harbour Porpoise that, subject to natural change, the following attributes are maintained or restored in the long term: • The species is a viable component of the site. • There is no significant disturbance of the species. • The supporting habitats and processes relevant to harbour porpoises and their prey are maintained.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
The Maidens SAC (UK0030384) 345km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170] Grey Seal (*Halichoerus grypus*) [1364]	To <u>maintain</u> (or restore where appropriate) the Grey Seal to favourable condition. • Maintain (and if feasible enhance) population numbers and distribution of Grey Seal. • Maintain and enhance, as appropriate, physical features used by Grey Seals within the site.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for temporary habitat loss and mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Mers Celtiques – Talus du golfe de Gascogne SAC (FR5302015)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Reefs [1170] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349]	No site-specific COs were present for Harbour Porpoise for Mers Celtiques – Talus du golfe de Gascogne SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
440km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	Harbour Porpoise (*Phocoena phocoena*) [1351]	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Nord Bretagne DH SAC (FR2502022) 455km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351]	No site-specific COs were present for Harbour Porpoise for Nord Bretagne DH SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Ouessant-Molène SAC (FR5300018) 505km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Coastal lagoons [1150] Reefs [1170] Annual vegetation of drift lines [1210] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Grey Seal (*Halichoerus grypus*) [1364]	No site-specific COs were present for Harbour Porpoise for Ouessant-Molène SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.	Shore Dock (*Rumex rupestris*) [1441] *Vandenboschia speciosa* [6985]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Abers - Côte des légendes SAC (FR5300017)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130]	No site-specific COs were present for Harbour Porpoise for Abers - Côte des légendes SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
510km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonizing mud and sand [1310] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with Ammophila arenaria ('white dunes') [2120] Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] Humid dune slacks [2190] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Siliceous rocky slopes with chasmophytic vegetation [8220] Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) [9120]	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.	Asperulo-Fagetum beech forests [9130] *Elona quimperiana* [1007] Southern Damselfly (*Coenagrion mercuriale*) [1044] Atlantic Salmon (*Salmo salar*) [1106] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Grey Seal (*Halichoerus grypus*) [1364] *Liparis loeselii* [1903]	
Côte de Granit rose-Sept-Iles SAC (FR5300009) 515km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330]	No site-specific COs were present for Harbour Porpoise for Côte de Granit rose-Sept-Iles SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.	Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] European dry heaths [4030] *Elona quimperiana* [1007] Sea Lamprey (*Petromyzon marinus*) [1095] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Atlantic Salmon (*Salmo salar*) [1106] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Grey Seal (*Halichoerus grypus*) [1364] Shore Dock (*Rumex rupestris*) [1441] *Vandenboschia speciosa* [6985]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Baie de Morlaix SAC (FR5300015) 525km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130]	No site-specific COs were present for Harbour Porpoise for Baie de Morlaix SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Halo-nitrophilous scrubs (Pegano-Salsoletea) [1430] European dry heaths [4030] Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robori-petraeae or Ilici-Fagenion) [9120] Barbastelle (*Barbastella barbastellus*) [1308] Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Grey Seal (*Halichoerus grypus*) [1364]	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Tregor Goëlo SAC (FR5310010) 535km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoon [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] *Salicornia* and other annuals colonizing mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120] Humid dune slacks [2190] Oligotrophic waters containing very few minerals generally on sandy soils of the	No site-specific COs were present for Harbour Porpoise for Tregor Goëlo SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.	West Mediterranean, with *Isoetes* spp [3120] Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* [4020] European dry heaths [4030] Species-rich *Nardus* grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe) [6230] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Siliceous rocky slopes with chasmophytic vegetation [8220] Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dillenii* [8230] Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) [9120] *Asperulo-Fagetum* beech forests [9130] *Tilio-Acerion* forests of slopes, screes and ravines [9180]	
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
			Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] *Elona quimperiana* [1007] Southern Damselfly (*Coenagrion mercuriale*) [1044] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Atlantic Salmon (*Salmo salar*) [1106] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Geoffroy's Bat (*Myotis emarginatus*) [1321] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Grey Seal (*Halichoerus grypus*) [1364] *Vandenboschia speciosa* [6985]	
Côtes de Crozon SAC (FR5302006)	**Permanent footprint** (Habitat loss – permanent; Habitat	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170]	No site-specific COs were present for Harbour Porpoise for Côtes de Crozon SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
545km hydrological distance	degradation – spread of invasive species)		Submerged or partially submerged sea caves [8330] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Grey Seal (*Halichoerus grypus*) [1364] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Riviére Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC (FR5300008) 550km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] European dry heaths [4030] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Siliceous rocky slopes with chasmophytic vegetation [8220] Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) [9120] *Asperulo-Fagetum* beech forests	No site-specific COs were present for Harbour Porpoise for Riviére Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**	[9130] Bog woodland [91D0] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] *Elona quimperiana* [1007] Marsh Fritillary (*Euphydryas aurinia*) [1065] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Atlantic Salmon (*Salmo salar*) [1106] Sculpin (*Cottus gobio*) [1163] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Otter (*Lutra lutra*) [1355] Harbour Seal (*Phoca vitulina*) [1365] *Cottus perifreum* [5315] *Vandenboschia speciosa* [6985] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
Chaussée de Sein SAC (FR5302007) 560km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Grey Seal (*Halichoerus grypus*) [1364] Shore Dock (*Rumex rupestris*) [1441]	No site-specific COs were present for Harbour Porpoise for Chaussée de Sein SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat	No, the site and functionally linked habitat are outside the		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrological changes	surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Récifs du talus du golfe de Gascogne SAC (FR5302016) 560km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Reefs [1170] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351]	No site-specific COs were present for Harbour Porpoise for Récifs du talus du golfe de Gascogne SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Récifs et landes de la Hague SAC (FR2500084) 605km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Mudflats and sandflats not covered by seawater at low tide [1140] Reefs [1170] Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220]	No site-specific COs were present for Harbour Porpoise for Récifs et landes de la Hague SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat	**Yes, functionally linked habitat is present within the ZoI for mortality.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – spread of invasive species)		Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Humid dune slacks [2190] Northern Atlantic wet heaths with *Erica tetalix* [4010] European dry heaths [4030] *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*) [6410] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*) [6510] Active raised bogs [7110] Degraded raised bogs still capable of natural regeneration [7120] *Asperulo-Fegetum* beech forests [9130] *Tilio-Acerion* forests of slopes, screes and ravines [9180] Bechstein's bat (*Myotis bechsteinii*) [1323] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Shore Dock (*Rumex rupestris*) [1441]	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
			Vandenboschia speciosa [6985] Harbour porpoise is present within this SAC but is not specifically designated as a QI	
Anse de Vauville SAC (FR2502019) 605km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	No site-specific COs were present for Harbour Porpoise for Anse de Vauville SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Cap d'Erquy-Cap Fréhel SAC (FR5300011) 605km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120]	No site-specific COs were present for Harbour Porpoise for Cap d'Erquy-Cap Fréhel SAC (FR5300011).
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		air quality and therefore there is no pathway to an effect.	Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] Humid dune slacks [2190] Temperate Atlantic wet heaths with *Erica ciliaris* and *Erica tetralix* [4020] European dry heaths [4030] Submerged or partially submerged sea caves [8330] *Tilio-Acerion* forests of slopes, screes and ravines [9180] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Greater Mouse-eared Bat (*Myotis myotis*) [1324] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] Otter (*Lutra lutra*) [1355] Shore Dock (*Rumex rupestris*) [1441]	
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Banc et récifs de Surtainville SAC (FR2502018)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Reefs [1170] Common Bottlenose Dolphin (*Tursiops*	No site-specific COs were present for Harbour Porpoise for Banc et récifs de Surtainville SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
610km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	*truncatus*) [1349] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Baie de Saint-Brieuc SAC (FR5300066) 610km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] *Salicornia* and other annuals colonizing mud and sand [1310] *Spartina* swards (Spartinion maritimae) [1320] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean and thermos-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*) [1420] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120]	No site-specific COs were present for Harbour Porpoise for Baie de Saint-Brieuc SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in water quality.	Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] Wooded dunes of the Atlantic, Continental and Boreal region [2180] Oligotrophic to mesotrophic standing waters with vegetation of the *Littorelletea uniflorae* and/or *Isoeto-Nanojuncetea* [3130] European dry heaths [4030] Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) [9120] *Tilio-Acerion* forests of slopes, screes and ravines [9180] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Barbastelle Bat (*Barbastella barbastellus*) [1308] Otter (*Lutra lutra*) [1355] Shore Dock (*Rumex rupestris*) [1441] *Coleanthus subtillis* [1887] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC (FR5300012) 635km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Mudflats and sandflats not covered by seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] *Salicornia* and other annuals colonizing mud and sand [1310] *Spartina* swards (Spartinion maritimae) [1320] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120] Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] Humid dune slacks [2190] Natural eutrophic lakes with *Magnopoamion* or *Hydrocharition* type vegetation [3150] European dry heaths [4030] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Lowland hay meadows (*Alopecurus pratensis*, *Sanguisorba officinalis*)	No site-specific COs were present for Harbour Porpoise for l'Arguenon, Archipel de Saint Malo et Dinard SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat	No, the site and functionally linked habitat are outside the		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrological changes	surface water catchment and therefore there is no pathway to an effect.	[6510] Alkaline fens [7230] Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dilleniid* [8230] Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) [9120] *Tilio-Acerion* forests of slopes, screes and ravines [9180] Allis shad (*Alosa alosa*) [1102] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Greater Mouse-eared Bat (*Myotis myotis*) [1324] Geoffroy's Bat (*Myotis emarginatus*) [1321] Shore Dock (*Rumex rupestris*) [1441] *Vandenboschia speciosa* [6985] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Chausey SAC (FR2500079)	**Permanent footprint** (Habitat loss – permanent; Habitat	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Mudflats and sandflats not covered by	No site-specific COs were present for Harbour Porpoise for Chausey SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
640km hydrological distance	degradation – spread of invasive species)		seawater at low tide [1140] Reefs [1170] Annual vegetation of drift lines [1210] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120] European dry heaths [4030] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Grey Seal (*Halichoerus grypus*) [1364] Shore Dock (*Rumex rupestris*) [1441] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Estuaire de la Rance SAC (FR5300061) 650km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] *Salicornia* and other annuals colonizing mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels [6430] Siliceous rocky slopes with chasmophytic vegetation [8220] Siliceous rock with pioneer vegetation of the *Sedo-Scleranthion* or of the *Sedo albi-Veronicion dilleniid* [8230]	No site-specific COs were present for Harbour Porpoise for Estuaire de la Rance SAC.
	Temporary footprint (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**		
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**	Atlantic acidophilous beech forests with *Ilex* and sometimes also *Taxus* in the shrublayer (*Quercion robori-petraeae* or *Ilici-Fagenion*) [9120] *Asperulo-Fagetum* beech forests [9130] *Tilio-Acerion* forests of slopes, screes and ravines [9180] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Lesser Horseshoe Bat (*Rhinolophus hipposideros*) [1303] Greater Horseshoe Bat (*Rhinolophus ferrumequinum*) [1304] Greater Mouse-eared Bat (*Myotis myotis*) [1324] Geoffroy's Bat (*Myotis emarginatus*) [1321] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, the site and functionally linked habitat are outside the groundwater catchment and therefore there is no pathway to an effect.		
Baie du Mont Saint-Michel SAC (FR2500077)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Sandbanks which are slightly covered by seawater all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by	No site-specific COs were present for Harbour Porpoise for Baie du Mont Saint-Michel SAC.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
670km hydrological distance	**Temporary footprint** (Habitat loss / degradation – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the ZoI for mortality.**	seawater at low tide [1140] Large shallow inlets and bays [1160] Reefs [1170] Annual vegetation of drift lines [1210] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] *Salicornia* and other annuals colonizing mud and sand [1310] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Embryonic shifting dunes [2110] Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') [2120] Fixed coastal dunes with herbaceous vegetation ('grey dunes') [2130] Dunes with *Salix repens* ssp. *Argentea* (*Salicion arenariae*) [2170] Humid dune slacks [2190] Natural eutrophic lakes with *Magnopoamion* or *Hydrocharition* type vegetation [3150] Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260] Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) [91E0]	
	200m from project (Habitat degradation – changes in air quality)	No, the site and functionally linked habitat are outside the ZoI for habitat degradation -changes in air quality and therefore there is no pathway to an effect.		
	500m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	No, the site and functionally linked habitat are outside the surface water catchment and therefore there is no pathway to an effect.		
	Groundwater catchment connectivity (Habitat	No, the site and functionally linked		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrogeological changes)	habitat are outside the groundwater catchment and therefore there is no pathway to an effect.	Stag Beetle (*Lucanus cervus*) [1083] Sea Lamprey (*Petromyzon marinus*) [1095] Brook Lamprey (*Lampetra planeri*) [1096] Allis shad (*Alosa alosa*) [1102] Twait Shad (*Alosa fallax*) [1103] Atlantic Salmon (*Salmo salar*) [1106] Sculpin (*Cottus gobio*) [1163] Warty Newt (*Triturus cristatus*) [1166] Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Grey Seal (*Halichoerus grypus*) [1364] Harbour Seal (*Phoca vitulina*) [1365] Shore Dock (*Rumex rupestris*) [1441] Jersey Tiger (*Euplagia quadripunctaria*) [6199] ***Harbour porpoise is present within this SAC but is not specifically designated as a QI***	
Special Protection Areas				
South Dublin Bay and River Tolka Estuary SPA (IE004024)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130]	To maintain the favourable conservation condition of light-bellied brent goose, oystercatcher, ringed plover, knot, sanderling, dunlin, bar-tailed godwit, redshank and black-headed gull in South Dublin Bay and River Tolka Estuary SPA, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
0m. Within Survey Works	**Temporary footprint** (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, the SPA is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**	Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Bar-tailed Godwit *(Limosa lapponica*) [A157] Redshank *(Tringa totanus*) [A162] Black-headed Gull *(Chroicocephalus ridibundus*) [A179] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Wetland and Waterbirds [A999]	• Population trend is maintained or increased. • The distribution of the species is maintained. To maintain the favourable conservation condition of roseate tern and Arctic tern in South Dublin Bay and River Tolka Estuary SPA, which is defined by the following list of attributes and targets: • Individual number is maintained or increased. • Distribution of roosting area does not decline. • Prey biomass does not decline. • Barriers to connectivity do not increase. • Disturbance level occur at level that do not affect the number of roosting sites. To maintain the favourable conservation condition of common tern in South Dublin Bay and River Tolka Estuary SPA, which is defined by the following list of attributes and targets: • Individual number is maintained or increased. • Breeding population abundance does not decline. • Mean number of young per breeding pair does not decline. • Distribution of breeding colonies and roosting area do not decline. • Prey biomass does not decline. • Barriers to connectivity do not increase. • Disturbance level occur at level that do not affect the number of roosting and breeding sites. To maintain the favourable conservation condition of the wetland habitat in South Dublin Bay and River Tolka Estuary
	200m from project (Habitat degradation – changes in air quality)	**Yes, the SPA is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, the SPA is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, the SPA is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, the SPA is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, the SPA is in the same groundwater catchment as the Survey Works.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				SPA as a resource for the regularly-occurring migratory waterbirds that utilise it, which is defined by the following: • Wetland habitat area is maintained and is not less than 2,192 ha. Grey Plover is proposed for removal from the list of Special Conservation Interests for South Dublin Bay and River Tolka Estuary SPA. As a result, a site-specific conservation objective has not been set for this species.
The Murrough SPA (IE004186) 0m. Within Survey Works	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Red-throated Diver (*Gavia stellata*) [A001] Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Wigeon (Mareca *penelope*) [A050] Teal (*Anas crecca*) [A052] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Herring Gull (*Larus argentatus*) [A184] Little Tern (*Sterna albifrons*) [A195] Wetland and Waterbirds [A999]	To <u>maintain</u> the favourable conservation condition of red-throated diver in The Murrough SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • There is a sufficient number of locations, area, and availability of suitable habitat to support the population target. • Disturbance level occur at level that do not affect the population trend and spatial distribution. • Barriers to connectivity and site use do not increase. • There is a sufficient number of locations, area of suitable habitat and available forage biomass and suitable roosting habitats to support the population target. To <u>restore</u> the favourable conservation condition of greylag goose, light-bellied Brent goose, wigeon, teal, black-headed gull, herring gull in The Murrough SPA, which is defined by the following list of attributes and targets:
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, the SPA is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, the SPA is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, the SPA is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, the SPA is within the ZoI for habitat degradation – changes in water quality.**		• Long term winter population trend is stable or increasing. • There is a sufficient number of locations, area, and availability of suitable habitat for winter spatial distribution to support the population target. • Disturbance level occur at level that do not affect the population trend and spatial distribution in wintering sites. • Barriers to connectivity and site use do not increase. • There is a sufficient number of locations, area of suitable habitat and available forage biomass and suitable roosting habitats to support the population target. • There is a sufficient area of utilisable habitat available in ecologically important sites outside the SPA. To maintain the favourable conservation condition of little tern in The Murrough SPA, which is defined by the following list of attributes and targets: Long term SPA breeding population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • Extent of available nesting options within the SPA is sufficient to maintain a stable or increasing population. • Extent of area of suitable habitat and available forage biomass is sufficient to maintain a stable or increasing population. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population.
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, the SPA is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, the SPA is in the same groundwater catchment as the Survey Works.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• Barriers to connectivity and site use do not increase. To maintain the favourable conservation condition of Wetland habitats in The Murrough SPA as a resource for the regularly-occurring migratory waterbirds that utilise these areas. This is defined by the following list of attributes and targets: • There is no wetland habitat loss within the SPA. • There is no significant impact on the quality or functioning of the wetland habitat within the SPA.
Dalkey Islands SPA (IE004172) 0.5km north east both direct distance and hydrological distance;	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194]	To restore the favourable conservation condition of roseate tern, common tern, Arctic tern in Dalkey Islands SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • There is a sufficient distribution of available roosting options within the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population. • Barriers to connectivity and site use do not increase.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		is present within the ZoI for disturbance.		
	1km from project (Habitat degradation – changes in water quality)	**Yes, the SPA is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No. Functionally linked habitat is not present within the groundwater catchment, therefore there is no pathway to an effect.		
Wicklow Head SPA (IE004127) 2.5km south east both direct distance and hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Kittiwake (*Rissa tridactyla*) [A188]	To <u>restore</u> the favourable conservation condition of kittiwake in Wicklow Head SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary,**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		mortality and spread of invasive species.		• There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population. • Barriers to connectivity and site use do not increase.
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No. Functionally linked habitat is not present within the groundwater catchment, therefore there is no pathway to an effect.		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
North Bull Island SPA (IE004006) 4.8km north east both direct distance and hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054] Shoveler (*Spatula clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Turnstone (*Arenaria interpres*) [A169] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Wetland and Waterbirds [A999]	To <u>maintain</u> the favourable conservation condition of light-bellied Brent goose, shelduck, teal, pintail, shoveler, oystercatcher, golden plover, grey plover, knot, sanderling, dunlin, black-tailed godwit, bar-tailed godwit, curlew, redshank, turnstone and black-headed gull in North Bull Island SPA which is defined by the following list of attributes and targets: • Population trend is maintained or increased. • The distribution of the species is maintained. To <u>maintain</u> the favourable conservation condition of the wetland habitat in North Bull Island SPA as a resource for the regularly occurring migratory waterbirds that utilise it, which is defined by the following: • The permanent area occupied by the wetland habitat is stable and not less than 1,713 ha.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat is present within the groundwater catchment.**		
North-West Irish Sea SPA (IE004236)	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Red-throated Diver (*Gavia stellata*) [A001] Great Northern Diver (*Gavia immer*) [A003]	To maintain the favourable conservation condition of red-throated diver, great northern diver, common scoter, black-headed gull, common gull, great black-backed gull and little gull at North-west Irish Sea SPA, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
4.8km north east both direct distance and hydrological distance	**Temporary footprint** (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**	Fulmar (*Fulmarus glacialis*) [A009] Manx Shearwater (*Puffinus puffinus*) [A013] Cormorant (*Phalacrocorax carbo*) [A017] Shag (*Gulosus aristotelis*) [A018] Common Scoter (*Melanitta nigra*) [A065] Little Gull (*Larus minutus*) [A177] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Common Gull (*Larus canus*) [A182] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Great Black-backed Gull (*Larus marinus*) [A187] Kittiwake (*Rissa tridactyla*) [A188] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Little Tern (*Sterna albifrons*) [A195] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200] Puffin (*Fratercula arctica*) [A204]	• Non-breeding population size does not decline. • Spatial distribution of suitable habitat is maintained sufficient to support the species. • Forage spatial distribution and available forage biomass are maintained sufficient to support the species. • Disturbance is maintained at levels that do not impact on the species. • Barriers to connectivity is maintained at levels that do not impact on the species' access to the SPA or to other ecologically important sites outside the SPA. To maintain the favourable conservation condition of fulmar, guillemot and razorbill at North-west Irish Sea SPA, which is defined by the following list of attributes and targets: • Population size does not decline. • Spatial distribution of suitable habitat is maintained sufficient to support the species. • Forage spatial distribution and available forage biomass are maintained sufficient to support the species. • Disturbance is maintained at levels that do not impact on the specie. • Barriers to connectivity is maintained at levels that do not impact on the species' access to the SPA or to other ecologically important sites outside the SPA. To maintain the favourable conservation condition of Manx shearwater, lesser black-backed gull, roseate tern, common
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supportive habitat is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, groundwater is absent from the SPA or functionally linked habitat		tern, Arctic tern and little tern at North-west Irish Sea SPA, which is defined by the following list of attributes and targets: • Breeding population size does not decline. • Spatial distribution of suitable habitat is maintained sufficient to support the species. • Forage spatial distribution and available forage biomass are maintained sufficient to support the species. • Disturbance is maintained at levels that do not impact on the species. • Barriers to connectivity is maintained at levels that do not impact on the species' access to the SPA or to other ecologically important sites outside the SPA. To maintain the favourable conservation condition of cormorant, shag and puffin at North-west Irish Sea SPA, which is defined by the following list of attributes and targets: • Breeding population trend is maintained or increased. • Spatial distribution of suitable habitat is maintained sufficient to support the species. • Forage spatial distribution and available forage biomass are maintained sufficient to support the species. • Disturbance is maintained at levels that do not impact on the species. • Barriers to connectivity is maintained at levels that do not impact on the species' access to the SPA or to other ecologically important sites outside the SPA.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				To maintain the favourable conservation condition of herring gull and kittiwake at North-west Irish Sea SPA which is defined by the following list of attributes and targets: • Population trend is maintained or increased. • Spatial distribution of suitable habitat is maintained sufficient to support the species. • Forage spatial distribution and available forage biomass are maintained sufficient to support the species. • Disturbance is maintained at levels that do not impact on the species. • Barriers to connectivity is maintained at levels that do not impact on the species' access to the SPA or to other ecologically important sites outside the SPA.
Wicklow Mountains SPA (IE004040) 9.4km west direct distance, 11.8km upstream hydrological connection	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Merlin (*Falco columbarius*) [A098] Peregrine (*Falco peregrinus*) [A103]	To maintain the favourable conservation condition of merlin in Wicklow Mountains SPA, which is defined by the following list of attributes and targets: • Breeding population is stable or increasing. • Productivity rate is sufficient to meet the population size target. • There is sufficient availability of suitable nesting sites throughout the SPA to maintain the population. • There is sufficient availability of suitable foraging habitat across the SPA to support targets relating to population size, productivity rate and distribution. • Disturbance is maintained at levels that do not impact on breeding population.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked habitat is present within the ZoI for habitat**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		degradation – changes in air quality.		To <u>maintain</u> the favourable conservation condition of peregrine in Wicklow Mountains SPA, which is defined by the following list of attributes and targets: • Productivity rate is sufficient to meet the population size target. • There is sufficient availability of suitable nesting sites throughout the SPA to maintain the population. • There is sufficient number of locations, area of suitable habitat, and available prey biomass to support the population target. • Disturbance is maintained at levels that do not impact on breeding population.
	300m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked habitat is present within the groundwater catchment.**		
Howth Head Coast SPA (IE004113) 9.9km north east both direct distance and hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works	Kittiwake (*Rissa tridactyla*) [A188]	To <u>restore</u> the favourable conservation condition of kittiwake in Howth Head Coast SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing • Productivity rate is sufficient to maintain a stable or increasing population • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary,**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		mortality and spread of invasive species.		• There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population Barriers to connectivity and site use do not increase.
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked habitat is within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No. Functionally linked habitat is not present within the groundwater catchment, therefore there is no pathway to an effect.		
Baldoyle Bay SPA (IE004016)	**Permanent footprint** (Habitat loss – permanent; Habitat	N/A. No permanent works are being	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	To maintain the favourable conservation condition of light-bellied brent goose, shelduck, ringed plover, golden plover,

