

EIRGRID INTERCONNECTOR DAC

**Section 115 Declaration Application
for Licensed Surveys of East West
Interconnector Cable Route
Supporting Information for
Screening of Appropriate
Assessment**

DOCUMENT RELEASE FORM

EIRGRID INTERCONNECTOR DAC

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Section 115 Declaration Application for Licensed Surveys of East West Interconnector Cable Route

Supporting Information for Screening of Appropriate Assessment

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GLOSSARY

AA

Appropriate Assessment

ACP

An Coimisiún Pleanála

AOS

Area of Search

BEIS

Business, Energy and Industrial Strategy

cSAC

Candidate Special Area of Conservation

Cm

Centimetre

CPT

Core Penetration Test

CSZ

Core Sustenance Zones

DAHG

Department of Arts, Heritage and the Gaeltacht

dB

Decibel

DHLGH

Department of Housing, Local Government and
 Heritage

DECC

Department of Energy and Climate Change (UK)

EC

European Commission

EDR

Effective Deterrent Range

EEZ

Exclusive Economic Zone

EIA

Environmental Impact Assessment

European Site

A candidate site of Community importance, a site of Community importance, a candidate Special Area of Conservation (SAC), an SAC, a candidate Special Protection Area (SPA) or an SPA.

EU

European Union

MUL

Maritime Usage Licence

GIS

Geographic Information System

ha

Hectare

HWM

High Water Mark

HZ

Hertz

HVDC

High Voltage Direct Current

ICG-C

Intercessional Correspondence Group on
 Cumulative Effects

INNS

Invasive Non-Native Species

IROPI

Imperative Reasons of Overriding Public Interest

JUB

Jack Up Barge

JNCC

Joint Nature Conservation Committee

kHz

Kilohertz

Km

Kilometre

LSE

Likely Significant Effect

M

Metre

MARA

Maritime Area Regulatory Authority

MarSEA

Marine Evidence-based Sensitivity Assessment

MBES

Multibeam Echosounder

MU

Management Units

MW

Megawatt

NIS

Natura Impact Statement

nm

Nautical Mile

NPWS

National Parks & Wildlife Service

NMFS

National Marine Fisheries Services

OSPAR

Oslo and Paris Conventions

OWF

Offshore Windfarm

pSPA

Proposed Special Protection Area

PTS

Permanent Threshold Shift

QI

Qualifying Interest

ROI

Republic Of Ireland

SAC

Special Area of Conservation

SBP

Sub-bottom Profiler

SCI

Special conservation interest

SEL

Sound Exposure Levels

SNCB

Statutory Nature Conservation Bodies

SPA

Special Protection Area

SPL

Sound Pressure Level

SPR

Source-Pathway-Receptor

SSS

Side Scan Sonar

The Licence

Foreshore Licence FS004527

TTS

Temporary Threshold Shift

UK

United Kingdom

UNCLOS

United National Convention on the Law of the Sea

ZOI

Zone of Influence

1. INTRODUCTION

1.1 Background

The East West Interconnector (EWIC) is a 500-Megawatt (MW) High Voltage Direct Current (HVDC) electricity interconnector linking the Irish and British electricity markets. Following installation in 2011/2012, EirGrid Interconnector Designated Activity Company (DAC) are obligated under Foreshore Licence FS004527 (the Licence) to “ensure that all Facilities or other works or structures in the Licences Area are at all times maintained in good and proper state of repair and condition to the reasonable satisfaction of the Minister, which ensures that they do not constitute a public health hazard or danger to persons, animals, marine life or the environment; not be injurious to navigation, the adjacent lands or the public interest”.