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
10.3km north direct distance and 17.5km hydrological distance	degradation – spread of invasive species)	undertaken during the Survey Works.	Shelduck (*Tadorna tadorna*) [A048] Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157] Wetland and Waterbirds [A999]	grey plover and bar-tailed godwit in Baldoyle Bay SPA which is defined by the following list of attributes and targets: • Population trend is maintained or increased. • The distribution of the species is maintained. To <u>maintain</u> the favourable conservation condition of the wetland habitat in Baldoyle Bay SPA, which is defined by the following: • The permanent area occupied by the wetland habitat is maintained and it is not less than the area of 263ha.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat	**Yes, functionally linked and supporting habitat is present within the**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	degradation – hydrological changes	**surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat is present within the groundwater catchment.**		
Irelands Eye SPA (IE004117) 13.1km north east direct distance and 14.2km hydrological distance;	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Cormorant (*Phalacrocorax carbo*) [A017] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200]	To restore the favourable conservation condition of cormorant, herring gull, kittiwake, guillemot and razorbill in Ireland's Eye SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population. • Barriers to connectivity and site use do not increase.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No functionally linked or supporting habitat is present within the groundwater catchment.		
Malahide Estuary SPA (IE004025) 14.9km north direct distance and 20.7km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Great Crested Grebe (*Podiceps cristatus*) [A005] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Pintail (*Anas acuta*) [A054] Goldeneye (*Bucephala clangula*) [A067] Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130]	To <u>maintain</u> the favourable conservation condition of great crested grebe, light-bellied brent goose, shelduck, pintail, goldeneye, red-breasted merganser, oystercatcher, golden plover, grey plover, knot, dunlin, black-tailed godwit, bar-tailed godwit and redshank in Malahide Estuary SPA, which is defined by the following list of attributes and targets: • Population trend is maintained or increased. • The distribution of the species is maintained. To <u>maintain</u> the favourable conservation condition of the wetland habitat in Malahide Estuary SPA as a resource for the regularly-occurring migratory waterbirds that utilise it which is defined by the following:
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**	Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	• The permanent area occupied by the wetland habitat is stable and not significantly less than the area of 765 hectares.
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat is present within the groundwater catchment.**		
Rogerstown Estuary SPA (IE004015) 20.5km north direct distance and 24.7km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048]	To maintain the favourable conservation condition of greylag goose, light-bellied brent goose, shelduck, shoveler, oystercatcher, ringed plover, grey plover, knot, dunlin, black-tailed godwit and redshank in Rogerstown Estuary SPA, which is defined by the following list of attributes and targets:

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**	Shoveler (*Spatula clypeata*) [A056] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Redshank (*Tringa totanus*) [A162] Wetland and Waterbirds [A999]	• Long term population trend is maintained or increased. • The distribution of the species does not decrease. To maintain the favourable conservation condition of Wetland and Waterbirds [A999] in Rogerstown Estuary SPA, which is defined by the following: • The permanent area occupied by the wetland habitat is stable and not significantly less than the area of 646 hectares.
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat is present within the groundwater catchment.**		
Lambay Island SPA (IE004069) 21.8km north east direct distance and 23.2km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Fulmar (*Fulmarus glacialis*) [A009] Cormorant (*Phalacrocorax carbo*) [A017] Shag (*Gulosus aristotelis*) [A018] Greylag Goose (*Anser* anser) [A043] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200] Puffin (*Fratercula arctica*) [A204]	To <u>restore</u> the favourable conservation condition of fulmar, cormorant, shag, lesser black-backed gull, kittiwake, guillemot, razorbill and puffin in Lambay Island SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. To <u>restore</u> the favourable conservation condition of greylag goose in Lambay Island SPA, which is defined by the following list of attributes and targets: • Long term winter population trend is stable or increasing.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		for habitat degradation – changes in water quality.		• There is a sufficient number of locations, area and availability of suitable habitat to support the population target. • Disturbance occurs at levels that do not affect the population and spatial distribution. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. • Sufficient number of locations and area of forage biomass to support the population target. • Sufficient number of locations and area of roosting habitat to support the population target. • Sufficient area of utilisable habitat available in ecological important sites outside the SPA. To <u>restore</u> the favourable conservation condition of herring gull in Lambay Island SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • Long term winter population trend is stable or increasing. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area and availability of suitable habitat to support the winter population target.
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat of Greylag Goose is present within the groundwater catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites, wintering sites and breeding population. • Sufficient number of locations and area of roosting habitat to support the population target. • Sufficient area of utilisable habitat available in ecological important sites outside the SPA. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA.
Skerries Islands SPA (IE004122) 29.2km north direct distance and 24.7km hydrological distance;	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Cormorant (*Phalacrocorax carbo*) [A017] Shag (*Gulosus aristotelis*) [A018] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Purple Sandpiper (*Calidris maritima*) [A148] Turnstone (*Arenaria interpres*) [A169] Herring Gull (*Larus argentatus*) [A184]	To <u>restore</u> the favourable conservation condition of cormorant in Skerries Islands SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • Long term winter population trend is stable or increasing. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area and availability of suitable habitat to support the winter population target.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		for habitat degradation – changes in air quality.		• There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites, wintering sites and breeding population. • Sufficient number of locations and area of roosting habitat to support the population target. • Sufficient area of utilisable habitat available in ecological important sites outside the SPA. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. To restore the favourable conservation condition of shag in Skerries Islands SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites and breeding population. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA.
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat of Light-bellied Brent Goose is present within the groundwater catchment.**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				To restore the favourable conservation condition of light-bellied brent goose in Skerries Islands SPA, which is defined by the following list of attributes and targets: • Long term winter population trend is stable or increasing. • There is a sufficient number of locations, area and availability of suitable habitat to support the population target. • Disturbance occurs at levels that do not affect the population and spatial distribution. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. • Sufficient number of locations and area of forage biomass to support the population target. • Sufficient number of locations and area of roosting habitat to support the population target. • Sufficient area of utilisable habitat available in ecological important sites outside the SPA. To restore the favourable conservation condition of purple sandpiper and turnstone in Skerries Islands SPA, which is defined by the following list of attributes and targets: • Long term winter population trend is stable or increasing. • There is a sufficient number of locations, area and availability of suitable habitat to support the population target. • Disturbance occurs at levels that do not affect the population and spatial distribution.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. • Sufficient number of locations and area of forage biomass to support the population target. • Sufficient number of locations and area of roosting habitat to support the population target. To restore the favourable conservation condition of herring gull in Skerries Islands SPA, which is defined by the following list of attributes and targets: • Long term SPA population trend is stable or increasing. • Productivity rate is sufficient to maintain a stable or increasing population. • Long term winter population trend is stable or increasing. • There is a sufficient distribution of suitable nesting sites throughout the SPA to maintain a stable or increasing population. • There is a sufficient number of locations, area and availability of suitable habitat to support the winter population target. • There is a sufficient number of locations, area of suitable habitat and available forage biomass to support the population target. • Disturbance occurs at levels that do not affect the birds at the breeding sites, wintering sites and breeding population. • Sufficient number of locations and area of roosting habitat to support the population target.

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
				• Sufficient area of utilisable habitat available in ecological important sites outside the SPA. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA.
Rockabill SPA (IE004014) 29.7km north west direct distance and 33.2km hydrological distance	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Purple Sandpiper (*Calidris maritima*) [A148] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194]	To <u>maintain</u> the favourable conservation condition of purple sandpiper in Rockabill SPA, which is defined by the following list of attributes and targets: • Long term population trend is maintained or increased. • The distribution of the species does not decrease. To <u>maintain</u> the favourable conservation condition of roseate tern, common tern and Arctic tern in Rockabill SPA, which is defined by the following list of attributes and targets: • Breeding population is not declining. • Fledged young per breeding pair are not declining. • Breeding colonies is not declining. • Prey availability is not declining. • Barriers to connectivity are not increasing. • Disturbance correlated to human activities occur at levels that do not affect the breeding population.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in air quality.**		
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		for habitat degradation – changes in water quality.		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	No, functionally linked and supporting habitat is not present within the groundwater catchment.		
Poulaphouca Reservoir SPA (IE004063) 23.9km south west direct distance, no hydrological connection.	**Permanent footprint** (Habitat loss – permanent; Habitat degradation – spread of invasive species)	N/A. No permanent works are being undertaken during the Survey Works.	Greylag Goose (*Anser anser*) [A043] Lesser Black-backed Gull (*Larus fuscus*) [A183]	To restore the favourable conservation condition of greylag goose and lesser black-backed gull in Poulaphouca reservoir SPA, which is defined by the following list of attributes and targets: • Long term winter population trend is stable or increasing. • There is a sufficient number of locations, area and availability of suitable habitat to support the population target. • Disturbance occurs at levels that do not affect the population and spatial distribution. • Barriers to connectivity do not impact the populations access to the SPA or important sites outside the SPA. • Sufficient number of locations and area of forage biomass to support the population target.
	Temporary footprint (Habitat loss – temporary; Mortality, Habitat degradation – spread of invasive species)	**Yes, functionally linked and supporting habitat is present within the temporary footprint of the Survey Works with potential for habitat loss- temporary, mortality and spread of invasive species.**		
	200m from project (Habitat degradation – changes in air quality)	**Yes, functionally linked and supporting habitat is present within the ZoI**		

Potentially relevant European sites considered in the assessment	ZoIs that overlap the site or supporting / functionally linked land associated with it	Potential for LSEs?	QIs	Conservation Objectives
		for habitat degradation – changes in air quality.		• Sufficient number of locations and area of roosting habitat to support the population target. • Sufficient area of utilisable habitat available in ecological important sites outside the SPA.
	300m from project (Disturbance of species)	**Yes, functionally linked and supporting habitat is present within the ZoI for disturbance.**		
	1km from project (Habitat degradation – changes in water quality)	**Yes, functionally linked and supporting habitat is present within the ZoI for habitat degradation – changes in water quality.**		
	Surface water catchment connectivity (Habitat degradation – hydrological changes	**Yes, functionally linked and supporting habitat is present within the surface water catchment.**		
	Groundwater catchment connectivity (Habitat degradation – hydrogeological changes)	**Yes, functionally linked and supporting habitat is present within the groundwater catchment.**		

5. Assessment of Likely Significant Effects (LSEs)

5.1 Assessment of LSEs Alone

Table 5.1 reports the assessment of LSEs on the QIs of the relevant European Sites.

Table 5.1: Assessment of LSEs on the QIs of the relevant European Sites. LSEs that cannot be excluded are shown in bold.

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
Special Areas of Conservation				
South Dublin Bay SAC (000210) 0m. Within Licence Area A	Mudflats and sandflats not covered by seawater at low tide [1140] Annual vegetation of drift lines [1210] *Salicornia* and other annuals colonising mud and sand [1310] Embryonic shifting dunes [2110]	Habitat loss - permanent	Survey Works being undertaken will not result in any permanent impacts, therefore there is no pathway to an effect.	No – No effects at all
		Habitat loss - temporary	**There will be temporary habitat loss from the GI works in Licence Area A.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in water quality	The SAC is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	**There is the potential for changes in land quality from pollution and compaction during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SAC is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works any effects are inconsequential and therefore there is no pathway to an effect.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SAC is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SAC.**	**Yes – LSE cannot be excluded**
		Disturbance of species	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all
Bray Head SAC (000714) 0m. Within Licence Area B	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The Survey Works within the SAC boundary will be confined to the intertidal zone and Irish Sea and therefore there is no pathway to an effect on the designated terrestrial habitats.	No – No effects at all
		Habitat degradation – changes in water quality	The Survey Works within the SAC boundary will be confined to the intertidal zone and Irish Sea and therefore there is no pathway to an effect on the designated terrestrial habitats.	No – No effects at all
		Habitat degradation – changes in land quality	**The Survey Works are within the SAC boundary. There is potential for degradation to habitats when accessing the Survey Works area in the intertidal zone.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SAC is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the temporary and small-scale nature of the Survey Works no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The Survey Works within the SAC boundary will be confined to the intertidal zone and Irish Sea and therefore there is no pathway to an effect on the designated terrestrial habitats.	No – No effects at all
		Habitat degradation –hydrogeological changes	The Survey Works within the SAC boundary will be confined to the intertidal zone and Irish Sea and therefore there is no pathway to an effect on the designated terrestrial habitats.	No – No effects at all
		Habitat degradation – spread of invasive species	**The Survey Works are within the SAC boundary. There is potential for invasive species to be spread or introduced into the SAC through Survey Works. These invasive species could impact designated terrestrial habitats.**	**Yes – LSE cannot be excluded**
		Disturbance of species	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all
The Murrough Wetlands SAC (002249) 0m. Within Licence Area D	Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330] Mediterranean salt meadows (*Juncetalia maritimi*) [1410] Calcareous fens with *Cladium* mariscus and species of the *Caricion davallianae* [7210]* Alkaline fens [7230]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and lack of GI works within the SAC no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	The SAC is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the nature of the Survey Works in this Licence Area no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	**There is the potential for changes in land quality from compaction and trampling during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SAC is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SAC is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC is present within the groundwater catchment and calcareous fens with *Cladium* mariscus and species of the *Caricion davallianae* [7210] and alkaline fens [7230] are characterised as groundwater dependent habitats. However, the Survey Works in this area will not impact on the groundwater levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SAC.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	The SAC is designated for habitats only, therefore there is no pathway to an effect.	No – No effects at all
North Dublin Bay SAC (IE000206) 3.2km north direct distance and hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to the other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat is outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat is outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat is outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat is outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat is outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Rockabill to Dalkey Island SAC (003000) 4km east direct distance and 4.5km east hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat is outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat is outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat is outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat is outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat is outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat is outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Wicklow Mountains SAC (002122) 8.9km west direct distance, 11.8km upstream hydrological connection	Otter (*Lutra lutra*) [1355] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC is outside the ZoI for habitat loss. Temporary habitat loss is only occurring within intertidal areas during GI works. As this habitat is not considered functionally linked, there is no pathway to an effect. .	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site through run-off, connected watercourses or within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat is outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The functionally linked habitat is outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	Functionally linked habitat is present within the surface water catchment, however there will be no impact on surface water levels as part of the Survey Works and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are not present within the groundwater catchment. In addition, the habitats used by the QI species is not dependent on groundwater levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works. However, given the nature and location of the Survey Works within marine habitats, distance and abundance of suitable habitat closer to the SAC, impacts from disturbance are not anticipated to be significant.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Lambay Island SAC (000204) 21.8km north east direct distance and 23.2km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] Grey Seal (*Halichoerus grypus*) [1364] Harbour Seal (*Phoca vitulina*) [1365	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat is outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	These QI are singled out as there was no pathway to an effect to other QIs of this SAC.		small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Codling Fault Zone SAC (003015)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
28.5km north east direct distance and hydrological distance	This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat is outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
Slaney River Valley SAC (IE000781) 30km direct distance. 124km hydrological distance	Harbor Seal (*Phoca vitulina*) [1365] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Carnsore Point SAC (IE002269) 150km southeast direct distance. 144km hydrological distance.	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated species	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on this designated species	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Saltee Islands SAC (IE000781) 102km southwest direct distance. 180km hydrological distance	Grey Seal (*Halichoerus grypus*) [1364] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat iare outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Hook Head SAC (IE000764) 102km southwest direct distance. 212km hydrological distance	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349] Harbour Porpoise (*Phocoena phocoena*) [1351] These QI are singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Roaringwater Bay and Islands SAC (IE000101) 280km southwest direct distance. 325km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Kenmare River SAC (IE002158) 270km southwest direct distance. 398km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Blasket Islands SAC (IE002172) 310km southwest direct distance. 455km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Belgica Mound Province SAC (IE002327) 420km southwestdirect distance. 480km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC (IE000625) 195km northwest direct distance 495km hydrological distance	This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	
West Connacht Coast SAC (IE002998) 264km northwest direct distance. 540km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Inishmore Island SAC (IE000213) 240km west direct distance. 590km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Kilkieran Bay and Islands SAC (IE002111) 240km west direct distance. 600km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
North Anglesey Marine SAC (UK0030398) 55km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Lleyn Peninsula and the Sarnau SAC (UK0013117) 135km hydrological distance	Common Bottlenose Dolphin (*Tursiops truncates*) [1349] Grey seal (*Halichoerus grypus*) [1364] These QI are singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
West Wales Marine SAC (UK0030397) 141km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Murlough SAC (UK0016612) 161km hydrological distance	Harbour Seal (*Phoca vitulina*) [1365] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Strangford Lough SAC (UK0016608) 179km hydrological distance	Harbour Seal (*Phoca vitulina*) [1365] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Cardigan Bay SAC (UK0012712)	Common Bottlenose Dolphin Tursiops *truncatus* [1349]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
183km hydrological distance	Grey Seal *Halichoerus grypus* [1364] These QI are singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	
The North Channel SAC (UK0030399) 187km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Bristol Channel Approaches SAC (UK0030396) 326km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat areoutside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
The Maidens SAC (UK0030384) 345km hydrological distance	Grey seal (*Halichoerus grypus*) [1364] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Mers Celtiques – Talus du golfe de Gascogne SAC (FR5302015) 440km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Nord Bretagne DH SAC (FR2502022) 455km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Ouessant-Molène SAC (FR5300018) 505km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Abers - Côte des légendes SAC (FR5300017) 510km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Côte de Granit rose-Sept-Iles SAC (FR5300009) 515km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Baie de Morlaix SAC (FR5300015)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
525km hydrological distance	This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	
Tregor Goëlo SAC (FR5310010) 535km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Côtes de Crozon SAC (FR5302006) 545km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Riviére Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC (FR5300008) 550km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat ar outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Chaussée de Sein SAC (FR5302007) 560km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitatares outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Récifs du talus du golfe de Gascogne SAC (FR5302016) 560km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Récifs et landes de la Hague SAC (FR2500084) 605km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Anse de Vauville SAC (FR2502019) 605km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Cap d'Erquy-Cap Fréhel SAC (FR5300011) 605km hydrological distance	Harbour Porpoise (*Phocoena phocoena*) [1351] This QI is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Banc et récifs de Surtainville SAC (FR2502018)		Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
610km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	
Baie de Saint-Brieuc SAC (FR5300066) 610km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC (FR5300012) 635km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Chausey SAC (FR2500079) 640km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Estuaire de la Rance SAC (FR5300061) 650km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Baie du Mont Saint-Michel SAC (FR2500077) 670km hydrological distance	Harbour porpoise is present within this SAC but is not specifically designated as a QI. This species is singled out as there was no pathway to an effect to other QIs of this SAC.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SAC and functionally linked habitat are outside the ZoI for habitat loss and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site within the Irish Sea. This could affect the QI directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	The SAC and functionally linked habitat are outside the ZoI for changes in land quality and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – changes in air quality	The SAC and functionally linked habitat are outside the ZoI for changes in air quality and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	The SAC and functionally linked habitat are outside the ZoI for hydrological changes and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SAC and functionally linked habitat are outside the ZoI for hydrogeological changes and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Habitat degradation – spread of invasive species	The SAC and functionally linked habitat are outside the ZoI for spread of invasive species and therefore there is no pathway to an effect on the designated habitats	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to harbour porpoise during the bathymetric surveys and ecology boat surveys.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for injury / mortality through collision with a boat or through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and base level of boat traffic within the area no significant effect is expected.	No - any effects are ecologically inconsequential
Special Protection Areas				
South Dublin Bay and River Tolka Estuary SPA (004024) 0m. Within Survey Works	Light-bellied Brent goose (*Branta bernicla hrota*) [A046] Oystercatcher (*Haematopus ostralegus*) [A130] Ringed plover (*Charadrius hiaticula*) [A137] Grey plover (*Pluvialis squatarola*) [A141] Knot (Calidris canutus) [A143] Sanderling (*Calidris alba*) [A144]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	**There will be temporary habitat loss from the GI works in Licence Area A.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in water quality	The SPA is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site through run-off or within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Dunlin (*Calidris alpina*) [A149] Bar-tailed godwit *(Limosa lapponica*) [A157] Redshank *(Tringa totanus*) [A162] Black-headed gull (Chroicocephalus ridibundus) [A179] Roseate tern (*Sterna dougallii*) [A192] Common tern (*Sterna hirundo*) [A193] Arctic tern (*Sterna paradisaea*) [A194]	**Habitat degradation – changes in land quality**	**There is the potential for changes in land quality from pollution and compaction during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SPA and functionally linked habitat are within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SPA is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SPA is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SPA.**	**Yes – LSE cannot be excluded**
		Disturbance of species	**The SPA and functionally linked habitat are within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	The SPA and functionally linked habitat are within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	**There will be temporary habitat loss from the GI works in Licence Area A.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat degradation – changes in water quality	The SPA is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality at the site through run-off or within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	**There is the potential for changes in land quality from pollution and compaction during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SPA is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SPA is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SPA is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SPA.**	**Yes – LSE cannot be excluded**
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
The Murrough SPA (004186)	Red-throated diver (*Gavia stellata*) [A001]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
0m. Within Survey Works	Greylag goose (*Anser anser*) [A043] Light-bellied brent goose (*Branta bernicla hrota*) [A046] Wigeon (Mareca *penelope*) [A050] Teal (*Anas crecca*) [A052] Black-headed gull (*Chroicocephalus ridibundus*) [A179] Herring gull (*Larus argentatus*) [A184] Little tern (*Sterna albifrons*) [A195]	Habitat loss / degradation - temporary	The SPA is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and lack of GI works within the SPA and functionally linked habitat, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	The SPA, functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the SPA or functionally linked habitat. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	**There is the potential for changes in land quality from trampling and compaction during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SPA and functionally linked habitat are within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SPA is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SPA is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SPA.**	**Yes – LSE cannot be excluded**
		Disturbance of species	**The SPA and functionally linked habitat are within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	The SPA and functionally linked habitat are within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999] This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	The SPA is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and lack of GI works within the SPA no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	The SPA is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the SPA. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	**There is the potential for changes in land quality from trampling and compaction during Survey Works.**	**Yes – LSE cannot be excluded**
		Habitat degradation – changes in air quality	The SPA is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	The SPA is present within the surface water catchment however, the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	The SPA is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	**There is the potential for invasive species to be spread or introduced within the SPA.**	**Yes – LSE cannot be excluded**
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
Dalkey Islands SPA (004172) – located 0.5km north east both direct distance and hydrological distance	Roseate tern (*Sterna dougallii*) [A192] Common tern (*Sterna hirundo*) [A193] Arctic tern (*Sterna paradisaea*) [A194]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked and supporting habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Wicklow Head SPA (004127) 2.5km south east both direct distance and hydrological distance	Kittiwake (*Rissa tridactyla*) [A188]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in air quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked habitat is outside the groundwater catchment and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
North Bull Island SPA (004006)	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
4.8km north east both direct distance and hydrological distance	Shelduck (*Tadorna tadorna*) [A048] Teal (*Anas crecca*) [A052] Pintail (*Anas acuta*) [A054] Shoveler (*Spatula clypeata*) [A056] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Curlew (*Numenius arquata*) [A160] Redshank (*Tringa totanus*) [A162] Turnstone (*Arenaria interpres*) [A169]	Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Black-headed Gull (*Chroicocephalus ridibundus*) [A179]	Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked and supporting habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999] This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. This could affect the QIs directly as well as result in loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
North-West Irish Sea SPA (004236) 4.8km north east both direct distance and hydrological distance	Red-throated Diver (*Gavia stellata*) [A001] Great Northern Diver (*Gavia immer*) [A003] Fulmar (*Fulmarus glacialis*) [A009] Manx Shearwater (*Puffinus puffinus*) [A013] Cormorant (*Phalacrocorax carbo*) [A017] Shag (Gulosus aristotelis) [A018]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is outside the ZoI for habitat loss, therefore there is no pathway to an effect	No – No effects at all
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. This could affect the QIs directly as well as result in loss of prey species. However, given	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Common Scoter (*Melanitta nigra*) [A065] Little Gull (*Larus minutus*) [A177] Black-headed Gull (*Chroicocephalus ridibundus*) [A179] Common Gull (*Larus canus*) [A182] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Great Black-backed Gull (*Larus marinus*) [A187] Kittiwake (*Rissa tridactyla*) [A188] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194] Little Tern (*Sterna albifrons*) [A195] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200] Puffin (*Fratercula arctica*) [A204]		the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	**Functionally linked and supporting habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Wicklow Mountains SPA (004040) 9.4km west direct distance, 11.8km upstream hydrological connection	Merlin (*Falco columbarius*) [A098] Peregrine (*Falco peregrinus*) [A103]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked habitat is present within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked habitat is present within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	Functionally linked habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked habitat is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked 0habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event is expected.	No - any effects are ecologically inconsequential
Howth Head Coast SPA (004113) 9.9km north east both direct distance and hydrological distance	Kittiwake (*Rissa tridactyla*) [A188]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in air quality	Functionally linked habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked habitat is present within the groundwater catchment however, the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intevening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Baldoyle Bay SPA (004016) 10.3km north direct distance and 17.5km hydrological distance	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Ringed Plover (*Charadrius hiaticula*) [A137] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Bar-tailed Godwit (*Limosa lapponica*) [A157]	Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999] This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
Irelands Eye SPA (004117) 13.1km north east direct distance and 14.2km hydrological distance	Cormorant (*Phalacrocorax carbo*) [A017] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intevening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Malahide Estuary SPA (004025) 14.9km north direct distance and 20.7km hydrological distance	Great Crested Grebe (*Podiceps cristatus*) [A005] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Pintail (*Anas acuta*) [A054] Goldeneye (*Bucephala clangula*) [A067]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Red-breasted Merganser (*Mergus serrator*) [A069] Oystercatcher (*Haematopus ostralegus*) [A130] Golden Plover (*Pluvialis apricaria*) [A140] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157] Redshank (*Tringa totanus*) [A162]	Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No – No effects at all
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
Rogerstown Estuary SPA (004015) 20.5km north direct distance and 24.7km hydrological distance	Greylag Goose (*Anser anser*) [A043] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Shelduck (*Tadorna tadorna*) [A048] Shoveler (*Spatula clypeata*) [A056] Oystercatcher (Haematopus ostralegus) [A130] Ringed Plover (*Charadrius hiaticula*) [A137] Grey Plover (*Pluvialis squatarola*) [A141] Knot (*Calidris canutus*) [A143] Dunlin (*Calidris alpina*) [A149] Black-tailed Godwit (*Limosa limosa*) [A156] Redshank (*Tringa totanus*) [A162]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However,	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
			given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Disturbance of species	**Functionally linked habitat is within the ZoI for disturbance and there is potential for disturbance to QI species during the Survey Works.**	**Yes – LSE cannot be excluded**
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
	Wetlands and Waterbirds [A999] This QI is singled out as the COs for this QI are different from the other QIs for this SPA.	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
		Mortality	This QI is for habitats only, therefore there is no pathway to an effect.	No – No effects at all
Lambay Island SPA (004069) 21.8km north east direct distance and 23.2km hydrological distance	Fulmar (*Fulmarus glacialis*) [A009] Cormorant (*Phalacrocorax carbo*) [A017] Shag (Gulosus aristotelis) [A018] Greylag Goose (*Anser* anser) [A043] Lesser Black-backed Gull (*Larus fuscus*) [A183] Herring Gull (*Larus argentatus*) [A184] Kittiwake (*Rissa tridactyla*) [A188] Guillemot (*Uria aalge*) [A199] Razorbill (*Alca torda*) [A200]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitats are within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the functionally linked or supporting habitat. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Puffin (*Fratercula arctica*) [A204]	Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intervening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Skerries Islands SPA (004122) 29.2km north direct distance and 24.7km hydrological distance	Cormorant (*Phalacrocorax carbo*) [A017] Shag (Gulosus aristotelis) [A018] Light-bellied Brent Goose (*Branta bernicla hrota*) [A046] Purple Sandpiper (*Calidris maritima*) [A148]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat los - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
	Turnstone (*Arenaria interpres*) [A169] Herring Gull (*Larus argentatus*) [A184]		change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intervening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
Rockabill SPA (004014) 29.7km north west direct distance and 33.2km hydrological distance	Purple Sandpiper (*Calidris maritima*) [A148] Roseate Tern (*Sterna dougallii*) [A192] Common Tern (*Sterna hirundo*) [A193] Arctic Tern (*Sterna paradisaea*) [A194]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intervening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential
Poulaphouca Reservoir SPA (004063) 23.9km south west direct distance, no hydrological connection	Greylag Goose (*Anser anser*) [A043] Lesser black-backed gull (*Larus fuscus*) [A183]	Habitat loss - permanent	No permanent works are being undertaken at this stage of the Survey Works, therefore there is no pathway to an effect	No – No effects at all
		Habitat loss - temporary	Functionally linked and supporting habitat is within the ZoI for habitat loss, however given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in water quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in water quality. There is potential for a pollution event to occur from the Survey Works which could change the water quality within the Irish Sea. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in land quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in land quality. There is the potential for changes in land quality from pollution and compaction during Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – changes in air quality	Functionally linked and supporting habitat is within the ZoI for habitat degradation from changes in air quality. There is the potential for changes in air quality from emissions during the Survey Works. However, given the small-scale nature of the Survey Works and distance to SPA, no significant effect is expected.	No - any effects are ecologically inconsequential
		Habitat degradation – hydrological changes	Functionally linked and supporting habitat is present within the surface water catchment, however the habitats are not dependent on surface water levels and therefore there is no pathway to an effect.	No – No effects at all

Relevant European site (and connectivity)	QIs	Potential pathways	Assessment of Likely Significant Effects (LSEs) Alone	LSE from the project alone?
		Habitat degradation –hydrogeological changes	Functionally linked and supporting habitat is present within the groundwater catchment, however the habitats are not dependent on groundwater and therefore there is no pathway to an effect.	No – No effects at all
		Habitat degradation – spread of invasive species	Functionally linked and supporting habitat is within the ZoI for habitat degradation from spread of invasive species. There is the potential for invasive species to be spread or introduced. However, given the small-scale nature and location of the Survey Works no effect is expected.	No – No effects at all
		Disturbance of species	Functionally linked habitat is within the ZoI for disturbance, however due to the intervening distance and average foraging distance of QI species, any effects are considered inconsequential.	No - any effects are ecologically inconsequential
		Mortality	Functionally linked and supporting habitat is within the ZoI for mortality. There is potential for mortality through a pollution event which could affect QI species directly or indirectly through loss of prey species. However, given the small-scale nature of the Survey Works no significant pollution event within the Irish Sea is expected.	No - any effects are ecologically inconsequential

5.1.1 Conclusions of Alone Assessment

An examination of European sites and their QI features within the ZoI of the Survey Works is presented in Table 5.1. From this assessment, it can be concluded the following LSEs and cannot be excluded on the basis of objective information and so Appropriate Assessment is required of them.

- Habitat loss / degradation- temporary
- Habitat degradation – changes in land quality
- Habitat degradation – spread of invasive species
- Disturbance of species

5.2 In-Combination Assessment

5.2.1 Methodology

5.2.1.1 LSEs with Potential to Act In-Combination with Other Plans and Projects

An assessment of potential in-combination effects has been carried out.

Where LSEs cannot be excluded and have been screened in for Appropriate Assessment, no in-combination assessment has been carried out for these LSEs as the Appropriate Assessment will require an in-combination assessment.

Where LSEs have been excluded on the basis that there is no pathway and therefore no effect at all or where an effect is ecologically inconsequential, no in-combination assessment has been carried out as if there is no effect at all or the effect is inconsequential, it cannot contribute to combined effects.

LSEs that have been excluded on the basis of ecological insignificance have been subject to the in-combination assessment as insignificant effects from combined plans and projects could act in combination to produce an LSE. LSEs that will be assessed are:

- Habitat loss – temporary;
- Habitat degradation - changes in water quality;
- Habitat degradation - changes in land quality;
- Habitat degradation - changes in air quality;
- Disturbance of species; and
- Mortality.

5.2.1.2 Identification of Plans and Projects with Potential to Act In-Combination

In order to take account of in-combination effects, plans and projects that are completed, approved but uncompleted, or proposed (but not yet approved) should be considered in this context (European Commission 2021a).

A search of the National Planning Application Database (NPAD) (DHLGH, accessed February 2025), Dun Laoghaire and Rathdown Conuty Council (accessed February 2025), Fingal and Wicklow County Council planning portals (accessed February 2025), Dublin City Council planning portal (accessed February 2025), An Bord Pleanála planning portal (accessed February 2025), foreshore licence application search (gov.ie and maritimeregulator.ie, accessed February 2025) and general web searches for major infrastructure projects and plans in the vicinity of the Survey Works has been undertaken as part of the Screening Assessment to identify other plans and projects that may contribute to in-combination effects.

For GI works, plans and projects from up to 5km and within three years of the GI works have been included. For all other proposed works, plans and projects within the works area and within 10 years (licence validity) have been included.

5.2.1.3 Assessment of In-Combination Effects

The search identified four plans and 16 projects which were considered to have the potential for in-combination effects with GI works on habitat loss- temporary, habitat degradation – changes in water quality, habitat degradation - changes in land quality, habitat degradation - changes in air quality disturbance of species and mortality. These are assessed in Table 5.2 below.

The search identified two plans and four projects which were considered to have the potential for in-combination effects with bathymetric surveys, benthic surveys, ecology boat surveys and intertidal archaeology surveys on habitat loss- temporary, habitat degradation - changes in water quality, habitat degradation - changes in land quality, habitat degradation - changes in air quality disturbance of species and mortality. These are assessed in Table 5.3 below.

Table 5.2: Assessment of in-combination effects of geophysical and geotechnical works

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
Climate Action Plan 2024	Department of the Environment, Climate and Communications	This Plan sets out the actions, measures and pathways to achieve a 51% reduction in overall greenhouse gas emissions by 2030, relative to 2018 levels, and to reach net-zero emissions by no later than 2050.	Habitat loss – temporary Habitat degradation – changes in water quality Habitat degradation – spread of invasive species Disturbance of species Mortality	It is acknowledged that the draft Plan is a high-level plan and as such prediction of effects at individual European sites is not practical as the draft Plan lacks the necessary spatial detail to give context to the extent or significance of any potential effects. As such, the potential for effects is raised within the confines of the draft Plan with a view to appropriately informing lower levels of planning where the necessary spatial detail is available and identifying the mitigation measures that must be in place for lower tier plans and projects to ensure the protection of the European sites. Due to the localised and temporary nature of the Survey Works, no significant in-combination effects are considered.	No
National Water Action Plan – River Basin Management Plan	Department of Housing, Local Government and Heritage	This Plan sets out the objectives and recommendations to be pursued until 2027 and beyond in order to improve the management of water in Ireland and to achieve the objectives of the Water Framework Directive (WFD)	Habitat loss – temporary Habitat degradation – changes in water quality Habitat degradation – spread of invasive species Disturbance of species Mortality	It is acknowledged that the daft RBMP is a high-level Plan and as such prediction of effects at individual European sites is not practical as the draft plan lacks the necessary spatial detail to give context to the extent or significance of any potential effects. As such, the potential for effects is raised within the confines of the draft RBMP with a view to appropriately informing lower levels of planning where the necessary spatial detail is available and identifying the mitigation measures that must be in place for lower tier plans, programmes and projects to ensure the protection of the European sites. Due to the localised and temporary nature of the Survey Works, no significant in-combination effects are considered.	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
National Marine Planning Framework	The Department of Housing, Planning, and Local Government	The NMPF will sit at the top of the hierarchy of plans and sectoral policies for the maritime area. The plan will be informed by existing sectoral plans and will, in turn, be used to inform future cycles of those plans. It will provide a coherent framework in which those sectoral policies and objectives can be realised.	Habitat loss – temporary Habitat degradation – changes in water quality Habitat degradation – spread of invasive species Disturbance of species Mortality	It is acknowledged that the daft NMPF is a high-level framework document and as such prediction of effects at individual European sites is not practical as the framework lacks the necessary spatial detail to give context to the extent or significance of any potential effects. As such, the potential for effects is raised within the confines of the draft NMPF with a view to appropriately informing lower levels of planning where the necessary spatial detail is available and identifying the mitigation measures that must be in place for lower tier plans and projects to ensure the protection of the European sites. Due to the localised and temporary nature of the Survey Works, no significant in-combination effects are considered.	No
Dublin City Development Plan 2022-2028	Dublin City Council	This plan aims to support the sustainable long-term development within Dublin.	Habitat loss – temporary Habitat degradation – changes in water quality Mortality	A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Tech Works Marine Ltd (FS007180)	-	Data buoy deployment off Dun Laoghaire, Dublin. Foreshore licence applied.	Habitat degradation – changes in water quality Disturbance of species	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered.	No
Mac Lir Offshore Wind Array (FS007472)	-	Site investigations for proposed offshore wind farm off Dublin, Wicklow and Wexford. Foreshore licence applied.	Habitat loss – temporary Habitat degradation – changes in water quality Disturbance of species	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered.	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
Mac Lir Offshore Wind Array (FS007472)	-	Site investigations and benthic surveys within a potential offshore export cable corridor. Foreshore licence applied.	Habitat loss – temporary Habitat degradation – changes in water quality Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised nature of the GI works, no significant in-combination effects are considered.	No
Leinster Offshore Wind Array (FS007162)	-	Site investigations for proposed offshore wind farm off Dublin. Foreshore licence applied.	Habitat loss – temporary Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Greystones OWL Windfarm Limited proposed wind farm (FS007367)	Dublin County Council and Wicklow County Council	Greystones OWL Windfarm Limited plans to develop an offshore wind farm at a site of Wicklow/Dublin coast. Seeking to undertake a variety of marine surveys to inform specific location, design and layout of the proposed offshore wind farm and export cable route to shore. A foreshore licence application has been submitted.	Habitat loss – temporary Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Réalt na Mara Offshore Wind Array (FS007330)	-	Site investigations for proposed offshore wind farm off Wicklow and Dublin. Foreshore licence applied.	Habitat loss – temporary Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
Irish Water Greater Dublin Drainage Outfall (FS006843)	City of Dublin	Construction of a 5.3km marine section of outfall pipe. Foreshore licence applied.	Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Sunrise Offshore Wind Array (FS007151)	Fingal County Council	Foreshore licence application for site investigation activities to undertake a variety of marine surveys at the proposed site in order to inform the specific location, design and layout of the proposed offshore wind farm and export cable route to shore. The surveys will include geophysical, geotechnical, environmental and metocean campaigns. The site investigation surveys in the proposed Foreshore Licence Application Area will support the development of the proposed Sunrise Offshore Wind Farm.	Habitat loss – temporary Habitat degradation – changes in water quality Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Microsoft Ireland Operations (LIC230018)	-	Site investigations for a proposed subsea fibre optic cable from Dublin Port to Angelsey, Wales	Habitat loss – temporary Habitat degradation – changes in water quality Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Poolbeg GIS Substation	Dublin City Council	A proposed electricity transmission development that primarily comprises the replacement and/or enhancement, and expansion of existing substation infrastructure. Includes associated GI and survey works.	Habitat degradation – changes in water quality Disturbance of species	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A Natura Impact Report has been completed and concluded that with mitigation	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
				measures there will be no impact on European sites alone or in-combination.	
Kish Bank Offshore Windfarm (FS006462)	Dun Laoghaire-Rathdown County Council	500MW offshore wind farm 11km off Dublin coast. Includes associated survey works. currently in consultation.	Habitat loss – temporary Habitat degradation – changes in water quality Disturbance of species Mortality	Given the early stage of the application, this will have no effect in-combination with the Survey Works	No
Codling Wind Park (FS007546)	Wicklow County Council Dublin City Council Dún Laoghaire - Rathdown County Council	Proposed Development of wind farm (ongoing since 1999). Proposed site investigation including bathymetric mapping of seabed, provide information on soil stability and morphology of the seabed, provide details of ground conditions and geology, obtain up to date information on wind resource and metocean data, generate environmental and ecological data. This will be done through a variety of different surveys.	Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Dublin Array (FS007188)	Dublin City Council Fingal County Council Dún Laoghaire - Rathdown County Council Wicklow County Council	Foreshore Licence to undertake geotechnical and geophysical site investigations and ecological, wind, wave and current monitoring to provide further data to refine wind farm design, cable routing, landfall design and associated installation methodologies for the proposed Dublin Array offshore wind farm.	Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Banba Offshore Wind Farm (FS007283)	Wickow City Council	Banba Wind Limited is proposing to develop an offshore wind farm at a site off the Wicklow and Dublin Coasts.	Habitat degradation – changes in water quality Disturbance of species	There is a possible temporal overlap in terms of disturbance and displacement, however due to the localised and temporary nature of the GI	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in-combination	Assessment of LSE in-combination	LSE in-combination?
		Banba Wind Limited is seeking to undertake a variety of marine surveys at the Foreshore Licence Application Area in order to inform the specific location, design and layout of the proposed offshore wind farm and export cable route to shore. The surveys will include geophysical, geotechnical, environmental, metocean campaigns.	Mortality	works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	
MUL230034	Codling Offshore Windfarm	Proposed Survey activities are: Metocean surveys. Geophysical and unexploded ordinance surveys. Geotechnical campaign(s) and trial pits at landfall. Fish & Shellfish surveys. Benthic & Intertidal surveys. Marine Mammal passive acoustic monitoring (PAM) survey. Archaeological surveys. The MUL Application is for site investigation and survey activities only.	Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap, however due to the localised and temporary nature of the GI works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Dublin BusConnects 313509	Dublin City Council	BusConnects Belfield/Blackrock to City Centre Core Bus Corridor Scheme 50m south of Survey Works area at closes point. Approved with conditions 27/03/24	Habitat degradation – changes in water quality	An NIS completed as part of the application states that with mitigation measures there will be no alone or in-combination effect on any European sites.	No

Table 5.3: Assessment of in-combination effects of bathymetric surveys, benthic surveys, ecology boat surveys and intertidal archaeology surveys

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in combination	Assessment of LSE in-combination	LSE in-combination?
Dublin City Development Plan 2022-2028	Dublin City Council	This plan aims to support the sustainable long-term development within Dublin.	Habitat degradation – changes in water quality Disturbance of species	A Natura Impact Report has been completed and concluded that with mitigation measures there will	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in combination	Assessment of LSE in-combination	LSE in-combination?
				be no impact on European sites alone or in-combination.	
Wicklow County Development Plan	Wicklow County Council	This plan aims to support the sustainable long-term development within Wicklow	Habitat degradation – changes in water quality Disturbance of species	A Natura Impact Report has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Dublin Array (FS007188)	Dublin City Council Fingal County Council Dún Laoghaire - Rathdown County Council Wicklow County Council	Foreshore Licence to undertake geotechnical and geophysical site investigations and ecological, wind, wave and current monitoring to provide further data to refine wind farm design, cable routing, landfall design and associated installation methodologies for the proposed Dublin Array offshore wind farm.	Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap, however due to the localised and temporary nature of the Survey Works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Codling Wind Park (FS007546)	Wicklow County Council Dublin City Council Dún Laoghaire - Rathdown County Council	Proposed Development of wind farm (ongoing since 1999). Proposed site investigation including bathymetric mapping of seabed, provide information on soil stability and morphology of the seabed, provide details of ground conditions and geology, obtain up to date information on wind resource and metocean data, generate environmental and ecological data. This will be done through a variety of different surveys.	Habitat degradation – changes in water quality Disturbance of species Mortality	There is a possible temporal overlap, however due to the localised and temporary nature of the Survey Works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	No
Wicklow Sea Wind Ltd (FS007588)	Wicklow County Council	The foreshore license application for Wicklow Sea Wind Limited is	Habitat degradation – changes in water quality	There is a possible temporal overlap, however due to the	No

Name and Application Reference	Planning Authority	Description	Pathways potentially acting in combination	Assessment of LSE in-combination	LSE in-combination?
		to survey an area suitable for the installation of an export cable corridor to connect a proposed fixed foundation offshore wind project in the Celtic Sea (approximately 8km off the east coast of Wicklow) to the grid.	Disturbance of species Mortality	localised and temporary nature of the Survey Works, no significant in-combination effects are considered. A NIS has been completed and concluded that with mitigation measures there will be no impact on European sites alone or in-combination.	
Seagull Cottage, Clonmannon 2360091	Wicklow County Council	The construction of a storey-and-a-half extension to the side and alterations to existing cottage including: the removal of pitched roofs to porches and replacement with single mono-pitch roof, new entrance to rear with new mono-pitch canopy, alterations to existing elevations, new Velux window to northern roof, new lime render; and all associated site works 100m west of Survey Works area. Conditionally granted 29/11/2023	Habitat degradation – changes in water quality	Given the small scale of the development and location beyond the railway, there will be no significant effect on water quality in combination with the Survey Works.	No

5.2.2 Conclusions on In-Combination Effects

It can be concluded on the basis of objective information from the assessment in Table 5.2 that there is no potential for in-combination effects of the Survey Works and other plans or projects to undermine the integrity of any European sites.