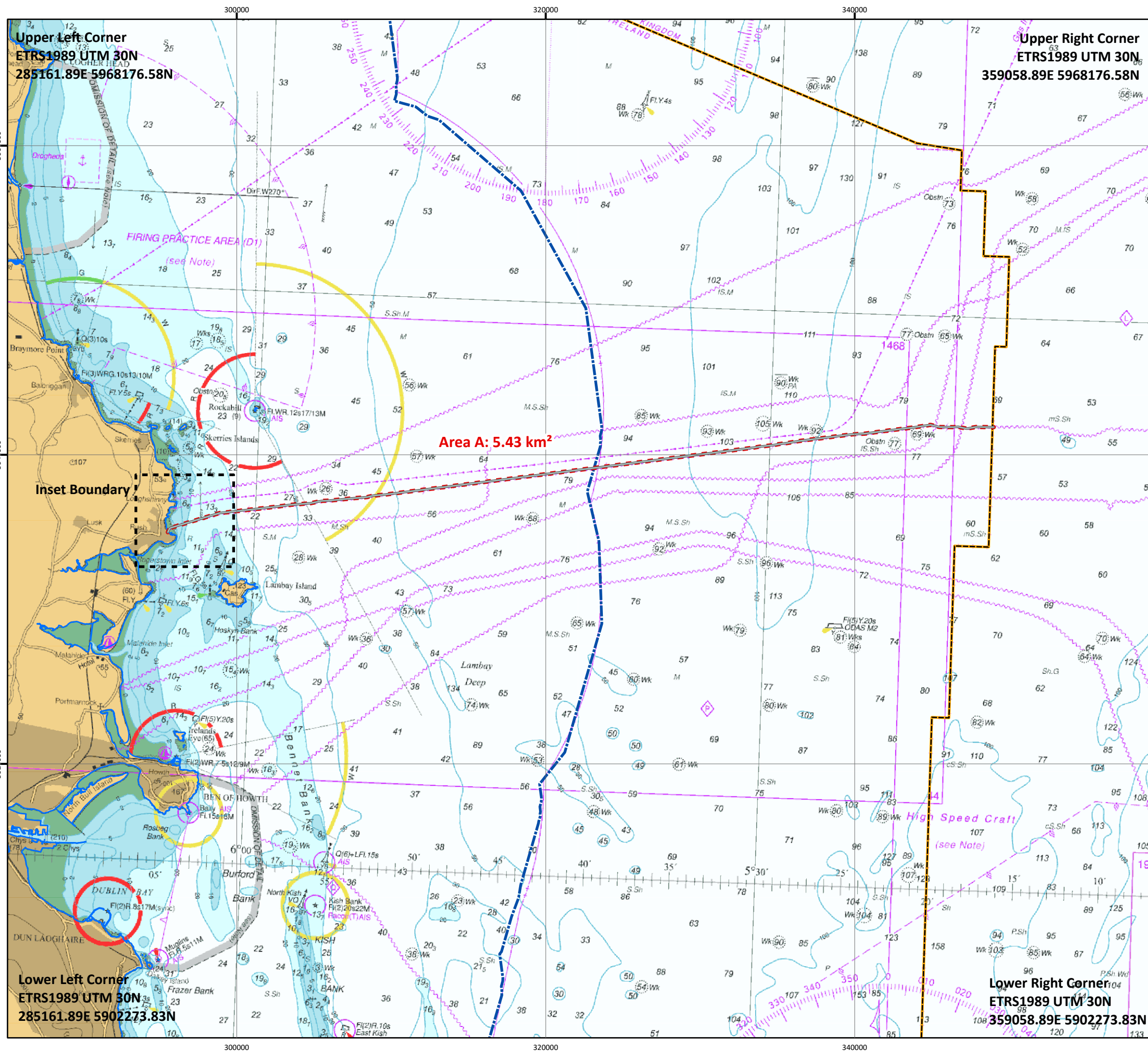
EirGrid Interconnector DAC intend to undertake a geophysical marine survey of the entire marine cable route (hereafter referred to as the "EWIC Inspection Surveys") corridor (including the Licenced Area as defined by the Licence) to establish the status of the installed cable. The survey will obtain data on the burial depth, sediment mobility, and the integrity of cable protection measures forming part of the Facilities as defined by Schedule 2 of the Licence. This will subsequently reveal where sediment accumulation has occurred and the locations where additional cable protection measures may be required to ensure the integrity of the cable and the safety of commercial fishing activities.

This will be the fourth EWIC Inspection Survey undertaken to assess the condition of the asset, pursuant to the Licence following geophysical surveys undertaken in 2015, 2019, and 2023.

An application is being made under section 115 of the Maritime Area Planning Act, as amended (MAP Act) for a declaration to confirm that the proposed EWIC Inspection Survey does not constitute a Schedule 7 usage and does not therefore require a MUL. The EWIC Inspection Surveys activities are being undertaken to assess the condition of the existing EWIC submarine electricity cable and identify any maintenance requirements necessary to support the continued operation of this existing infrastructure. The proposed survey activities are limited to the EWIC Inspection and assessment of an authorised operational asset and do not constitute the installation of new infrastructure, an extension or upgrade of the existing cable, or any future development of the EWIC project. EWIC Inspection within ROI, the proposed EWIC Inspection Survey Area extends from the High-Water Mark (HWM) to the boundary of Ireland's Exclusive Economic Zone (EEZ), encompassing approximately 5395.49 hectares (ha) in total. The EWIC cable was installed and became operational prior to the establishment of MARA and prior to the commencement of the MAP Act. As a result of the transition from the foreshore consenting regime to the maritime area consenting regime, the proposed survey works span areas that are now subject to different regulatory requirements.

The Licence authorises EWIC Inspection and survey of the Facilities (as defined in the Licence) within the Licensed Area (as defined in the Licence) between the mean HWM and the outer limit of the "foreshore" as defined in the Foreshore Act 1933 as amended (the Foreshore Acts). The Minister for Climate, Energy and the Environment (formerly the Minister for Energy and Natural Resources) provided written consent for the EWIC route between the outer limit of the foreshore and the outer limit of the EEZ, pursuant to the State's rights under the UNCLOS and the Maritime Jurisdiction Act (2006). The EWIC Inspection Surveys are therefore already authorised pursuant to the legislative scheme in place at the relevant time and there is nothing in the MAP Act that revokes or repeals such authorisation. EirGrid Interconnector DAC is therefore seeking written confirmation from the MARA by way of a section 115 declaration that the EWIC Inspection Surveys are not a Schedule 7 usage and do not require a MUL.