6. Screening Statement and Conclusion

The Survey Works will occur within South Dublin Bay SAC, Bray Head SAC, The Murrough SAC, South Dublin Bay and Tolka Estuary SPA and The Murrough SPA. The Survey Works are not directly connected with or necessary to the conservation management of any these European sites.

This AA Screening Report presents the objective scientific information required to inform a robust and complete examination of the potential impacts of the Survey Works on European sites.

The conclusion of the Screening for AA is that, in the absence of mitigation measures, the potential of the Survey Works to undermine the COs of the following European sites, as set out in Table 6.1, cannot be excluded.

Table 6.1: European sites with the potential for LSEs from the Survey Works and the potential pathways

European Site	QIs	Potential Pathway
South Dublin Bay SAC (IE000210)	Mudflats and sandflats not covered by seawater at low tide [1140], annual vegetation of drift lines [1210], *Salicornia* and other annuals colonising mud and sand [1310], embryonic shifting dunes [2110].	Habitat loss – temporary, change in land quality and spread of invasive species
Bray Head SAC (IE000714)	Vegetated sea cliffs of the Atlantic and Baltic coasts [1230], European dry heaths [4030]	Change in land quality and spread of invasive species
The Murrough Wetlands SAC (IE002249)	Annual vegetation of drift lines [1210], Perennial vegetation of stony banks [1220], Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) [1330], Mediterranean salt meadows (*Juncetalia maritimi*) [1410], Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae* [7210]*, Alkaline fens [7230]	Change in land quality and spread of invasive species
North Dublin Bay SAC (IE000206)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Rockabill to Dalkey Island SAC (IE003000)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Lambay Island SAC (IE000204)	Harbour Porpoise (*Phocoena phocoena*) [1351], Grey Seal (*Halichoerus grypus*) [1364], Harbour Seal (*Phoca vitulina*) [1365]	Disturbance of species
Codling Fault Zone SAC (IE003015)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Slaney River Valley SAC (IE000781)	Harbour Seal (*Phoca vitulina*) [1365]	Disturbance of species
Carnsore Point SAC (IE002269)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Saltee Islands SAC (IE000781)	Grey Seal (*Halichoerus grypus*) [1364]	Disturbance of species
Hook Head SAC (IE000764)	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349], Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Roaringwater Bay and Islands SAC (IE000101)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Kenmare River SAC (IE002158)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Blasket Islands SAC (IE0002172)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species

European Site	QIs	Potential Pathway
Belgica Mound Province SAC (IE002327)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Bunduff Lough and Machair/Trawalua/Mullaghmore SAC	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
West Connacht Coast SAC (IE002998)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Inishmore Island SAC (IE000213)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Kilkieran Bay and Islands SAC (IE002111)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
North Anglesey Marine SAC (UK0030398)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Lleyn Peninsula and the Sarnau SAC (UK0013117)	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349], Grey Seal (*Halichoerus grypus*) [1364]	Disturbance of species
West Wales Marine SAC (UK0030397)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Murlough SAC (UK0016612)	Harbour Seal (*Phoca vitulina*) [1365]	Disturbance of species
Strangford Lough SAC (UK0016608)	Harbour Seal (*Phoca vitulina*) [1365]	Disturbance of species
Cardigan Bay SAC (UK0013117)	Common Bottlenose Dolphin (*Tursiops truncatus*) [1349], Grey Seal (*Halichoerus grypus*) [1364]	Disturbance of species
North Channel SAC (UK0030399)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of specie
Bristol Channel Approaches SAC (UK0030396)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
The Maidens SAC (UK0030384)	Grey Seal (*Halichoerus grypus*) [1364]	Disturbance of species
Mers Celtiques – Talus du golfe de Gascogne SAC (FR5302015)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Nord Bretagne DH SAC (FR2502022)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Ouessant-Molène SAC (FR5300018)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Abers - Côte des légendes SAC (FR5300017)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Côte de Granit rose-Sept-Iles SAC (FR5300009)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Baie de Morlaix SAC (FR5300015)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Tregor Goëlo SAC (FR5310070)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species

European Site	QIs	Potential Pathway
Côtes de Crozon SAC (FR5302006)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Riviére Leguer, forêts de Beffou, Coat an Noz et Coat an Hay SAC(FR5300008)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Chaussée de Sein SAC (FR5302007)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Récifs du talus du golfe de Gascogne SAC (FR5302016)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Récifs et landes de la Hague SAC (FR2500084)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Anse de Vauville SAC (FR2502019)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Cap d'Erquy-Cap Fréhel SAC (FR5300011)	Harbour Porpoise (*Phocoena phocoena*) [1351]	Disturbance of species
Banc et récifs de Surtainville SAC (FR2502018)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Baie de Saint-Brieuc SAC(FR5300066)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Baie de Lancieux, Baie de l'Arguenon, Archipel de Saint Malo et Dinard SAC (FR5300012)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Chausey SAC (FR2500079)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Estuaire de la Rance SAC (FR5300061)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
Baie du Mont Saint-Michel SAC (FR2500077)	Harbour porpoise is present within this SAC but is not specifically designated as a QI.	Disturbance of species
South Dublin Bay and River Tolka SPA (IE004024)	Light-bellied Brent goose (*Branta bernicla hrota*) [A046], Oystercatcher (*Haematopus ostralegus*) [A130], Ringed plover (*Charadrius hiaticula*) [A137], Grey plover (*Pluvialis squatarola*) [A141], Knot (*Calidris canutus*) [A143], Sanderling (*Calidris alba*) [A144] Dunlin (*Calidris alpina*) [A149], Bar-tailed godwit *(Limosa lapponica*) [A157], Redshank *(Tringa totanus*) [A162], Black-headed gull *(Chroicocephalus ridibundus*) [A179], Roseate tern (*Sterna dougallii*) [A192], Common tern (*Sterna hirundo*) [A193], Arctic tern (*Sterna paradisaea*) [A194], Wetlands and Waterbirds [A999]	Habitat loss – temporary, change in land quality, spread of invasive species and disturbance of species
The Murrough SPA (IE004186)	Red-throated diver (*Gavia stellata*) [A001], Greylag goose (*Anser anser*) [A043], Light-bellied brent goose (*Branta bernicla hrota*) [A046], Wigeon (Mareca *penelope*) [A050], Teal (*Anas crecca*) [A052], Black-headed gull (*Chroicocephalus ridibundus*) [A179], Herring gull (*Larus argentatus*)	Change in land quality, spread of invasive species and disturbance of species

European Site	QIs	Potential Pathway
	[A184], Little tern (*Sterna albifrons*) [A195], Wetlands and Waterbirds [A999]	
Dalkey Island SPA (Site Code IE004172)	Roseate tern (*Sterna dougallii*) [A192], Common tern (*Sterna hirundo*) [A193], Arctic tern (*Sterna paradisaea*) [A194]	Disturbance of species
Wicklow Head SPA (IE004127)	Kittiwake (*Rissa tridactyla*) [A188]	Disturbance of species
North Bull Island SPA (IE004006)	Light-bellied Brent goose (*Branta bernicla hrota*) [A046], Shelduck (Tadorna tadorna) [A048], Teal (Anas crecca) [A052], Pintail (Anas acuta) [A054], Shoveler (Spatula clypeata) [A056], Oystercatcher (*Haematopus ostralegus*) [A130], Golden Plover (Pluvialis apricaria) [A140], Grey plover (*Pluvialis squatarola*) [A141], Knot (*Calidris canutus*) [A143], Sanderling (*Calidris alba*) [A144], Dunlin (*Calidris alpina*) [A149], Black-tailed Godwit (Limosa limosa) [A156], Bar-tailed godwit *(Limosa lapponica*) [A157], Curlew (Numenius arquata) [A160], Redshank *(Tringa totanus*) [A162], Turnstone (Arenaria interpres) [A169], Black-headed gull *(Chroicocephalus ridibundus*) [A179]	Disturbance of species
North West Irish Sea SPA (IE004236)	Red-throated Diver (*Gavia stellata*) [A001], Great Northern Diver (*Gavia immer*) [A003], Fulmar (*Fulmarus glacialis*) [A009], Manx Shearwater (*Puffinus puffinus*) [A013], Cormorant (*Phalacrocorax carbo*) [A017], Shag (*Gulosus aristotelis*) [A018], Common Scoter (*Melanitta nigra*) [A065], Little Gull (*Larus minutus*) [A177], Black-headed Gull (*Chroicocephalus ridibundus*) [A179], Common Gull (*Larus canus*) [A182], Lesser Black-backed Gull (*Larus fuscus*) [A183], Herring Gull (*Larus argentatus*) [A184], Great Black-backed Gull (*Larus marinus*) [A187], Kittiwake (*Rissa tridactyla*) [A188], Roseate Tern (*Sterna dougallii*) [A192], Common Tern (*Sterna hirundo*) [A193], Arctic Tern (*Sterna paradisaea*) [A194], Little Tern (*Sterna albifrons*) [A195], Guillemot (*Uria aalge*) [A199], Razorbill (*Alca torda*) [A200], Puffin (*Fratercula arctica*) [A204]	Disturbance of species
Wicklow Mountains SPA (Site code IE004040)	Merlin (*Falco columbarius*) [A098], Peregrine (*Falco peregrinus*) [A103]	Disturbance of species
Baldoyle Bay SPA (IE004016)	Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Shelduck (*Tadorna tadorna*) [A048], Ringed Plover (*Charadrius hiaticula*) [A137], Golden Plover (*Pluvialis apricaria*) [A140], Grey Plover (*Pluvialis squatarola*) [A141], Bar-tailed Godwit (*Limosa lapponica*) [A157]	Disturbance of species
Malahide Estuary SPA (IE004025)	Great Crested Grebe (*Podiceps cristatus*) [A005], Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Shelduck (*Tadorna tadorna*) [A048], Pintail (*Anas acuta*) [A054], Goldeneye (*Bucephala clangula*) [A067], Red-breasted Merganser (*Mergus serrator*) [A069], Oystercatcher (*Haematopus ostralegus*) [A130], Golden Plover (*Pluvialis apricaria*) [A140], Grey Plover (*Pluvialis squatarola*) [A141], Knot (*Calidris canutus*) [A143],	Disturbance of species

European Site	QIs	Potential Pathway
	Dunlin (*Calidris alpina*) [A149], Black-tailed Godwit (*Limosa limosa*) [A156], Bar-tailed Godwit (*Limosa lapponica*) [A157], Redshank (*Tringa totanus*) [A162]	
Rogerstown Estuary SPA (IE004015)	Greylag Goose (*Anser anser*) [A043], Light-bellied Brent Goose (*Branta bernicla hrota*) [A046], Shelduck (*Tadorna tadorna*) [A048], Shoveler (*Spatula clypeata*) [A056], Oystercatcher (*Haematopus ostralegus*) [A130], Ringed Plover (*Charadrius hiaticula*) [A137], Grey Plover (*Pluvialis squatarola*) [A141], Knot (*Calidris canutus*) [A143], Dunlin (*Calidris alpina*) [A149], Black-tailed Godwit (*Limosa limosa*) [A156], Redshank (*Tringa totanus*) [A162]	Disturbance of species

It is therefore required that the Survey Works are progressed to Stage 2 Appropriate Assessment, which will comprise a detailed assessment of the potential for adverse effects on the integrity of European sites based on these potential LSEs.

Detailed information to inform the AA for the Survey Works will be presented in a Natura Impact Statement (NIS) which will be submitted alongside in the this report in the MUL to enable the Competent Authority to undertake an AA in respect of the Survey Works.

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Appendix A. Figures

Appendix B. Borehole Locations

Not Used

Appendix C. NBDC Desk-Based Review Results

Table 1: Results of the NBDC desk-based review of Annex I bird species. Species in bold indicate a QI of a European Site within the ZoI. A dash (-) has been used to signify where no data was returned.

Species	Designation	Licence area	Number of records	Most recent record
Arctic tern (*Sterna paradisaea*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	8	2017
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	2	2010
Atlantic puffin (*Fratercula arctica*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	3	2010
Bar-tailed godwit (*Limosa lapponica*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	14	2018
		Licence Area B	2	2016
		Licence Area C	-	-
		Licence Area D	9	2022
Common tern (*Sterna hirundo*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	11	2019
		Licence Area B	3	2023
		Licence Area C	1	2011
		Licence Area D	7	2010
Dunlin (*Calidris alpina*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	23	2012
		Licence Area B	4	2012
		Licence Area C	-	-
		Licence Area D	44	2023
European golden plover (*Pluvialis apricaria*)	EU Birds Directive: Annex I, Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	3	2011
		Licence Area B	23	2012
		Licence Area C	1	2010
		Licence Area D	16	2023
Great northern Diver (*Gavia immer*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	2	2012
		Licence Area B	3	2012
		Licence Area C	1	2011
		Licence Area D	5	2011
Little gull (*Larus minutus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	7	2017
		Licence Area B	5	2019
		Licence Area C	-	-
		Licence Area D	13	2016
Little tern (*Sternula albifrons*)	EU Birds Directive: Annex I species	Licence Area A	-	-
		Licence Area B	-	-

Species	Designation	Licence area	Number of records	Most recent record
	Protected Species: Wildlife Acts	Licence Area C	-	-
		Licence Area D	50	2022
Merlin (*Falco columbarius*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	7	2011
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	7	2023
Peregrine falcon (*Falco peregrinus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	18	2022
		Licence Area B	1	2010
		Licence Area C	7	2016
		Licence Area D	14	2023
Red-throated diver (*Gavia stellata*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	12	2016
		Licence Area B	50	2016
		Licence Area C	-	-
		Licence Area D	40	2023
Roseate tern (*Sterna dougallii*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	7	2012
		Licence Area B	1	2016
		Licence Area C	-	-
		Licence Area D	1	2020
Common Goldeneye (*Bucephala clangula*)	EU Birds Directive: Annex II species Protected Species: Wildlife Acts	Licence Area A	1	2011
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	6	2011
Eurasian curlew (*Numenius arquata*)	EU Birds Directive: Annex II species Protected Species: Wildlife Acts	Licence Area A	27	2023
		Licence Area B	10	2012
		Licence Area C	1	2011
		Licence Area D	86	2023
Red-breasted merganser (*Mergus serrator*)	EU Habitats Directive: Annex II species Protected Species: Wildlife Acts	Licence Area A	6	2016
		Licence Area B	3	2016
		Licence Area C	-	-
		Licence Area D	5	2011
Common scoter (*Melanitta nigra*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	1	2011
		Licence Area B	-	-
		Licence Area C	1	2017
		Licence Area D	12	2023
Eurasian teal (*Anas crecca*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	20	2012
		Licence Area B	1	2012
		Licence Area C	-	-
		Licence Area D	99	2023

Species	Designation	Licence area	Number of records	Most recent record
Eurasian wigeon (*Mareca penelope*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	3	2018
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	79	2023
Greylag goose (*Anser anser*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	11	2017
Northern pintail (*Anas acuta*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	10	2011
Northern shoveler (*Spatula clypeata*)	EU Birds Directive: Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	67	2023
Black-headed gull (*Chroicocephalus ridibundus*)	Protected Species: Wildlife Acts	Licence Area A	50	2023
		Licence Area B	9	2023
		Licence Area C	2	2017
		Licence Area D	83	2023
Black-legged kittiwake (*Rissa tridactyla*)	Protected Species: Wildlife Acts	Licence Area A	49	2023
		Licence Area B	21	2017
		Licence Area C	22	2017
		Licence Area D	44	2016
Black-tailed godwit (*Limosa limosa*)	Protected Species: Wildlife Acts	Licence Area A	33	2019
		Licence Area B	1	2010
		Licence Area C	-	-
		Licence Area D	44	2023
Brent goose (*Branta bernicla*)	Protected Species: Wildlife Acts	Licence Area A	23	2019
		Licence Area B	5	2017
		Licence Area C	1	2011
		Licence Area D	41	2023
Common guillemot (Uria aalge)	Protected Species: Wildlife Acts	Licence Area A	41	2023
		Licence Area B	11	2016
		Licence Area C	19	2017
		Licence Area D	49	2023
Common Gull (*Larus canus*)	Protected Species: Wildlife Act	Licence Area A	16	2023
		Licence Area B	2	2012

Species	Designation	Licence area	Number of records	Most recent record
		Licence Area C	2	2020
		Licence Area D	22	2016
Common redshank (*Tringa totanus*)	Protected Species: Wildlife Acts	Licence Area A	44	2019
		Licence Area B	32	2017
		Licence Area C	-	-
		Licence Area D	54	2023
Common shelduck (*Tadorna tadorna*)	Protected Species: Wildlife Acts	Licence Area A	9	2019
		Licence Area B	11	2016
		Licence Area C	-	-
		Licence Area D	70	2023
Eurasian oystercatcher (*Haematopus ostralegus*)	Protected Species: Wildlife Acts	Licence Area A	36	2023
		Licence Area B	5	2017
		Licence Area C	1	2011
		Licence Area D	72	2023
European shag (*Golamula aristotelis*)	Protected Species: Wildlife Acts	Licence Area A	54	2023
		Licence Area B	26	2020
		Licence Area C	22	2020
		Licence Area D	53	2023
Great black-backed gull (*Larus marinus*)	Protected Species: Wildlife Acts	Licence Area A	39	2023
		Licence Area B	8	2023
		Licence Area C	4	2023
		Licence Area D	59	2023
Great cormorant (Phalacrocorax carbo)	Protected Species: Wildlife Acts	Licence Area A	57	2023
		Licence Area B	27	2020
		Licence Area C	22	2023
		Licence Area D	76	2023
Great crested grebe (*Podiceps cristatus*)	Protected Species: Wildlife Acts	Licence Area A	19	2016
		Licence Area B	5	2017
		Licence Area C	1	2011
		Licence Area D	3	2011
Grey plover (*Pluvialis squatarola*)	Protected Species: Wildlife Acts	Licence Area A	1	2010
		Licence Area B	6	2012
		Licence Area C	-	-
		Licence Area D	8	2023
Herring gull (Larus argentatus)	Protected Species: Wildlife Acts	Licence Area A	71	2023
		Licence Area B	9	2016
		Licence Area C	13	2017
		Licence Area D	87	2023

Species	Designation	Licence area	Number of records	Most recent record
Lesser black-backed gull (*Larus fuscus*)	Protected Species: Wildlife Acts	Licence Area A	14	2020
		Licence Area B	5	2017
		Licence Area C	1	2011
		Licence Area D	15	2012
Manx Shearwater (*Puffinus puffinus*)	Protected Species: Wildlife Acts	Licence Area A	1	1991
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	23	2020
Razorbill (*Alca torda*)	Protected Species: Wildlife Acts	Licence Area A	29	2022
		Licence Area B	7	2016
		Licence Area C	13	2017
		Licence Area D	58	2023
Red knot (*Calidris canutus*)	Protected Species: Wildlife Acts	Licence Area A	16	2012
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	10	2023
Ringed plover (*Charadrius hiaticula*)	Protected Species: Wildlife Acts	Licence Area A	13	2012
		Licence Area B	6	2020
		Licence Area C	-	-
		Licence Area D	71	2023
Northern fulmar (*Fulmarus glacialis*)	N/A	Licence Area A	15	2016
		Licence Area B	31	2012
		Licence Area C	1	2017
		Licence Area D	25	2020
Purple sandpiper (*Calidris maritima*)	N/A	Licence Area A	10	2023
		Licence Area B	-	-
		Licence Area C	1	2011
		Licence Area D	3	2011
Ruddy Turnstone (*Arenaria interpres*)	N/A	Licence Area A	33	2023
		Licence Area B	11	2023
		Licence Area C	-	-
		Licence Area D	25	2023
Sanderling (*Calidris alba*)	N/A	Licence Area A	-	-
		Licence Area B	1	2011
		Licence Area C	-	-
		Licence Area D	6	2010
Bewick's swan (*Cygnus columbianus*)	EU Birds Directive: Annex I species	Licence Area A	-	-
		Licence Area B	-	-

Species	Designation	Licence area	Number of records	Most recent record
	Protected Species: Wildlife Acts	Licence Area C	-	-
		Licence Area D	7	2012
Black tern (*Chlidonias niger*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	1	2009
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	1	2001
Black-throated diver (*Gavia arctica*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	1	2014
Common kingfisher (*Alcedo atthis*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	7	2017
		Licence Area B	76	2017
		Licence Area C	1	2023
		Licence Area D	16	2023
Cory's shearwater (*Calonectris diomedea*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	1	2007
Eurasian Marsh Harrier (*Circus aeruginosus*)	EU Birds Directive: Annex I Species Protected Species: Wildlife Act	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	4	2019
European storm-petrel (*Hydrobates pelagicus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	21	2012
		Licence Area C	-	-
		Licence Area D	1	2009
Hen harrier (*Circus cyaneus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	4	2011
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	12	2021
Little egret (*Egretta garzetta*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	49	2022
		Licence Area B	1	2002
		Licence Area C	-	-
		Licence Area D	101	2023
Mediterranean gull (*Larus melanocephalus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	13	2015
		Licence Area B	7	2012
		Licence Area C	-	-
		Licence Area D	12	2012

Species	Designation	Licence area	Number of records	Most recent record
Red-necked phalarope (*Phalaropus lobatus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	1	1957
		Licence Area B	17	2011
		Licence Area C	-	-
		Licence Area D	1	2006
Ruff (*Philomachus pugnax*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	3	2011
Sandwich tern (*Sterna sandvicensis*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	9	2022
		Licence Area B	65	2012
		Licence Area C	3	2016
		Licence Area D	54	2023
Short-eared owl (*Asio flammeus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	2	2020
		Licence Area B	-	-
		Licence Area C	1	2020
		Licence Area D	7	2011
Whooper swan (*Cygnus cygnus*)	EU Birds Directive: Annex I species Protected Species: Wildlife Acts	Licence Area A	2	2011
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	32	2023
Greater white-fronted goose (*Anser albifrons*)	EU Birds Directive: Annex I, Annex II & Annex III species Protected Species: Wildlife Acts	Licence Area A	-	-
		Licence Area B	-	-
		Licence Area C	-	-
		Licence Area D	3	2011

Appendix D. Wintering Bird Survey Results

October 2022 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Licence Area	Vantage Point	Species	Species Code	Peak Count
CCA1	VP1	**Bar-tailed Godwit**	BA	250
CCA1	VP1	**Brent goose**	BG	6
CCA1	VP1	**Black-headed gull**	BH	420
CCA1	VP1	**Black-tailed godwit**	BW	14
CCA1	VP1	**Common gull**	CM	25
CCA1	VP1	**Curlew**	CU	38
CCA1	VP1	**Dunlin**	DN	200
CCA1	VP1	Little egret	ET	2
CCA1	VP1	**Great black-backed gull**	GB	1
CCA1	VP1	Greenshank	GK	8
CCA1	VP1	**Golden plover**	GP	50
CCA1	VP1	**Grey plover**	GV	1
CCA1	VP1	**Herring gull**	HG	85
CCA1	VP1	**Knot**	KN	60
CCA1	VP1	**Lesser black-backed gull**	LB	1
CCA1	VP1	Mediterranean gull	MU	60
CCA1	VP1	**Oystercatcher**	OC	750
CCA1	VP1	**Redshank**	RK	171
CCA1	VP1	**Teal**	T.	70
CCA1	VP1	**Wigeon**	WN	7
CCA1	VP2	**Black-headed gull**	BH	150
CCA1	VP2	**Black-tailed godwit**	BW	12
CCA1	VP2	**Cormorant**	CA	10
CCA1	VP2	**Great black-backed gull**	GB	2
CCA1	VP2	**Great crested grebe**	GG	5
CCA1	VP2	**Herring gull**	HG	150
CCA1	VP2	**Knot**	KN	3
CCA1	VP2	**Oystercatcher**	OC	200
CCA1	VP2	**Redshank**	RK	18
CCA1	VP2	**Ringed plover**	RP	35
CCA1	VP2	**Turnstone**	TT	6
CCA2-3	VP1	**Black-headed gull**	BH	1
CCA2-3	VP1	**Cormorant**	CA	2
CCA2-3	VP1	**Herring gull**	HG	5
CCA2-3	VP1	Rock Pipit	RC	2
CCA2-3	VP1	**Shag**	SA	10
CCA5	VP1	**Black-headed gull**	BH	12

Licence Area	Vantage Point	Species	Species Code	Peak Count
CCA5	VP1	**Cormorant**	CA	3
CCA5	VP1	**Great black-backed gull**	GB	3
CCA5	VP1	**Herring gull**	HG	10
CCA5	VP1	**Lesser black-backed gull**	LB	1
CCA5	VP1	Mute swan	MS	2
CCA5	VP1	**Shag**	SA	2
CCA6.1	VP1	**Black-headed gull**	BH	8
CCA6.1	VP1	**Cormorant**	CA	2
CCA6.1	VP1	**Great black-backed gull**	GB	1
CCA6.1	VP1	Gannet	GX	1
CCA6.1	VP1	**Herring gull**	HG	3
CCA6.1	VP1	Kestrel	K.	1
CCA6.1	VP1	**Lesser black-backed gull**	LB	3
CCA6.1	VP1	**Oystercatcher**	OC	40
CCA6.1	VP1	**Razorbill**	RA	1
CCA6.1	VP1	**Red-throated diver**	RH	2
CCA6.1	VP1	**Shag**	SA	3
CCA6.1	VP1	**Turnstone**	TT	1
CCA6.1	VP2	**Black-headed gull**	BH	8
CCA6.1	VP2	**Cormorant**	CA	4
CCA6.1	VP2	**Curlew**	CU	72
CCA6.1	VP2	**Common scoter**	CX	1
CCA6.1	VP2	**Great black-backed gull**	GB	1
CCA6.1	VP2	**Herring gull**	HG	8
CCA6.1	VP2	**Merlin**	ML	1
CCA6.1	VP2	**Oystercatcher**	OC	1
CCA6.1	VP2	**Razorbill**	RA	3
CCA6.1	VP2	**Red-throated diver**	RH	2
CCA6.1	VP2	**Ringed plover**	RP	24
CCA6.1	VP2	**Shag**	SA	1
CCA6.1	VP3	**Black-headed gull**	BH	4
CCA6.1	VP3	**Cormorant**	CA	6
CCA6.1	VP3	**Curlew**	CU	8
CCA6.1	VP3	**Common scoter**	CX	1
CCA6.1	VP3	Little egret	ET	3
CCA6.1	VP3	**Great black-backed gull**	GB	1
CCA6.1	VP3	**Golden plover**	GP	3
CCA6.1	VP3	**Guillemot**	GU	1
CCA6.1	VP3	**Grey plover**	GV	1
CCA6.1	VP3	Gannet	GX	2

Licence Area	Vantage Point	Species	Species Code	Peak Count
CCA6.1	VP3	Grey heron	H.	2
CCA6.1	VP3	**Herring gull**	HG	30
CCA6.1	VP3	Lapwing	L.	102
CCA6.1	VP3	**Little gull**	LU	3
CCA6.1	VP3	Mallard	MA	3
CCA6.1	VP3	Mute swan	MS	1
CCA6.1	VP3	**Oystercatcher**	OC	32
CCA6.1	VP3	**Peregrine**	PE	1
CCA6.1	VP3	**Razorbill**	RA	2
CCA6.1	VP3	**Red-throated diver**	RH	3
CCA6.1	VP3	**Redshank**	RK	7
CCA6.1	VP3	**Shag**	SA	4
CCA6.1	VP3	**Shelduck**	SU	1
CCA6.1	VP3	**Shoveler**	SV	7
CCA6.1	VP3	**Teal**	T.	1
CCA6.1	VP3	**Wigeon**	WN	182
CCA6.1	VP3	Whooper swan	WS	8
CCA6.1	VP4	**Black-headed gull**	BH	13
CCA6.1	VP4	**Black-tailed godwit**	BW	2
CCA6.1	VP4	**Cormorant**	CA	7
CCA6.1	VP4	**Common gull**	CM	3
CCA6.1	VP4	**Curlew**	CU	10
CCA6.1	VP4	**Dunlin**	DN	6
CCA6.1	VP4	Little egret	ET	1
CCA6.1	VP4	**Great black-backed gull**	GB	2
CCA6.1	VP4	Greenshank	GK	2
CCA6.1	VP4	**Grey plover**	GV	2
CCA6.1	VP4	**Grey heron**	H.	2
CCA6.1	VP4	**Herring gull**	HG	7
CCA6.1	VP4	Little grebe	LG	4
CCA6.1	VP4	**Little gull**	LU	2
CCA6.1	VP4	Mallard	MA	3
CCA6.1	VP4	Meadow pipit	MP	4
CCA6.1	VP4	Mute swan	MS	2
CCA6.1	VP4	**Oystercatcher**	OC	9
CCA6.1	VP4	**Razorbill**	RA	10
CCA6.1	VP4	**Red-throated diver**	RH	3
CCA6.1	VP4	**Redshank**	RK	1
CCA6.1	VP4	**Ringed plover**	RP	1
CCA6.1	VP4	**Shag**	SA	4

Licence Area	Vantage Point	Species	Species Code	Peak Count
CCA6.1	VP4	**Shoveler**	SV	2
CCA6.1	VP4	**Teal**	T.	10
CCA6.1	VP4	**Turnstone**	TT	3
CCA6.1	VP4	Black Guillemot	TY	1
CCA6.1	VP4	**Wigeon**	WN	18
CCA6.1	VP4	Whooper swan	WS	6
CCA6.1	VP5	**Black-headed gull**	BH	27
CCA6.1	VP5	**Cormorant**	CA	5
CCA6.1	VP5	**Common gull**	CM	3
CCA6.1	VP5	**Dunlin**	DN	4
CCA6.1	VP5	**Great black-backed gull**	GB	1
CCA6.1	VP5	Greenshank	GK	1
CCA6.1	VP5	Goldfinch	GO	100+
CCA6.1	VP5	**Golden plover**	GP	16
CCA6.1	VP5	**Guillemot**	GU	1
CCA6.1	VP5	Gannet	GX	1
CCA6.1	VP5	**Herring gull**	HG	6
CCA6.1	VP5	Long-tailed tit	LT	10
CCA6.1	VP5	**Merlin**	ML	1
CCA6.1	VP5	Mediterranean gull	MU	1
CCA6.1	VP5	**Oystercatcher**	OC	1
CCA6.1	VP5	**Razorbill**	RA	17
CCA6.1	VP5	**Red-throated diver**	RH	4
CCA6.1	VP5	**Shag**	SA	4
CCA6.1	VP5	Starling	SG	50
CCA6.1	VP5	**Teal**	T.	2
CCA6.1	VP5	Sandwich Tern	TE	2
CCA6.2	VP1	**Black-headed gull**	BH	21
CCA6.2	VP1	**Cormorant**	CA	5
CCA6.2	VP1	**Curlew**	CU	6
CCA6.2	VP1	**Dunlin**	DN	15
CCA6.2	VP1	**Great black-backed gull**	GB	3
CCA6.2	VP1	Gannet	GX	2
CCA6.2	VP1	**Herring gull**	HG	16
CCA6.2	VP1	**Shelduck**	SU	5
CCA6.2	VP2	**Black-headed gull**	BH	235
CCA6.2	VP2	**Cormorant**	CA	1
CCA6.2	VP2	**Common gull**	CM	2
CCA6.2	VP2	**Common scoter**	CX	6
CCA6.2	VP2	**Great black-backed gull**	GB	2

Licence Area	Vantage Point	Species	Species Code	Peak Count
CCA6.2	VP2	**Guillemot**	GU	1
CCA6.2	VP2	Gannet	GX	2
CCA6.2	VP2	Grey heron	H.	1
CCA6.2	VP2	**Herring gull**	HG	2
CCA6.2	VP2	**Lesser black-backed gull**	LB	1
CCA6.2	VP2	Linnet	LI	43
CCA6.2	VP2	Mallard	MA	2
CCA6.2	VP2	Mute swan	MS	2
CCA6.2	VP2	Mediterranean gull	MU	1
CCA6.2	VP2	**Oystercatcher**	OC	2
CCA6.2	VP2	**Razorbill**	RA	3
CCA6.2	VP2	**Red-throated diver**	RH	1
CCA6.2	VP2	**Shag**	SA	3
CCA6.2	VP4	**Black-headed gull**	BH	3
CCA6.2	VP4	Gannet	GX	1
CCA6.2	VP4	Meadow Pipit	MP	6
CCA6.2	VP4	Stonechat	SC	2

November 2022 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Brent goose**	BG	71
CCA1	VP1	**Black-headed gull**	BH	175
CCA1	VP1	**Black-tailed godwit**	BW	10
CCA1	VP1	**Cormorant**	CA	1
CCA1	VP1	**Curlew**	CU	50
CCA1	VP1	**Dunlin**	DN	300
CCA1	VP1	Little egret	ET	5
CCA1	VP1	**Great black-backed gull**	GB	6
CCA1	VP1	**Great crested grebe**	GG	36
CCA1	VP1	Greenshank	GK	15
CCA1	VP1	Grey heron	H.	1
CCA1	VP1	**Herring gull**	HG	250
CCA1	VP1	**Knot**	KN	2
CCA1	VP1	Lapwing	L.	12
CCA1	VP1	**Oystercatcher**	OC	600
CCA1	VP1	**Redshank**	RK	207
CCA1	VP1	**Ringed plover**	RP	8
CCA1	VP1	**Shelduck**	SU	3
CCA1	VP1	**Teal**	T.	73

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP2	**Black-headed gull**	BH	60
CCA1	VP2	**Cormorant**	CA	1
CCA1	VP2	**Dunlin**	DN	500
CCA1	VP2	Little egret	ET	1
CCA1	VP2	**Great black-backed gull**	GB	1
CCA1	VP2	**Great crested grebe**	GG	3
CCA1	VP2	**Herring gull**	HG	30
CCA1	VP2	**Ringed plover**	RP	30
CCA1	VP2	Mediterranean gull	MU	40
CCA1	VP2	**Oystercatcher**	OC	1
CCA1	VP2	**Red-throated diver**	RH	1
CCA1	VP2	**Red-breasted merganser**	RM	1
CCA1	VP2	**Shag**	SA	1
CCA1	VP2	**Turnstone**	TT	25
CCA2-3	VP1	**Black-headed gull**	BH	56
CCA2-3	VP1	**Cormorant**	CA	1
CCA2-3	VP1	**Great black-backed gull**	GB	2
CCA2-3	VP1	Grey wagtail	GL	1
CCA2-3	VP1	**Guillemot**	GU	1
CCA2-3	VP1	Grey heron	H.	1
CCA2-3	VP1	**Herring gull**	HG	50
CCA2-3	VP1	**Shag**	SA	3
CCA2-3	VP1	Sparrowhawk	SH	1
CCA5	VP1	**Black-headed gull**	BH	8
CCA5	VP1	Black-throated diver	BV	1
CCA5	VP1	**Cormorant**	CA	110
CCA5	VP1	**Common gull**	CM	13
CCA5	VP1	**Great black-backed gull**	GB	3
CCA5	VP1	**Greylag goose**	GJ	5
CCA5	VP1	Gannet	GX	1
CCA5	VP1	**Herring gull**	HG	90
CCA5	VP1	**Razorbill**	RA	1
CCA5	VP1	**Red-throated diver**	RH	5
CCA5	VP1	**Shag**	SA	8
CCA5	VP1	Whooper swan	WS	2
CCA6.1	VP1	**Brent goose**	BG	2
CCA6.1	VP1	**Black-headed gull**	BH	71
CCA6.1	VP1	Black-throated diver	BV	3
CCA6.1	VP1	**Cormorant**	CA	36
CCA6.1	VP1	**Common gull**	CM	19

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP1	**Common scoter**	CX	25
CCA6.1	VP1	**Dunlin**	DN	4
CCA6.1	VP1	**Great black-backed gull**	GB	3
CCA6.1	VP1	**Herring gull**	HG	46
CCA6.1	VP1	Kestrel	K.	1
CCA6.1	VP1	Mediterranean gull	MU	1
CCA6.1	VP1	**Oystercatcher**	OC	103
CCA6.1	VP1	**Razorbill**	RA	7
CCA6.1	VP1	**Red-throated diver**	RH	167
CCA6.1	VP1	**Ringed plover**	RP	2
CCA6.1	VP1	**Shag**	SA	4
CCA6.1	VP1	Black Guillemot	TY	1
CCA6.1	VP1	White-fronted goose	WG	1
CCA6.1	VP2	**Black-headed gull**	BH	30
CCA6.1	VP2	Black-throated diver	BV	1
CCA6.1	VP2	**Cormorant**	CA	3
CCA6.1	VP2	**Dunlin**	DN	3
CCA6.1	VP2	**Great black-backed gull**	GB	2
CCA6.1	VP2	Grey heron	H.	3
CCA6.1	VP2	**Herring gull**	HG	6
CCA6.1	VP2	Lapwing	L.	100
CCA6.1	VP2	Mallard	MA	6
CCA6.1	VP2	**Oystercatcher**	OC	60
CCA6.1	VP2	**Peregrine**	PE	1
CCA6.1	VP2	**Red-throated diver**	RH	29
CCA6.1	VP2	**Shag**	SA	4
CCA6.1	VP2	Starling	SG	300
CCA6.1	VP2	**Shelduck**	SU	1
CCA6.1	VP3	**Black-headed gull**	BH	60
CCA6.1	VP3	**Cormorant**	CA	6
CCA6.1	VP3	**Curlew**	CU	100
CCA6.1	VP3	**Dunlin**	DN	3
CCA6.1	VP3	Little egret	ET	3
CCA6.1	VP3	Gadwall	GA	1
CCA6.1	VP3	**Great black-backed gull**	GB	2
CCA6.1	VP3	**Greylag goose**	GJ	27
CCA6.1	VP3	Greenshank	GK	2
CCA6.1	VP3	**Grey plover**	GV	2
CCA6.1	VP3	Gannet	GX	3
CCA6.1	VP3	**Herring gull**	HG	2

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP3	Lapwing	L.	108
CCA6.1	VP3	Little grebe	LG	1
CCA6.1	VP3	Mute swan	MS	2
CCA6.1	VP3	Pink-footed goose	PG	2
CCA6.1	VP3	**Red-throated diver**	RH	13
CCA6.1	VP3	**Redshank**	RK	24
CCA6.1	VP3	**Shag**	SA	1
CCA6.1	VP3	Starling	SG	20
CCA6.1	VP3	**Shelduck**	SU	1
CCA6.1	VP3	**Shoveler**	SV	8
CCA6.1	VP3	**Teal**	T.	10
CCA6.1	VP3	**Wigeon**	WN	298
CCA6.1	VP3	Whooper swan	WS	37
CCA6.1	VP4	**Brent goose**	BG	7
CCA6.1	VP4	**Black-headed gull**	BH	121
CCA6.1	VP4	**Cormorant**	CA	5
CCA6.1	VP4	**Common gull**	CM	1
CCA6.1	VP4	**Curlew**	CU	2
CCA6.1	VP4	**Dunlin**	DN	1
CCA6.1	VP4	Little egret	ET	2
CCA6.1	VP4	**Great black-backed gull**	GB	4
CCA6.1	VP4	Greenshank	GK	2
CCA6.1	VP4	Grey heron	H.	3
CCA6.1	VP4	**Herring gull**	HG	10
CCA6.1	VP4	Little grebe	LG	1
CCA6.1	VP4	Moorhen	MH	1
CCA6.1	VP4	Mediterranean gull	MU	2
CCA6.1	VP4	**Oystercatcher**	OC	2
CCA6.1	VP4	**Razorbill**	RA	6
CCA6.1	VP4	**Red-throated diver**	RH	22
CCA6.1	VP4	**Ringed plover**	RP	6
CCA6.1	VP4	**Shag**	SA	6
CCA6.1	VP4	**Shelduck**	SU	2
CCA6.1	VP4	**Teal**	T.	6
CCA6.1	VP4	**Wigeon**	WN	178
CCA6.1	VP5	**Black-headed gull**	BH	1
CCA6.1	VP5	**Cormorant**	CA	3
CCA6.1	VP5	Common gull	CM	4
CCA6.1	VP5	**Curlew**	CU	2
CCA6.1	VP5	**Common scoter**	CX	3

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP5	Little egret	ET	1
CCA6.1	VP5	**Great black-backed gull**	GB	1
CCA6.1	VP5	**Guillemot**	GU	1
CCA6.1	VP5	Grey heron	H.	1
CCA6.1	VP5	**Herring gull**	HG	30
CCA6.1	VP5	Kestrel	K.	1
CCA6.1	VP5	Red kite	KT	1
CCA6.1	VP5	Linnet	LI	7
CCA6.1	VP5	**Little gull**	LU	1
CCA6.1	VP5	Mallard	MA	2
CCA6.1	VP5	**Oystercatcher**	OC	3
CCA6.1	VP5	**Razorbill**	RA	7
CCA6.1	VP5	**Red-throated diver**	RH	16
CCA6.1	VP5	**Redshank**	RK	3
CCA6.1	VP5	**Shag**	SA	11
CCA6.1	VP5	**Shelduck**	SV	10
CCA6.1	VP5	**Teal**	T.	235
CCA6.1	VP5	**Wigeon**	WN	137
CCA6.2	VP1	**Black-headed gull**	BH	20
CCA6.2	VP1	**Black-tailed godwit**	BW	4
CCA6.2	VP1	**Cormorant**	CA	1
CCA6.2	VP1	**Curlew**	CU	15
CCA6.2	VP1	**Dunlin**	DN	1
CCA6.2	VP1	**Great black-backed gull**	GB	2
CCA6.2	VP1	**Guillemot**	GU	1
CCA6.2	VP1	Gannet	GX	1
CCA6.2	VP1	**Herring gull**	HG	3
CCA6.2	VP1	Red kite	KT	1
CCA6.2	VP1	Lapwing	L.	5
CCA6.2	VP1	**Oystercatcher**	OC	3
CCA6.2	VP1	**Razorbill**	RA	1
CCA6.2	VP1	**Red-throated diver**	RH	40
CCA6.2	VP1	**Redshank**	RK	1
CCA6.2	VP1	**Shag**	SA	3
CCA6.2	VP1	**Shelduck**	SU	3
CCA6.2	VP1	**Shoveler**	SV	25
CCA6.2	VP1	**Teal**	T.	30
CCA6.2	VP1	**Wigeon**	WN	90
CCA6.2	VP2	**Black-headed gull**	BH	20
CCA6.2	VP2	**Black-tailed godwit**	BW	40

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP2	**Cormorant**	CA	1
CCA6.2	VP2	Little egret	ET	2
CCA6.2	VP2	**Great black-backed gull**	GB	4
CCA6.2	VP2	**Great crested grebe**	GG	1
CCA6.2	VP2	**Herring gull**	HG	5
CCA6.2	VP2	Linnet	LI	20
CCA6.2	VP2	Mallard	MA	3
CCA6.2	VP2	**Great northern diver**	ND	1
CCA6.2	VP2	**Oystercatcher**	OC	3
CCA6.2	VP2	**Red-throated diver**	RH	3
CCA6.2	VP2	**Shag**	SA	2
CCA6.2	VP2	**Turnstone**	TT	4
CCA6.2	VP3	**Black-headed gull**	BH	18
CCA6.2	VP3	**Curlew**	CU	100
CCA6.2	VP3	**Great black-backed gull**	GB	2
CCA6.2	VP3	**Greylag goose**	GJ	41
CCA6.2	VP3	Greenshank	GK	1
CCA6.2	VP3	Gannet	GX	1
CCA6.2	VP3	Lapwing	L.	60
CCA6.2	VP3	Little grebe	LG	2
CCA6.2	VP3	**Red-throated diver**	RH	6
CCA6.2	VP3	**Redshank**	RK	2
CCA6.2	VP3	**Shag**	SA	1
CCA6.2	VP3	Starling	SG	40
CCA6.2	VP3	**Shelduck**	SV	3
CCA6.2	VP3	**Teal**	T.	8
CCA6.2	VP3	**Wigeon**	WN	298
CCA6.2	VP3	Whooper swan	WS	23
CCA6.2	VP4	**Black-headed gull**	BH	200
CCA6.2	VP4	**Black-tailed godwit**	BW	20
CCA6.2	VP4	**Cormorant**	CA	1
CCA6.2	VP4	**Common gull**	CM	20
CCA6.2	VP4	**Curlew**	CU	10
CCA6.2	VP4	**Dunlin**	DN	8
CCA6.2	VP4	Little egret	ET	3
CCA6.2	VP4	**Great black-backed gull**	GB	5
CCA6.2	VP4	Greenshank	GK	2
CCA6.2	VP4	**Golden plover**	GP	60
CCA6.2	VP4	**Herring gull**	HG	30
CCA6.2	VP4	Kingfisher	KF	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP4	Red kite	KT	2
CCA6.2	VP4	Little grebe	LG	30
CCA6.2	VP4	Mute swan	MS	27
CCA6.2	VP4	Mediterranean gull	MU	2
CCA6.2	VP4	**Great northern diver**	ND	1
CCA6.2	VP4	**Oystercatcher**	OC	1
CCA6.2	VP4	**Redshank**	RK	50
CCA6.2	VP4	Sparrowhawk	SH	1
CCA6.2	VP4	Sand Martin	SM	3
CCA6.2	VP4	**Shoveler**	SV	8
CCA6.2	VP4	Water rail	WA	1
CCA6.2	VP4	**Wigeon**	WN	26

December 2022 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Bar-tailed godwit**	BA	260
CCA1	VP1	**Brent goose**	BG	274
CCA1	VP1	**Black-headed gull**	BH	600
CCA1	VP1	**Black-tailed godwit**	BW	87
CCA1	VP1	**Common Gull**	CM	50
CCA1	VP1	**Curlew**	CU	99
CCA1	VP1	**Dunlin**	DN	650
CCA1	VP1	Little egret	ET	3
CCA1	VP1	**Great black-backed gull**	GB	3
CCA1	VP1	**Great crested grebe**	GG	9
CCA1	VP1	Greenshank	GK	9
CCA1	VP1	**Golden plover**	GP	1
CCA1	VP1	Grey heron	H.	5
CCA1	VP1	**Herring gull**	HG	100
CCA1	VP1	**Knot**	KN	150
CCA1	VP1	**Lesser black-backed gull**	LB	1
CCA1	VP1	Mallard	MA	20
CCA1	VP1	Moorhen	MH	3
CCA1	VP1	**Oystercatcher**	OC	1400
CCA1	VP1	**Redshank**	RK	335
CCA1	VP1	**Ringed plover**	RP	120
CCA1	VP1	**Sanderling**	SS	13
CCA1	VP1	**Shelduck**	SU	1
CCA1	VP1	**Teal**	T.	100
CCA1	VP1	**Turnstone**	TT	8

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP2	Arctic skua	AC	4
CCA1	VP2	**Black-headed gull**	BH	30
CCA1	VP2	**Dunlin**	DN	2
CCA1	VP2	Little egret	ET	1
CCA1	VP2	**Great black-backed gull**	GB	1
CCA1	VP2	**Herring gull**	HG	10
CCA1	VP2	Mediterranean gull	MU	2
CCA1	VP2	**Oystercatcher**	OC	2
CCA1	VP2	**Redshank**	RK	1
CCA1	VP2	**Ringed plover**	RP	1
CCA1	VP2	**Turnstone**	TT	10
CCA2-3	VP1	**Black-headed gull**	BH	2
CCA2-3	VP1	**Common Gull**	CM	1
CCA2-3	VP1	**Great black-backed gull**	GB	2
CCA2-3	VP1	**Herring gull**	HG	20
CCA2-3	VP1	**Shag**	SA	12
CCA5	VP1	**Brent goose**	BG	20
CCA5	VP1	**Black-headed gull**	BH	23
CCA5	VP1	**Cormorant**	CA	24
CCA5	VP1	**Common Gull**	CM	4
CCA5	VP1	**Great black-backed gull**	GB	5
CCA5	VP1	**Herring gull**	HG	11
CCA5	VP1	**Oystercatcher**	OC	3
CCA5	VP1	**Razorbill**	RA	1
CCA5	VP1	**Red-throated diver**	RH	1
CCA5	VP1	**Shag**	SA	1
CCA5	VP1	Whooper swan	WS	1
CCA6.1	VP1	**Brent goose**	BG	19
CCA6.1	VP1	**Black-headed gull**	BH	52
CCA6.1	VP1	Black-throated diver	BV	1
CCA6.1	VP1	**Cormorant**	CA	2
CCA6.1	VP1	**Common Gull**	CM	1
CCA6.1	VP1	**Great black-backed gull**	GB	3
CCA6.1	VP1	Gannet	GX	5
CCA6.1	VP1	**Herring gull**	HG	19
CCA6.1	VP1	**Oystercatcher**	OC	24
CCA6.1	VP1	**Razorbill**	RA	1
CCA6.1	VP1	**Red-throated diver**	RH	5
CCA6.1	VP1	**Redshank**	RK	3
CCA6.1	VP1	**Shag**	SA	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP2	**Black-headed gull**	BH	28
CCA6.1	VP2	**Curlew**	CU	5
CCA6.1	VP2	Little egret	ET	1
CCA6.1	VP2	**Great black-backed gull**	GB	2
CCA6.1	VP2	**Guillemot**	GU	1
CCA6.1	VP2	Gannet	GX	2
CCA6.1	VP2	Grey heron	H.	3
CCA6.1	VP2	**Herring gull**	HG	5
CCA6.1	VP2	**Oystercatcher**	OC	60
CCA6.1	VP2	**Red-throated diver**	RH	24
CCA6.1	VP2	**Redshank**	RK	1
CCA6.1	VP2	**Shag**	SA	11
CCA6.1	VP2	Stonechat	SC	2
CCA6.1	VP2	**Teal**	T.	30
CCA6.1	VP2	**Wigeon**	WN	300
CCA6.1	VP3	**Brent goose**	BG	32
CCA6.1	VP3	**Black-headed gull**	BH	5
CCA6.1	VP3	**Cormorant**	CA	6
CCA6.1	VP3	**Curlew**	CU	40
CCA6.1	VP3	**Dunlin**	DN	8
CCA6.1	VP3	Little egret	ET	1
CCA6.1	VP3	**Great black-backed gull**	GB	3
CCA6.1	VP3	**Greylag goose**	GJ	75
CCA6.1	VP3	Greenshank	GK	2
CCA6.1	VP3	**Guillemot**	GU	4
CCA6.1	VP3	Grey heron	H.	1
CCA6.1	VP3	**Herring gull**	HG	3
CCA6.1	VP3	Lapwing	L.	200
CCA6.1	VP3	Little grebe	LG	3
CCA6.1	VP3	Mallard	MA	8
CCA6.1	VP3	**Great northern diver**	ND	1
CCA6.1	VP3	**Oystercatcher**	OC	1
CCA6.1	VP3	Pink-footed goose	PG	2
CCA6.1	VP3	**Red-throated diver**	RH	18
CCA6.1	VP3	**Redshank**	RK	5
CCA6.1	VP3	**Shag**	SA	33
CCA6.1	VP3	**Shelduck**	SU	4
CCA6.1	VP3	**Shoveler**	SV	14
CCA6.1	VP3	**Teal**	T.	21
CCA6.1	VP3	**Wigeon**	WN	450

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP3	Whooper swan	WS	50
CCA6.1	VP4	**Brent goose**	BG	5
CCA6.1	VP4	**Black-headed gull**	BH	99
CCA6.1	VP4	**Black-tailed godwit**	BW	55
CCA6.1	VP4	**Cormorant**	CA	31
CCA6.1	VP4	**Common Gull**	CM	1
CCA6.1	VP4	**Curlew**	CU	50
CCA6.1	VP4	**Dunlin**	DN	60
CCA6.1	VP4	Little egret	ET	2
CCA6.1	VP4	**Great black-backed gull**	GB	3
CCA6.1	VP4	**Greylag goose**	GJ	50
CCA6.1	VP4	Gannet	GX	1
CCA6.1	VP4	Grey heron	H.	1
CCA6.1	VP4	**Herring gull**	HG	9
CCA6.1	VP4	Lapwing	L.	7
CCA6.1	VP4	Little grebe	LG	2
CCA6.1	VP4	Mallard	MA	5
CCA6.1	VP4	Moorhen	MH	1
CCA6.1	VP4	Mute swan	MS	2
CCA6.1	VP4	**Oystercatcher**	OC	125
CCA6.1	VP4	**Red-throated diver**	RH	103
CCA6.1	VP4	**Redshank**	RK	2
CCA6.1	VP4	**Ringed plover**	RP	1
CCA6.1	VP4	**Shag**	SA	1
CCA6.1	VP4	**Teal**	T.	4
CCA6.1	VP4	**Wigeon**	WN	24
CCA6.1	VP4	Whooper swan	WS	2
CCA6.1	VP5	**Black-headed gull**	BH	2
CCA6.1	VP5	Buzzard	BZ	1
CCA6.1	VP5	**Cormorant**	CA	2
CCA6.1	VP5	**Common Gull**	CM	2
CCA6.1	VP5	**Curlew**	CU	1
CCA6.1	VP5	Little egret	ET	2
CCA6.1	VP5	**Great black-backed gull**	GB	2
CCA6.1	VP5	Grey heron	H.	1
CCA6.1	VP5	**Herring gull**	HG	1
CCA6.1	VP5	Kestrel	K.	1
CCA6.1	VP5	Red kite	KT	1
CCA6.1	VP5	Lapwing	L.	200
CCA6.1	VP5	Mallard	MA	3

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP5	Mute swan	MS	2
CCA6.1	VP5	**Oystercatcher**	OC	1
CCA6.1	VP5	**Razorbill**	RA	1
CCA6.1	VP5	**Red-throated diver**	RH	24
CCA6.1	VP5	**Redshank**	RK	3
CCA6.1	VP5	**Shag**	SA	2
CCA6.1	VP5	**Wigeon**	WN	150
CCA6.2	VP1	**Brent goose**	BG	4
CCA6.2	VP1	**Black-headed gull**	BH	1
CCA6.2	VP1	**Black-tailed godwit**	BW	1
CCA6.2	VP1	**Common Gull**	CM	1
CCA6.2	VP1	**Great black-backed gull**	GB	3
CCA6.2	VP1	**Great crested grebe**	GG	1
CCA6.2	VP1	**Guillemot**	GU	2
CCA6.2	VP1	**Herring gull**	HG	4
CCA6.2	VP1	Mallard	MA	9
CCA6.2	VP1	Meadow pipit	MP	1
CCA6.2	VP1	**Oystercatcher**	OC	1
CCA6.2	VP1	**Razorbill**	RA	1
CCA6.2	VP1	**Red-throated diver**	RH	28
CCA6.2	VP1	**Redshank**	RK	1
CCA6.2	VP1	**Shag**	SA	3
CCA6.2	VP1	**Shoveler**	SV	25
CCA6.2	VP1	**Teal**	T.	25
CCA6.2	VP1	**Turnstone**	TT	1
CCA6.2	VP1	**Wigeon**	WN	4
CCA6.2	VP2	**Black-headed gull**	BH	1
CCA6.2	VP2	**Common Gull**	CM	3
CCA6.2	VP2	**Curlew**	CU	1
CCA6.2	VP2	**Great black-backed gull**	GB	3
CCA6.2	VP2	**Guillemot**	GU	1
CCA6.2	VP2	**Herring gull**	HG	18
CCA6.2	VP2	Red kite	KT	1
CCA6.2	VP2	Mallard	MA	3
CCA6.2	VP2	**Great northern diver**	ND	2
CCA6.2	VP2	**Oystercatcher**	OC	1
CCA6.2	VP2	Raven	RN	2
CCA6.2	VP2	**Shag**	SA	3
CCA6.2	VP2	**Teal**	T.	1
CCA6.2	VP2	**Turnstone**	TT	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP4	**Black-headed gull**	BH	70
CCA6.2	VP4	**Black-tailed godwit**	BW	40
CCA6.2	VP4	**Cormorant**	CA	1
CCA6.2	VP4	**Common Gull**	CM	9
CCA6.2	VP4	**Curlew**	CU	12
CCA6.2	VP4	**Dunlin**	DN	15
CCA6.2	VP4	Little egret	ET	2
CCA6.2	VP4	**Great black-backed gull**	GB	17
CCA6.2	VP4	Greenshank	GK	2
CCA6.2	VP4	**Grey plover**	GV	1
CCA6.2	VP4	Grey heron	H.	1
CCA6.2	VP4	**Herring gull**	HG	35
CCA6.2	VP4	Lapwing	L.	29
CCA6.2	VP4	Little grebe	LG	12
CCA6.2	VP4	Mallard	MA	37
CCA6.2	VP4	Mute swan	MS	1
CCA6.2	VP4	**Redshank**	RK	8
CCA6.2	VP4	**Ringed plover**	RP	1
CCA6.2	VP4	**Teal**	T.	29
CCA6.2	VP4	**Turnstone**	TT	1
CCA6.2	VP4	**Wigeon**	WN	30

January 2023 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Bar-tailed godwit**	BA	2000
CCA1	VP1	**Brent goose**	BG	200
CCA1	VP1	**Black-headed gull**	BH	1000
CCA1	VP1	**Black-tailed godwit**	BW	200
CCA1	VP1	**Common gull**	CM	100
CCA1	VP1	**Curlew**	CU	33
CCA1	VP1	**Dunlin**	DN	1500
CCA1	VP1	Little egret	ET	2
CCA1	VP1	**Great black-backed gull**	GB	5
CCA1	VP1	Greenshank	GK	9
CCA1	VP1	**Golden plover**	GP	4
CCA1	VP1	**Grey plover**	GV	8
CCA1	VP1	**Herring gull**	HG	100
CCA1	VP1	**Knot**	KN	4000
CCA1	VP1	Mallard	MA	6
CCA1	VP1	**Oystercatcher**	OC	800

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Redshank**	RK	250
CCA1	VP1	**Ringed plover**	RP	20
CCA1	VP1	Snipe	SN	1
CCA1	VP1	**Sanderling**	SS	30
CCA1	VP1	**Shelduck**	SU	3
CCA1	VP1	**Teal**	T.	115
CCA1	VP2	**Brent goose**	BG	3
CCA1	VP2	**Black-headed gull**	BH	25
CCA1	VP2	**Cormorant**	CA	1
CCA1	VP2	**Common gull**	CM	5
CCA1	VP2	**Common scoter**	CX	22
CCA1	VP2	**Dunlin**	DN	60
CCA1	VP2	**Great black-backed gull**	GB	3
CCA1	VP2	**Great crested grebe**	GG	2
CCA1	VP2	**Herring gull**	HG	15
CCA1	VP2	**Lesser black-backed gull**	LB	1
CCA1	VP2	Mallard	MA	2
CCA1	VP2	Mediterranean gull	MU	4
CCA1	VP2	**Oystercatcher**	OC	240
CCA1	VP2	**Ringed plover**	RP	2
CCA1	VP2	**Turnstone**	TT	12
CCA2-3	VP1	**Black-headed gull**	BH	26
CCA2-3	VP1	**Cormorant**	CA	1
CCA2-3	VP1	**Great black-backed gull**	GB	3
CCA2-3	VP1	**Herring gull**	HG	7
CCA2-3	VP1	Mediterranean gull	MU	1
CCA2-3	VP1	**Shag**	SA	6
CCA5	VP1	**Brent goose**	BG	9
CCA5	VP1	**Black-headed gull**	BH	236
CCA5	VP1	**Cormorant**	CA	86
CCA5	VP1	**Great black-backed gull**	GB	1
CCA5	VP1	**Herring gull**	HG	29
CCA5	VP1	**Red-throated diver**	RH	1
CCA5	VP1	**Ringed plover**	RP	15
CCA5	VP1	**Shag**	SA	1
CCA6.1	VP1	**Brent goose**	BG	45
CCA6.1	VP1	**Black-headed gull**	BH	83
CCA6.1	VP1	**Cormorant**	CA	3
CCA6.1	VP1	**Great black-backed gull**	GB	1
CCA6.1	VP1	**Guillemot**	GU	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP1	**Herring gull**	HG	14
CCA6.1	VP1	Mute swan	MS	2
CCA6.1	VP1	**Oystercatcher**	OC	68
CCA6.1	VP1	**Razorbill**	RA	1
CCA6.1	VP1	**Red-throated diver**	RH	2
CCA6.1	VP1	**Redshank**	RK	4
CCA6.1	VP1	**Ringed plover**	RP	12
CCA6.1	VP1	**Shag**	SA	4
CCA6.1	VP1	**Turnstone**	TT	6
CCA6.1	VP1	**Wigeon**	WN	4
CCA6.1	VP2	**Black-headed gull**	BH	3
CCA6.1	VP2	**Cormorant**	CA	2
CCA6.1	VP2	**Curlew**	CU	140
CCA6.1	VP2	**Great black-backed gull**	GB	1
CCA6.1	VP2	Gannet	GX	3
CCA6.1	VP2	Grey heron	H.	2
CCA6.1	VP2	**Herring gull**	HG	6
CCA6.1	VP2	**Kittiwake**	KI	1
CCA6.1	VP2	Mallard	MA	6
CCA6.1	VP2	Mute swan	MS	2
CCA6.1	VP2	**Great northern diver**	ND	1
CCA6.1	VP2	**Oystercatcher**	OC	1
CCA6.1	VP2	**Razorbill**	RA	1
CCA6.1	VP2	**Red-throated diver**	RH	205
CCA6.1	VP2	**Shag**	SA	80
CCA6.1	VP2	**Teal**	T.	35
CCA6.1	VP2	**Wigeon**	WN	9
CCA6.1	VP3	**Brent goose**	BG	50
CCA6.1	VP3	**Black-headed gull**	BH	9
CCA6.1	VP3	**Cormorant**	CA	8
CCA6.1	VP3	**Curlew**	CU	70
CCA6.1	VP3	Little egret	ET	1
CCA6.1	VP3	**Great black-backed gull**	GB	5
CCA6.1	VP3	**Greylag goose**	GJ	17
CCA6.1	VP3	Gannet	GX	2
CCA6.1	VP3	**Herring gull**	HG	6
CCA6.1	VP3	**Kittiwake**	KI	1
CCA6.1	VP3	Red kite	KT	1
CCA6.1	VP3	Lapwing	L.	500
CCA6.1	VP3	Little grebe	LG	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP3	Mallard	MA	3
CCA6.1	VP3	Mute swan	MS	2
CCA6.1	VP3	**Great northern diver**	ND	1
CCA6.1	VP3	**Oystercatcher**	OC	2
CCA6.1	VP3	**Razorbill**	RA	1
CCA6.1	VP3	**Red-throated diver**	RH	5
CCA6.1	VP3	**Ringed plover**	RP	1
CCA6.1	VP3	**Shag**	SA	5
CCA6.1	VP3	Sparrowhawk	SH	1
CCA6.1	VP3	**Shoveler**	SV	4
CCA6.1	VP3	**Teal**	T.	22
CCA6.1	VP3	**Wigeon**	WN	1000
CCA6.1	VP3	Whooper swan	WS	9
CCA6.1	VP4	**Brent goose**	BG	46
CCA6.1	VP4	**Black-headed gull**	BH	58
CCA6.1	VP4	**Black-tailed godwit**	BW	10
CCA6.1	VP4	**Cormorant**	CA	4
CCA6.1	VP4	**Common gull**	CM	15
CCA6.1	VP4	**Curlew**	CU	62
CCA6.1	VP4	**Dunlin**	DN	9
CCA6.1	VP4	Little egret	ET	1
CCA6.1	VP4	**Great black-backed gull**	GB	1
CCA6.1	VP4	**Greylag goose**	GJ	110
CCA6.1	VP4	Greenshank	GK	2
CCA6.1	VP4	Grey heron	H.	2
CCA6.1	VP4	**Herring gull**	HG	14
CCA6.1	VP4	Little grebe	LG	2
CCA6.1	VP4	Mallard	MA	4
CCA6.1	VP4	**Oystercatcher**	OC	6
CCA6.1	VP4	**Razorbill**	RA	2
CCA6.1	VP4	**Red-throated diver**	RH	2
CCA6.1	VP4	**Redshank**	RK	5
CCA6.1	VP4	**Ringed plover**	RP	9
CCA6.1	VP4	**Shag**	SA	11
CCA6.1	VP4	**Shelduck**	SU	3
CCA6.1	VP4	**Shoveler**	SV	4
CCA6.1	VP4	**Teal**	T.	12
CCA6.1	VP4	**Wigeon**	WN	230
CCA6.1	VP4	Whooper swan	WS	21
CCA6.1	VP5	**Cormorant**	CA	7

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP5	**Curlew**	CU	2
CCA6.1	VP5	Little egret	ET	1
CCA6.1	VP5	**Great black-backed gull**	GB	3
CCA6.1	VP5	**Greylag goose**	GJ	150
CCA6.1	VP5	**Guillemot**	GU	1
CCA6.1	VP5	Grey heron	H.	1
CCA6.1	VP5	**Herring gull**	HG	23
CCA6.1	VP5	Kestrel	K.	1
CCA6.1	VP5	Mallard	MA	3
CCA6.1	VP5	**Oystercatcher**	OC	8
CCA6.1	VP5	**Razorbill**	RA	1
CCA6.1	VP5	**Red-throated diver**	RH	3
CCA6.1	VP5	**Redshank**	RK	2
CCA6.1	VP5	**Shag**	SA	24
CCA6.1	VP5	Snipe	SN	3
CCA6.1	VP5	**Shoveler**	SV	6
CCA6.1	VP5	**Teal**	T.	4
CCA6.1	VP5	**Wigeon**	WN	190
CCA6.2	VP1	**Black-headed gull**	BH	21
CCA6.2	VP1	**Cormorant**	CA	7
CCA6.2	VP1	**Curlew**	CU	8
CCA6.2	VP1	**Great black-backed gull**	GB	7
CCA6.2	VP1	Gannet	GX	1
CCA6.2	VP1	**Herring gull**	HG	10
CCA6.2	VP1	Red kite	KT	1
CCA6.2	VP1	Mallard	MA	5
CCA6.2	VP1	**Merlin**	ML	1
CCA6.2	VP1	**Oystercatcher**	OC	1
CCA6.2	VP1	**Red-throated diver**	RH	2
CCA6.2	VP1	**Shag**	SA	1
CCA6.2	VP1	**Sanderling**	SS	1
CCA6.2	VP1	**Shoveler**	SV	52
CCA6.2	VP1	**Teal**	T.	17
CCA6.2	VP1	**Wigeon**	WN	440
CCA6.2	VP1	Whooper swan	WS	2
CCA6.2	VP2	**Black-headed gull**	BH	3
CCA6.2	VP2	Buzzard	BZ	2
CCA6.2	VP2	**Cormorant**	CA	3
CCA6.2	VP2	Little egret	ET	1
CCA6.2	VP2	**Great black-backed gull**	GB	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP2	Gannet	GX	1
CCA6.2	VP2	**Herring gull**	HG	9
CCA6.2	VP2	Red kite	KT	4
CCA6.2	VP2	Mallard	MA	8
CCA6.2	VP2	**Peregrine**	PE	1
CCA6.2	VP2	**Razorbill**	RA	1
CCA6.2	VP2	**Red-throated diver**	RH	3
CCA6.2	VP2	**Shag**	SA	1
CCA6.2	VP2	Sparrowhawk	SH	1
CCA6.2	VP2	**Teal**	T.	33
CCA6.2	VP2	**Turnstone**	TT	3
CCA6.2	VP2	Water rail	WA	1
CCA6.2	VP2	**Wigeon**	WN	250
CCA6.2	VP4	**Black-headed gull**	BH	29
CCA6.2	VP4	**Cormorant**	CA	1
CCA6.2	VP4	**Curlew**	CU	40
CCA6.2	VP4	Little egret	ET	1
CCA6.2	VP4	**Great black-backed gull**	GB	8
CCA6.2	VP4	Greenshank	GK	2
CCA6.2	VP4	Grey heron	H.	1
CCA6.2	VP4	**Herring gull**	HG	8
CCA6.2	VP4	Lapwing	L.	29
CCA6.2	VP4	Little grebe	LG	4
CCA6.2	VP4	Mallard	MA	3
CCA6.2	VP4	Mute swan	MS	2
CCA6.2	VP4	**Redshank**	RK	5
CCA6.2	VP4	**Teal**	T.	2
CCA6.2	VP4	**Wigeon**	WN	19

February 2023 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Bar-tailed godwit**	BA	800
CCA1	VP1	**Brent goose**	BG	400
CCA1	VP1	**Black-headed gull**	BH	300
CCA1	VP1	**Black-tailed godwit**	BW	350
CCA1	VP1	**Common gull**	CM	30
CCA1	VP1	**Curlew**	CU	15
CCA1	VP1	**Dunlin**	DN	10000
CCA1	VP1	Little egret	ET	3
CCA1	VP1	**Great black-backed gull**	GB	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	Greenshank	GK	14
CCA1	VP1	Grey heron	H.	4
CCA1	VP1	**Herring gull**	HG	5
CCA1	VP1	**Knot**	KN	15000
CCA1	VP1	Moorhen	MH	6
CCA1	VP1	**Oystercatcher**	OC	1500
CCA1	VP1	**Redshank**	RK	110
CCA1	VP1	**Ringed plover**	RP	100
CCA1	VP1	**Sanderling**	SS	30
CCA1	VP1	**Shelduck**	SU	5
CCA1	VP1	**Teal**	T.	60
CCA1	VP2	**Brent goose**	BG	6
CCA1	VP2	**Black-headed gull**	BH	5
CCA1	VP2	**Cormorant**	CA	6
CCA1	VP2	**Common gull**	CM	1
CCA1	VP2	**Curlew**	CU	2
CCA1	VP2	**Great black-backed gull**	GB	1
CCA1	VP2	**Great crested grebe**	GG	1
CCA1	VP2	**Herring gull**	HG	27
CCA1	VP2	Mallard	MA	4
CCA1	VP2	Mute swan	MS	1
CCA1	VP2	**Oystercatcher**	OC	4
CCA1	VP2	**Redshank**	RK	1
CCA1	VP2	**Red-breasted merganser**	RM	18
CCA1	VP2	**Turnstone**	TT	19
CCA2-3	VP1	**Black-headed gull**	BH	1
CCA2-3	VP1	**Cormorant**	CA	6
CCA2-3	VP1	**Great black-backed gull**	GB	6
CCA2-3	VP1	**Guillemot**	GU	100
CCA2-3	VP1	Gannet	GX	1
CCA2-3	VP1	**Herring gull**	HG	60
CCA2-3	VP1	**Kittiwake**	KI	1
CCA2-3	VP1	**Lesser black-backed gull**	LB	1
CCA2-3	VP1	Mediterranean gull	MU	3
CCA2-3	VP1	**Great northern diver**	ND	1
CCA2-3	VP1	**Oystercatcher**	OC	18
CCA2-3	VP1	**Red-throated diver**	RH	1
CCA2-3	VP1	**Shag**	SA	15
CCA2-3	VP1	Black guillemot	TY	3
CCA5	VP1	**Black-headed gull**	BH	53

Survey area	Vantage Point	Species	Species code	Peak Count
CCA5	VP1	**Cormorant**	CA	1
CCA5	VP1	**Common gull**	CM	42
CCA5	VP1	**Fulmar**	F.	2
CCA5	VP1	**Great black-backed gull**	GB	1
CCA5	VP1	**Guillemot**	GU	3
CCA5	VP1	Gannet	GX	7
CCA5	VP1	**Herring gull**	HG	13
CCA5	VP1	Mute swan	MS	3
CCA5	VP1	**Red-throated diver**	RH	1
CCA5	VP1	**Shag**	SA	87
CCA5	VP1	**Turnstone**	TT	4
CCA5	VP1	Black guillemot	TY	1
CCA6.1	VP1	**Brent goose**	BG	142
CCA6.1	VP1	**Black-headed gull**	BH	83
CCA6.1	VP1	**Cormorant**	CA	5
CCA6.1	VP1	**Great black-backed gull**	GB	1
CCA6.1	VP1	**Guillemot**	GU	3
CCA6.1	VP1	Gannet	GX	2
CCA6.1	VP1	**Herring gull**	HG	10
CCA6.1	VP1	**Oystercatcher**	OC	40
CCA6.1	VP1	**Razorbill**	RA	9
CCA6.1	VP1	**Red-throated diver**	RH	7
CCA6.1	VP1	**Ringed plover**	RP	10
CCA6.1	VP1	**Shag**	SA	36
CCA6.1	VP1	**Turnstone**	TT	8
CCA6.1	VP1	Black guillemot	TY	3
CCA6.1	VP2	**Brent goose**	BG	35
CCA6.1	VP2	**Black-headed gull**	BH	500
CCA6.1	VP2	**Cormorant**	CA	1
CCA6.1	VP2	**Common gull**	CM	14
CCA6.1	VP2	**Curlew**	CU	13
CCA6.1	VP2	**Great black-backed gull**	GB	5
CCA6.1	VP2	**Guillemot**	GU	3
CCA6.1	VP2	Gannet	GX	1
CCA6.1	VP2	Grey heron	H.	2
CCA6.1	VP2	**Herring gull**	HG	20
CCA6.1	VP2	**Kittiwake**	KI	1
CCA6.1	VP2	Mallard	MA	6
CCA6.1	VP2	Mute swan	MS	1
CCA6.1	VP2	Mediterranean gull	MU	2

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP2	**Oystercatcher**	OC	6
CCA6.1	VP2	**Razorbill**	RA	2
CCA6.1	VP2	**Red-throated diver**	RH	11
CCA6.1	VP2	**Shag**	SA	20
CCA6.1	VP2	Snipe	SN	1
CCA6.1	VP2	**Shelduck**	SU	3
CCA6.1	VP2	**Teal**	T.	20
CCA6.1	VP2	Black guillemot	TY	1
CCA6.1	VP3	**Brent goose**	BG	54
CCA6.1	VP3	**Black-tailed godwit**	BW	9
CCA6.1	VP3	**Cormorant**	CA	4
CCA6.1	VP3	**Curlew**	CU	36
CCA6.1	VP3	**Dunlin**	DN	10
CCA6.1	VP3	Little egret	ET	1
CCA6.1	VP3	**Great black-backed gull**	GB	3
CCA6.1	VP3	**Greylag goose**	GJ	100
CCA6.1	VP3	Greenshank	GK	1
CCA6.1	VP3	**Golden plover**	GP	4
CCA6.1	VP3	Gannet	GX	1
CCA6.1	VP3	**Herring gull**	HG	6
CCA6.1	VP3	Lapwing	L.	1000
CCA6.1	VP3	Little grebe	LG	4
CCA6.1	VP3	Mallard	MA	6
CCA6.1	VP3	Mute swan	MS	1
CCA6.1	VP3	**Oystercatcher**	OC	2
CCA6.1	VP3	**Peregrine**	PE	1
CCA6.1	VP3	**Razorbill**	RA	1
CCA6.1	VP3	**Red-throated diver**	RH	1
CCA6.1	VP3	**Redshank**	RK	9
CCA6.1	VP3	Skylark	S.	8
CCA6.1	VP3	**Shag**	SA	3
CCA6.1	VP3	Snipe	SN	1
CCA6.1	VP3	**Shelduck**	SU	3
CCA6.1	VP3	**Shoveler**	SV	17
CCA6.1	VP3	**Teal**	T.	3
CCA6.1	VP3	**Wigeon**	WN	2000
CCA6.1	VP3	Whooper swan	WS	35
CCA6.1	VP4	**Black-headed gull**	BH	60
CCA6.1	VP4	**Black-throated diver**	BV	1
CCA6.1	VP4	**Cormorant**	CA	3

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP4	**Common gull**	CM	1
CCA6.1	VP4	**Curlew**	CU	22
CCA6.1	VP4	Little egret	ET	1
CCA6.1	VP4	**Great black-backed gull**	GB	4
CCA6.1	VP4	Greenshank	GK	1
CCA6.1	VP4	**Guillemot**	GU	6
CCA6.1	VP4	Grey heron	H.	1
CCA6.1	VP4	**Herring gull**	HG	46
CCA6.1	VP4	Kestrel	K.	1
CCA6.1	VP4	Red kite	KT	1
CCA6.1	VP4	Lapwing	L.	45
CCA6.1	VP4	Little grebe	LG	2
CCA6.1	VP4	Mallard	MA	2
CCA6.1	VP4	Moorhen	MH	1
CCA6.1	VP4	**Merlin**	ML	1
CCA6.1	VP4	Mute swan	MS	3
CCA6.1	VP4	**Oystercatcher**	OC	8
CCA6.1	VP4	**Razorbill**	RA	4
CCA6.1	VP4	**Red-throated diver**	RH	6
CCA6.1	VP4	**Redshank**	RK	5
CCA6.1	VP4	**Ringed plover**	RP	6
CCA6.1	VP4	**Shag**	SA	22
CCA6.1	VP4	Stonechat	SC	1
CCA6.1	VP4	**Shelduck**	SU	2
CCA6.1	VP4	**Shoveler**	SV	3
CCA6.1	VP4	**Teal**	T.	2
CCA6.1	VP4	**Turnstone**	TT	2
CCA6.1	VP4	**Wigeon**	WN	52
CCA6.1	VP4	Whooper swan	WS	40
CCA6.1	VP5	**Brent goose**	BG	2
CCA6.1	VP5	**Black-headed gull**	BH	42
CCA6.1	VP5	**Black-tailed godwit**	BW	6
CCA6.1	VP5	Buzzard	BZ	1
CCA6.1	VP5	**Cormorant**	CA	6
CCA6.1	VP5	**Curlew**	CU	11
CCA6.1	VP5	Little egret	ET	1
CCA6.1	VP5	**Great black-backed gull**	GB	1
CCA6.1	VP5	**Greylag goose**	GJ	90
CCA6.1	VP5	**Guillemot**	GU	2
CCA6.1	VP5	Gannet	GX	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP5	**Herring gull**	HG	11
CCA6.1	VP5	Kestrel	K.	1
CCA6.1	VP5	Mallard	MA	4
CCA6.1	VP5	**Oystercatcher**	OC	6
CCA6.1	VP5	**Razorbill**	RA	5
CCA6.1	VP5	**Red-throated diver**	RH	2
CCA6.1	VP5	**Ringed plover**	RP	2
CCA6.1	VP5	**Shag**	SA	32
CCA6.1	VP5	**Shelduck**	SU	2
CCA6.1	VP5	**Shoveler**	SV	32
CCA6.1	VP5	**Teal**	T.	96
CCA6.1	VP5	Black guillemot	TY	1
CCA6.1	VP5	Water rail	WA	2
CCA6.1	VP5	**Wigeon**	WN	248
CCA6.2	VP1	**Black-headed gull**	BH	4
CCA6.2	VP1	**Black-tailed godwit**	BW	1
CCA6.2	VP1	Buzzard	BZ	1
CCA6.2	VP1	**Cormorant**	CA	1
CCA6.2	VP1	**Curlew**	CU	1
CCA6.2	VP1	Little egret	ET	1
CCA6.2	VP1	**Great black-backed gull**	GB	3
CCA6.2	VP1	Grey heron	H.	1
CCA6.2	VP1	**Herring gull**	HG	5
CCA6.2	VP1	Mallard	MA	5
CCA6.2	VP1	Moorhen	MH	2
CCA6.2	VP1	Mute swan	MS	2
CCA6.2	VP1	**Oystercatcher**	OC	1
CCA6.2	VP1	**Red-throated diver**	RH	2
CCA6.2	VP1	**Shag**	SA	15
CCA6.2	VP1	**Shelduck**	SU	2
CCA6.2	VP1	**Teal**	T.	72
CCA6.2	VP1	Black guillemot	TY	1
CCA6.2	VP1	Water rail	WA	1
CCA6.2	VP1	**Wigeon**	WN	150
CCA6.2	VP2	**Black-headed gull**	BH	1
CCA6.2	VP2	Buzzard	BZ	2
CCA6.2	VP2	**Cormorant**	CA	1
CCA6.2	VP2	Little egret	ET	1
CCA6.2	VP2	**Great black-backed gull**	GB	2
CCA6.2	VP2	**Guillemot**	GU	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP2	Grey heron	H.	3
CCA6.2	VP2	**Herring gull**	HG	3
CCA6.2	VP2	Kestrel	K.	1
CCA6.2	VP2	Mallard	MA	3
CCA6.2	VP2	**Oystercatcher**	OC	1
CCA6.2	VP2	**Razorbill**	RA	3
CCA6.2	VP2	**Red-throated diver**	RH	3
CCA6.2	VP2	**Ringed plover**	RP	2
CCA6.2	VP2	**Shag**	SA	8
CCA6.2	VP2	**Shelduck**	SU	1
CCA6.2	VP2	**Turnstone**	TT	1
CCA6.2	VP2	Water rail	WA	3
CCA6.2	VP4	**Black-headed gull**	BH	133
CCA6.2	VP4	**Black-tailed godwit**	BW	80
CCA6.2	VP4	Buzzard	BZ	3
CCA6.2	VP4	**Common gull**	CM	4
CCA6.2	VP4	**Curlew**	CU	25
CCA6.2	VP4	**Dunlin**	DN	45
CCA6.2	VP4	Little egret	ET	3
CCA6.2	VP4	**Great black-backed gull**	GB	8
CCA6.2	VP4	Greenshank	GK	2
CCA6.2	VP4	Grey heron	H.	2
CCA6.2	VP4	**Herring gull**	HG	36
CCA6.2	VP4	**Lesser black-backed gull**	LB	2
CCA6.2	VP4	Little grebe	LG	4
CCA6.2	VP4	Mallard	MA	11
CCA6.2	VP4	**Redshank**	RK	37
CCA6.2	VP4	**Shelduck**	SU	1
CCA6.2	VP4	**Teal**	T.	22
CCA6.2	VP4	**Wigeon**	WN	15

March 2023 wintering bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	**Bar-tailed godwit**	BA	10000
CCA1	VP1	**Brent goose**	BG	84
CCA1	VP1	**Black-headed gull**	BH	220
CCA1	VP1	**Black-tailed godwit**	BW	1500
CCA1	VP1	**Common gull**	CM	20
CCA1	VP1	**Curlew**	CU	30
CCA1	VP1	**Dunlin**	DN	30000

Survey area	Vantage Point	Species	Species code	Peak Count
CCA1	VP1	Little egret	ET	3
CCA1	VP1	Greenshank	GK	14
CCA1	VP1	**Grey plover**	GV	50
CCA1	VP1	Grey heron	H.	1
CCA1	VP1	**Herring gull**	HG	12
CCA1	VP1	**Knot**	KN	20000
CCA1	VP1	**Lesser black-backed gull**	LB	1
CCA1	VP1	Mallard	MA	3
CCA1	VP1	**Oystercatcher**	OC	1000
CCA1	VP1	**Redshank**	RK	90
CCA1	VP1	**Red-breasted merganser**	RM	25
CCA1	VP1	**Ringed plover**	RP	50
CCA1	VP1	Snipe	SN	2
CCA1	VP1	**Sanderling**	SS	80
CCA1	VP1	**Shelduck**	SU	2
CCA1	VP1	**Teal**	T.	55
CCA1	VP2	**Brent goose**	BG	31
CCA1	VP2	**Cormorant**	CA	6
CCA1	VP2	**Common gull**	CM	1
CCA1	VP2	**Common scoter**	CX	12
CCA1	VP2	**Dunlin**	DN	9
CCA1	VP2	Little egret	ET	1
CCA1	VP2	**Great black-backed gull**	GB	3
CCA1	VP2	**Great crested grebe**	GG	6
CCA1	VP2	Greenshank	GK	5
CCA1	VP2	Gannet	GX	4
CCA1	VP2	**Herring gull**	HG	11
CCA1	VP2	Mallard	MA	2
CCA1	VP2	**Oystercatcher**	OC	25
CCA1	VP2	**Razorbill**	RA	5
CCA1	VP2	**Redshank**	RK	2
CCA1	VP2	**Red-breasted merganser**	RM	25
CCA1	VP2	**Shelduck**	SU	1
CCA1	VP2	**Turnstone**	TT	11
CCA2-3	VP1	**Brent goose**	BG	18
CCA2-3	VP1	**Black-headed gull**	BH	60
CCA2-3	VP1	**Cormorant**	CA	2
CCA2-3	VP1	**Common gull**	CM	1
CCA2-3	VP1	**Great black-backed gull**	GB	2
CCA2-3	VP1	**Guillemot**	GU	12

Survey area	Vantage Point	Species	Species code	Peak Count
CCA2-3	VP1	Gannet	GX	2
CCA2-3	VP1	**Herring gull**	HG	10
CCA2-3	VP1	**Kittiwake**	KI	1
CCA2-3	VP1	Mediterranean gull	MU	1
CCA2-3	VP1	**Razorbill**	RA	4
CCA2-3	VP1	**Shag**	SA	12
CCA2-3	VP1	**Shelduck**	SU	2
CCA2-3	VP1	Black guillemot	TY	6
CCA5	VP1	**Black-headed gull**	BH	33
CCA5	VP1	**Cormorant**	CA	12
CCA5	VP1	**Great black-backed gull**	GB	2
CCA5	VP1	Gannet	GX	2
CCA5	VP1	**Herring gull**	HG	27
CCA5	VP1	**Razorbill**	RA	5
CCA5	VP1	**Shag**	SA	10
CCA5	VP1	Black guillemot	TY	1
CCA6.1	VP1	**Brent goose**	BG	123
CCA6.1	VP1	**Black-headed gull**	BH	80
CCA6.1	VP1	**Cormorant**	CA	5
CCA6.1	VP1	**Common gull**	CM	6
CCA6.1	VP1	**Great black-backed gull**	GB	6
CCA6.1	VP1	**Guillemot**	GU	6
CCA6.1	VP1	Gannet	GX	1
CCA6.1	VP1	Grey heron	H.	1
CCA6.1	VP1	**Herring gull**	HG	64
CCA6.1	VP1	Mute swan	MS	2
CCA6.1	VP1	**Oystercatcher**	OC	88
CCA6.1	VP1	**Red-throated diver**	RH	1
CCA6.1	VP1	**Shag**	SA	24
CCA6.1	VP2	**Black-headed gull**	BH	4
CCA6.1	VP2	Buzzard	BZ	1
CCA6.1	VP2	**Cormorant**	CA	6
CCA6.1	VP2	**Common gull**	CM	4
CCA6.1	VP2	Little egret	ET	1
CCA6.1	VP2	**Great black-backed gull**	GB	12
CCA6.1	VP2	**Guillemot**	GU	1
CCA6.1	VP2	Gannet	GX	2
CCA6.1	VP2	Grey heron	H.	1
CCA6.1	VP2	**Herring gull**	HG	8
CCA6.1	VP2	Red kite	KT	3

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP2	Meadow pipit	MP	50
CCA6.1	VP2	Mute swan	MS	2
CCA6.1	VP2	**Razorbill**	RA	2
CCA6.1	VP2	**Red-throated diver**	RH	2
CCA6.1	VP2	**Ringed plover**	RP	2
CCA6.1	VP2	**Shag**	SA	6
CCA6.1	VP2	**Shelduck**	SU	1
CCA6.1	VP2	**Teal**	T.	3
CCA6.1	VP2	**Turnstone**	TT	2
CCA6.1	VP2	**Wigeon**	WN	7
CCA6.1	VP3	**Black-tailed godwit**	BW	1
CCA6.1	VP3	**Cormorant**	CA	14
CCA6.1	VP3	**Dunlin**	DN	2
CCA6.1	VP3	Little egret	ET	1
CCA6.1	VP3	**Great black-backed gull**	GB	2
CCA6.1	VP3	**Greylag goose**	GJ	30
CCA6.1	VP3	Greenshank	GK	1
CCA6.1	VP3	**Golden plover**	GP	400
CCA6.1	VP3	Grey heron	H.	1
CCA6.1	VP3	**Herring gull**	HG	3
CCA6.1	VP3	Lapwing	L.	30
CCA6.1	VP3	Little grebe	LG	2
CCA6.1	VP3	Mute swan	MS	3
CCA6.1	VP3	**Oystercatcher**	OC	1
CCA6.1	VP3	**Redshank**	RK	3
CCA6.1	VP3	**Shelduck**	SU	2
CCA6.1	VP3	**Wigeon**	WN	500
CCA6.1	VP3	Whooper swan	WS	40
CCA6.1	VP4	**Black-headed gull**	BH	1
CCA6.1	VP4	**Cormorant**	CA	7
CCA6.1	VP4	**Common gull**	CM	2
CCA6.1	VP4	Little egret	ET	1
CCA6.1	VP4	**Great black-backed gull**	GB	16
CCA6.1	VP4	**Greylag goose**	GJ	22
CCA6.1	VP4	Grey heron	H.	1
CCA6.1	VP4	**Herring gull**	HG	33
CCA6.1	VP4	Mallard	MA	2
CCA6.1	VP4	Mute swan	MS	3
CCA6.1	VP4	**Oystercatcher**	OC	9
CCA6.1	VP4	**Red-throated diver**	RH	1

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.1	VP4	**Redshank**	RK	2
CCA6.1	VP4	**Ringed plover**	RP	2
CCA6.1	VP4	**Shag**	SA	7
CCA6.1	VP4	Snipe	SN	1
CCA6.1	VP4	**Wigeon**	WN	15
CCA6.1	VP5	**Black-headed gull**	BH	5
CCA6.1	VP5	**Cormorant**	CA	2
CCA6.1	VP5	Eider	E.	1
CCA6.1	VP5	Little egret	ET	1
CCA6.1	VP5	**Great black-backed gull**	GB	39
CCA6.1	VP5	**Golden plover**	GP	80
CCA6.1	VP5	**Guillemot**	GU	2
CCA6.1	VP5	Gannet	GX	8
CCA6.1	VP5	**Herring gull**	HG	9
CCA6.1	VP5	Mallard	MA	2
CCA6.1	VP5	**Oystercatcher**	OC	20
CCA6.1	VP5	**Razorbill**	RA	1
CCA6.1	VP5	**Ringed plover**	RP	2
CCA6.1	VP5	**Shag**	SA	1
CCA6.1	VP5	**Shoveler**	SV	2
CCA6.1	VP5	**Teal**	T.	115
CCA6.1	VP5	Black guillemot	TY	1
CCA6.1	VP5	**Wigeon**	WN	39
CCA6.2	VP1	**Black-headed gull**	BH	5
CCA6.2	VP1	**Black-tailed godwit**	BW	15
CCA6.2	VP1	**Cormorant**	CA	7
CCA6.2	VP1	Little egret	ET	1
CCA6.2	VP1	**Great black-backed gull**	GB	90
CCA6.2	VP1	Gannet	GX	8
CCA6.2	VP1	**Herring gull**	HG	3
CCA6.2	VP1	Lapwing	L.	1
CCA6.2	VP1	Mallard	MA	4
CCA6.2	VP1	**Oystercatcher**	OC	1
CCA6.2	VP1	**Shag**	SA	1
CCA6.2	VP1	**Teal**	T.	3
CCA6.2	VP2	**Black-headed gull**	BH	1
CCA6.2	VP2	Buzzard	BZ	4
CCA6.2	VP2	**Cormorant**	CA	2
CCA6.2	VP2	Little egret	ET	2
CCA6.2	VP2	**Great black-backed gull**	GB	6

Survey area	Vantage Point	Species	Species code	Peak Count
CCA6.2	VP2	Grey heron	H.	2
CCA6.2	VP2	**Herring gull**	HG	10
CCA6.2	VP2	Kestrel	K.	1
CCA6.2	VP2	Red kite	KT	1
CCA6.2	VP2	Mallard	MA	3
CCA6.2	VP2	**Ringed plover**	RP	3
CCA6.2	VP2	**Shag**	SA	1
CCA6.2	VP2	Snipe	SN	3
CCA6.2	VP2	**Shelduck**	SU	1
CCA6.2	VP2	**Teal**	T.	3
CCA6.2	VP2	**Turnstone**	TT	9
CCA6.2	VP4	**Black-headed gull**	BH	24
CCA6.2	VP4	**Black-tailed godwit**	BW	170
CCA6.2	VP4	Buzzard	BZ	3
CCA6.2	VP4	**Cormorant**	CA	1
CCA6.2	VP4	**Common gull**	CM	1
CCA6.2	VP4	**Curlew**	CU	1
CCA6.2	VP4	Little egret	ET	1
CCA6.2	VP4	**Great black-backed gull**	GB	6
CCA6.2	VP4	Greenshank	GK	3
CCA6.2	VP4	Grey heron	H.	2
CCA6.2	VP4	**Herring gull**	HG	32
CCA6.2	VP4	Red kite	KT	1
CCA6.2	VP4	**Lesser black-backed gull**	LB	6
CCA6.2	VP4	**Oystercatcher**	OC	2
CCA6.2	VP4	**Redshank**	RK	30
CCA6.2	VP4	**Shelduck**	SU	4
CCA6.2	VP4	**Wigeon**	WN	8

Appendix E. Breeding Bird Survey Results

April 2023 breeding bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA2-3	1	**Cormorant**	CA	1	9	Probable
CCA2-3	1	**Great black-backed gull**	GB	3	7	Probable
CCA2-3	1	Grasshopper warbler	GH	1	1	Possible
CCA2-3	1	**Herring gull**	HG	2	38	Probable
CCA2-3	1	Meadow pipit	MP	1	2	Probable
CCA2-3	1	**Oystercatcher**	OC	3	6	Probable
CCA2-3	1	Black guillemot	TY	2	8	Possible
CCA2-3	2	Feral pigeon	FP	1	1	Possible
CCA2-3	2	**Guillemot**	GU	2	1	Possible
CCA2-3	2	Hooded crow	HC	1	1	Possible
CCA2-3	2	**Herring gull**	HG	3	12	Probable
CCA2-3	2	**Lesser black-backed gull**	LB	1	6	Probable
CCA2-3	2	**Peregrine**	PE	1	1	Possible
CCA2-3	2	**Shag**	SA	1	3	Probable
CCA2-3	2	**Shelduck**	SU	1	7	Probable
CCA2-3	2	Woodpigeon	WP	1	2	Probable
CCA5	1	Blackbird	B.	6	2	Probable
CCA5	1	Blackcap	BC	1	1	Probable
CCA5	1	Blue tit	BT	1	1	Possible
CCA5	1	**Cormorant**	CA	5	120	Confirmed
CCA5	1	Dunnock	D.	4	2	Probable
CCA5	1	**Fulmar**	F.	3	5	Confirmed
CCA5	1	**Great black-backed gull**	GB	2	2	Possible
CCA5	1	Goldfinch	GO	7	2	Probable
CCA5	1	Great tit	GT	1	1	Probable
CCA5	1	**Guillemot**	GU	9	50	Probable
CCA5	1	Hooded crow	HC	2	2	Probable
CCA5	1	**Herring gull**	HG	7	8	Probable
CCA5	1	Meadow pipit	MP	2	1	Probable
CCA5	1	Robin	R.	1	1	Possible
CCA5	1	**Razorbill**	RA	1	20	Probable
CCA5	1	**Shag**	SA	2	75	Confirmed
CCA5	1	Stonechat	SC	1	1	Possible
CCA5	1	Starling	SG	2	50	Probable
CCA5	1	Swallow	SL	1	8	Probable
CCA5	1	Sand martin	SM	3	100	Confirmed

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA5	1	Song thrush	ST	4	2	Probable
CCA5	1	Black guillemot	TY	1	15	Probable
CCA5	1	Woodpigeon	WP	5	2	Probable
CCA5	1	Wren	WR	6	2	Probable
CCA5	1	Willow warbler	WW	1	1	Probable
CCA6.1	1	**Little tern**	AF	1	2	Probable
CCA6.1	1	Blackbird	B.	1	2	Probable
CCA6.1	1	Common Sandpiper	CS	2	1	Possible
CCA6.1	1	**Dunlin**	DN	1	2	Possible
CCA6.1	1	Goldfinch	GO	1	1	Possible
CCA6.1	1	Hooded crow	HC	1	1	Possible
CCA6.1	1	House sparrow	HS	1	4	Probable
CCA6.1	1	Linnet	LI	3	4	Probable
CCA6.1	1	Mallard	MA	2	2	Probable
CCA6.1	1	Magpie	MG	1	2	Probable
CCA6.1	1	Meadow pipit	MP	4	2	Probable
CCA6.1	1	Pied wagtail	PW	1	1	Possible
CCA6.1	1	**Ringed plover**	RP	12	7	Probable
CCA6.1	1	Skylark	S.	1	1	Possible
CCA6.1	1	Stonechat	SC	5	1	Possible
CCA6.1	1	Starling	SG	1	2	Probable
CCA6.1	1	Swallow	SL	1	2	Possible
CCA6.1	1	Sand martin	SM	1	15	Possible
CCA6.1	1	Snipe	SN	2	1	Probable
CCA6.1	1	Song thrush	ST	1	1	Possible
CCA6.1	1	**Teal**	T.	1	4	Probable
CCA6.1	1	Wheatear	W.	7	2	Possible
CCA6.1	1	Woodpigeon	WP	2	2	Probable
CCA6.1	1	Wren	WR	5	2	Possible
CCA6.1	1	Willow warbler	WW	1	1	Possible
CCA6.2	2	**Little tern**	AF	5	8	Probable
CCA6.2	2	Blackbird	B.	4	3	Confirmed
CCA6.2	2	Chaffinch	CH	1	1	Possible
CCA6.2	2	**Dunlin**	DN	1	11	Possible
CCA6.2	2	**Great black-backed gull**	GB	1	2	Probable
CCA6.2	2	Goldfinch	GO	5	6	Probable
CCA6.2	2	Hooded crow	HC	3	2	Confirmed
CCA6.2	2	**Herring gull**	HG	2	12	Probable

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA6.2	2	House sparrow	HS	1	2	Probable
CCA6.2	2	Jackdaw	JD	2	12	Probable
CCA6.2	2	Kestrel	K.	2	1	Possible
CCA6.2	2	Red kite	KT	1	1	Possible
CCA6.2	2	Lapwing	L.	1	31	Probable
CCA6.2	2	Little grebe	LG	1	1	Possible
CCA6.2	2	Linnet	LI	3	14	Probable
CCA6.2	2	Mallard	MA	3	4	Probable
CCA6.2	2	Moorhen	MH	1	1	Possible
CCA6.2	2	Meadow pipit	MP	6	2	Probable
CCA6.2	2	Mute swan	MS	3	3	Possible
CCA6.2	2	**Oystercatcher**	OC	6	12	Probable
CCA6.2	2	Pheasant	PH	1	1	Possible
CCA6.2	2	Robin	R.	1	1	Possible
CCA6.2	2	Reed bunting	RB	2	1	Possible
CCA6.2	2	**Redshank**	RK	1	3	Possible
CCA6.2	2	**Ringed plover**	RP	5	18	Probable
CCA6.2	2	Skylark	S.	4	3	Possible
CCA6.2	2	**Shag**	SA	1	11	Possible
CCA6.2	2	Stonechat	SC	2	1	Possible
CCA6.2	2	Starling	SG	1	2	Probable
CCA6.2	2	Swallow	SL	2	9	Confirmed
CCA6.2	2	Sand martin	SM	1	2	Probable
CCA6.2	2	Snipe	SN	1	1	Possible
CCA6.2	2	**Shelduck**	SU	6	4	Probable
CCA6.2	2	**Shoveler**	SV	3	7	Probable
CCA6.2	2	Sedge warbler	SW	1	2	Possible
CCA6.2	2	**Teal**	T.	2	2	Probable
CCA6.2	2	Sandwich tern	TE	3	5	Possible
CCA6.2	2	**Turnstone**	TT	1	3	Possible
CCA6.2	2	Wheatear	W.	1	2	Probable
CCA6.2	2	Wren	WR	2	2	Possible
CCA6.2	2	Willow warbler	WW	1	1	Possible

May 2023 breeding bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA2-3	1	**Cormorant**	CA	3	12	Possible

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA2-3	1	**Common tern**	CN	10	40	Probable
CCA2-3	1	Dunnock	D.	1	1	Possible
CCA2-3	1	Feral pigeon	FP	1	4	Probable
CCA2-3	1	**Great black-backed gull**	GB	4	2	Confirmed
CCA2-3	1	Goldfinch	GO	2	6	Probable
CCA2-3	1	Gannet	GX	1	1	Possible
CCA2-3	1	**Herring gull**	HG	7	16	Confirmed
CCA2-3	1	Linnet	LI	2	2	Probable
CCA2-3	1	**Oystercatcher**	OC	2	2	Probable
CCA2-3	1	Pied wagtail	PW	1	2	Probable
CCA2-3	1	**Shag**	SA	1	2	Possible
CCA2-3	1	Starling	SG	2	6	Confirmed
CCA2-3	1	**Shelduck**	SU	2	2	Probable
CCA2-3	1	Black guillemot	TY	2	2	Probable
CCA2-3	1	Wren	WR	1	1	Possible
CCA2-3	2	**Great black-backed gull**	GB	1	7	Possible
CCA2-3	2	**Herring gull**	HG	2	8	Confirmed
CCA2-3	2	**Oystercatcher**	OC	1	2	Probable
CCA2-3	2	**Shelduck**	SU	1	3	Possible
CCA5	1	**Cormorant**	CA	3	12	Possible
CCA5	1	Dunnock	D.	1	1	Possible
CCA5	1	**Fulmar**	F.	1	5	Possible
CCA5	1	**Great black-backed gull**	GB	2	5	Possible
CCA5	1	**Guillemot**	GU	3	40	Possible
CCA5	1	**Herring gull**	HG	3	30	Possible
CCA5	1	House martin	HM	1	1	Possible
CCA5	1	House sparrow	HS	2	2	Probable
CCA5	1	**Kittiwake**	KI	2	40	Possible
CCA5	1	**Razorbill**	RA	3	8	Possible
CCA5	1	**Shag**	SA	3	3	Possible
CCA5	1	Starling	SG	2	10	Confirmed
CCA5	1	Sand martin	SM	1	12	Probable
CCA5	1	Song thrush	ST	1	1	Possible
CCA5	1	Black guillemot	TY	1	2	Possible
CCA5	1	Whitethroat	WH	2	2	Probable
CCA5	1	Wren	WR	1	1	Possible
CCA5	1	Willow warbler	WW	1	1	Possible
CCA5	2	**Cormorant**	CA	2	23	Confirmed

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA5	2	**Fulmar**	F.	1	5	Confirmed
CCA5	2	**Great black-backed gull**	GB	1	2	Probable
CCA5	2	**Guillemot**	GU	1	400	Possible
CCA5	2	**Herring gull**	HG	2	18	Confirmed
CCA5	2	**Shag**	SA	2	38	Confirmed
CCA5	2	Sand martin	SM	3	34	Confirmed
CCA6.1	1	**Little tern**	AF	3	300	Confirmed
CCA6.1	1	Buzzard	BZ	1	1	Possible
CCA6.1	1	Dunnock	D.	1	2	Probable
CCA6.1	1	Little egret	ET	1	1	Possible
CCA6.1	1	Goldfinch	GO	1	2	Probable
CCA6.1	1	Grey heron	H.	1	1	Possible
CCA6.1	1	Lapwing	L.	3	8	Confirmed
CCA6.1	1	Linnet	LI	1	2	Probable
CCA6.1	1	Meadow pipit	MP	2	2	Probable
CCA6.1	1	Mute swan	MS	2	2	Probable
CCA6.1	1	**Oystercatcher**	OC	7	4	Confirmed
CCA6.1	1	Reed bunting	RB	1	1	Possible
CCA6.1	1	Raven	RN	1	2	Probable
CCA6.1	1	**Ringed plover**	RP	6	14	Confirmed
CCA6.1	1	Skylark	S.	2	2	Possible
CCA6.1	1	Stonechat	SC	1	1	Possible
CCA6.1	1	Starling	SG	1	2	Confirmed
CCA6.1	1	Swallow	SL	3	4	Possible
CCA6.1	1	Snipe	SN	1	1	Possible
CCA6.1	1	Song thrush	ST	1	1	Possible
CCA6.1	1	**Shelduck**	SU	1	4	Probable
CCA6.1	1	Sedge warbler	SW	2	1	Possible
CCA6.1	1	Woodpigeon	WP	1	6	Possible
CCA6.1	1	Wren	WR	1	1	Possible
CCA6.1	1	Willow warbler	WW	1	1	Possible
CCA6.2	2	**Little tern**	AF	4	2	Possible
CCA6.2	2	Bullfinch	BF	1	1	Possible
CCA6.2	2	Goldfinch	GO	1	1	Possible
CCA6.2	2	Grey heron	H.	2	3	Possible
CCA6.2	2	House sparrow	HS	2	2	Confirmed
CCA6.2	2	Linnet	LI	3	2	Probable
CCA6.2	2	Mistle thrush	M.	1	1	Possible

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA6.2	2	Meadow pipit	MP	3	2	Possible
CCA6.2	2	**Oystercatcher**	OC	1	1	Possible
CCA6.2	2	**Ringed plover**	RP	3	6	Confirmed
CCA6.2	2	Stonechat	SC	5	2	Probable
CCA6.2	2	Starling	SG	2	5	Probable
CCA6.2	2	Swallow	SL	2	2	Possible
CCA6.2	2	Sedge warbler	SW	1	1	Possible
CCA6.2	2	Whitethroat	WH	2	1	Possible

June 2023 breeding bird survey results. Species in bold indicate a QI of a European Site within the ZoI

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA2-3	1	**Arctic tern**	AE	2	20	Probable
CCA2-3	1	**Little tern**	AF	1	2	Probable
CCA2-3	1	**Cormorant**	CA	5	17	Confirmed
CCA2-3	1	**Common Tern**	CN	4	80	Probable
CCA2-3	1	**Great black-backed gull**	GB	3	5	Probable
CCA2-3	1	**Herring gull**	HG	5	70	Confirmed
CCA2-3	1	**Oystercatcher**	OC	3	2	Probable
CCA2-3	1	**Ringed plover**	RP	1	2	Probable
CCA2-3	1	**Shag**	SA	1	4	Probable
CCA2-3	1	Sandwich tern	TE	1	7	Probable
CCA2-3	1	Black guillemot	TY	1	1	Possible
CCA2-3	2	**Arctic tern**	AE	2	1	Possible
CCA2-3	2	**Cormorant**	CA	2	3	Confirmed
CCA2-3	2	**Fulmar**	F.	2	1	Possible
CCA2-3	2	**Great black-backed gull**	GB	3	9	Confirmed
CCA2-3	2	**Guillemot**	GU	2	74	Possible
CCA2-3	2	**Herring gull**	HG	2	12	Confirmed
CCA2-3	2	**Kittiwake**	KI	1	2	Possible
CCA5	1	Blackbird	B.	1	1	Probable
CCA5	1	Blue tit	BT	1	1	Possible
CCA5	1	**Cormorant**	CA	9	25	Confirmed
CCA5	1	**Common Tern**	CN	1	1	Possible
CCA5	1	**Fulmar**	F.	4	8	Confirmed
CCA5	1	**Great black-backed gull**	GB	2	3	Possible
CCA5	1	Goldfinch	GO	5	5	Probable

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA5	1	**Guillemot**	GU	9	3000	Confirmed
CCA5	1	Gannet	GX	1	3	Possible
CCA5	1	**Herring gull**	HG	4	9	Confirmed
CCA5	1	House sparrow	HS	2	20	Possible
CCA5	1	**Kittiwake**	KI	4	19	Confirmed
CCA5	1	Meadow pipit	MP	1	1	Probable
CCA5	1	**Razorbill**	RA	8	100	Confirmed
CCA5	1	Skylark	S.	2	1	Probable
CCA5	1	Stonechat	SC	1	3	Probable
CCA5	1	Swift	SL	1	20	Possible
CCA5	1	Sand martin	SM	2	200	Possible
CCA5	1	Woodpigeon	WP	1	2	Possible
CCA5	1	Wren	WR	1	1	Probable
CCA6.1	1	**Little tern**	AF	8	600	Confirmed
CCA6.1	1	Blackbird	B.	1	1	Probable
CCA6.1	1	**Bar-tailed godwit**	BA	2	2	Non-breeding
CCA6.1	1	Bullfinch	BF	1	1	Probable
CCA6.1	1	**Black-headed gull**	BH	2	9	Probable
CCA6.1	1	**Black-tailed godwit**	BW	1	2	Possible
CCA6.1	1	**Cormorant**	CA	1	2	Possible
CCA6.1	1	Little egret	ET	2	2	Probable
CCA6.1	1	**Great black-backed gull**	GB	1	4	Possible
CCA6.1	1	Goldcrest	GC	1	1	Possible
CCA6.1	1	Greenshank	GK	1	1	Possible
CCA6.1	1	Goldfinch	GO	1	3	Possible
CCA6.1	1	Great tit	GT	1	1	Possible
CCA6.1	1	Grey heron	H.	1	1	Possible
CCA6.1	1	**Herring gull**	HG	1	14	Possible
CCA6.1	1	House martin	HM	1	10	Possible
CCA6.1	1	House sparrow	HS	1	4	Possible
CCA6.1	1	Lapwing	L.	2	4	Confirmed
CCA6.1	1	Little grebe	LG	2	3	Probable
CCA6.1	1	Linnet	LI	1	2	Probable
CCA6.1	1	Mallard	MA	2	1	Probable
CCA6.1	1	Meadow pipit	MP	2	1	Possible
CCA6.1	1	Mute swan	MS	1	2	Possible
CCA6.1	1	**Oystercatcher**	OC	8	1	Confirmed
CCA6.1	1	Pied wagtail	PW	2	2	Probable

Survey Area	Vantage Point / Transect	Species	Code	Number of records	Peak Count	Highest Breeding Status
CCA6.1	1	**Redshank**	RK	1	3	Probable
CCA6.1	1	**Ringed plover**	RP	3	1	Confirmed
CCA6.1	1	Reed warbler	RW	1	1	Probable
CCA6.1	1	Skylark	S.	5	2	Probable
CCA6.1	1	Stonechat	SC	2	2	Probable
CCA6.1	1	Starling	SG	3	30	Probable
CCA6.1	1	Swift	SI	1	10	Possible
CCA6.1	1	Sand martin	SM	1	10	Possible
CCA6.1	1	Snipe	SN	1	2	Probable
CCA6.1	1	Song thrush	ST	1	1	Probable
CCA6.1	1	**Shelduck**	SU	3	2	Probable
CCA6.1	1	Sedge warbler	SW	2	1	Probable
CCA6.1	1	Sandwich tern	TE	1	2	Possible
CCA6.1	1	Whitethroat	WH	1	1	Probable
CCA6.1	1	Whimbrel	WM	1	1	Possible
CCA6.1	1	Wren	WR	2	1	Probable
CCA6.1	1	Willow warbler	WW	1	1	Probable
CCA6.2	2	**Little tern**	AF	3	5	Confirmed
CCA6.2	2	Goldfinch	GO	1	10	Possible
CCA6.2	2	Gannet	GX	1	1	Confirmed
CCA6.2	2	Grey heron	H.	1	1	Possible
CCA6.2	2	House martin	HM	1	2	Possible
CCA6.2	2	House sparrow	HS	1	10	Confirmed
CCA6.2	2	Linnet	LI	2	2	Possible
CCA6.2	2	Meadow pipit	MP	1	1	Possible
CCA6.2	2	Pied wagtail	PW	1	1	Probable
CCA6.2	2	Skylark	S.	3	1	Confirmed
CCA6.2	2	Stonechat	SC	1	5	Possible
CCA6.2	2	Starling	SG	1	20	Confirmed
CCA6.2	2	Whitethroat	WH	1	1	Probable