The EWIC Inspection Survey Area is presented in EWIC Inspection Survey Area Map 1 (Drawing Ref: P2226-LOC-001-B).



EWIC INSPECTION SURVEY

LOCATION OVERVIEW

EWIC Inspection Survey Area

Drawing No: P2226-LOC-003

B

Legend

EEZ Boundary

12 NM Territorial Sea Limit

EWIC Inspection Survey Area

HW

North Arrow

W N E S

Skerries Islands

Loughshinny

Rush

Rogerstown Inlet

Lambay Island

Area A: 5.43 km²

Note: Coordinates listed in
ETRS1989 UTM 30N
EPSG: 25830

Map prepared by:
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Hydrography,
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NOTE: Not to be used for Navigation

Date	04 September 2026
Coordinate System	ETRS 1989 UTM Zone 30N
Projection	Transverse Mercator
Datum	ETRS 1989
Data Source	GEBCO; ESRI; EirGrid; MarineFind; DECC
File Reference	J:\P2226\Mxd\01_LOC\P2226-LOC-003-B.mxd
Created By	Adam Johns
Reviewed By	Eloise Boblin
Approved By	Aodhfin Coyle

EirGrid

intertek
metoc

0 2 4 6 8 km

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1.2 Aim of this Report

The aim of this report is to inform the AA Screening Determination to be made by or on behalf of EirGrid Interconnector DAC pursuant to its obligations as a public authority under the EC (Birds and Natural Habitats) Regulations 2011, as amended (Habitats Regulations), as to whether the EWIC Inspection Surveys are likely to have a significant effect on any European Site. This report, together with the AA Screening Determination, shall be submitted as supporting information for the section 115 declaration application.

This report assesses the EWIC Inspection Survey activities to be carried out within the EWIC Inspection Survey Area within the maritime area as defined by the MAP Act alone. The report further assesses the EWIC Inspection Survey activities in the EWIC Inspection Survey Area beyond the EEZ including in the UK EEZ and territorial waters which fall outside the scope of MARA's jurisdiction on an "in combination" basis. Finally, the report assesses the implications for European sites of the EWIC Inspection Surveys in combination with other relevant plans and projects.

This report has been prepared in accordance with current guidance:

- The EC Guidance "Assessment of plans and projects in relation to Natura 2000 Sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC, October 2021".
- NPWS "Guidance on Appropriate Assessment for Planning Authorities" 2009/2010).
- NPWS "Marine Natura Impact Statements in Irish SAC's working document (2012)
- DCEE "Guidance Documents for Offshore Renewable Energy Developers" (2018)
- Office of the Planning Regulator (OPR) Practice Note 1 (PN01) "Appropriate Assessment Screening for Development Management, March 2021."
- MARA "Review of Impacts of Geophysical and Geotechnical Surveys on Marine Fish and Shellfish in Irish Waters" (2026)
- The EC notice "Managing Natura 2000 Sites. The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC", 21 November 2018.

1.3 EWIC Inspection Survey Activities

This section provides a high-level overview of the proposed survey works. Regard has been had in the preparation of this Report to the EWIC 2026 Geophysical Condition Survey document reference 2877_AKAPR15_Rev3 as appended

The EWIC Inspection Survey Area comprised the entire cable route and associated survey corridor from end to end. For the purposes of this report, the Project Area refers to the section of the EWIC inspection Survey Area located within the maritime area of the ROI. The Licensed Area represents a subset of the Project Area and corresponds to the area covered by the Foreshore Licence. The EWIC Inspection Surveys in 2026 are intended to be undertaken in September/October 2026. The active survey programme is expected to require approximately 10 days to complete across the entire EWIC cable route, although a survey window of up to 25 days has been allowed to accommodate weather-related delays, vessel availability constraints and other operational contingencies. Accordingly, the total duration of active survey operations is not expected to exceed approximately 10 days, with the additional 15 days representing contingency rather than additional survey effort. Within Irish waters, active survey activities are expected to require approximately 6 days¹. As noted, EWIC Inspection Surveys have been undertaken in 2015, 2019 and 2023. It is proposed to undertake further geophysical condition surveys in September/October 2026, and periodically thereafter throughout the EWIC asset life. The Licence is granted for 99 years. The section 115 declaration application therefore seeks confirmation that the proposed EWIC Inspection Surveys in 2026 and similar geophysical condition surveys which are required to be undertaken at similar intervals periodically thereafter pursuant to the Licence are not a Schedule 7 usage for which a MUL is required under the MAP Act. It is expected that geophysical condition surveys to be undertaken pursuant to the Licence in future years will be similar to those proposed in 2026.

The surveys are non-intrusive as they do not interfere with the seabed. The vessel undertaking the surveys is required to operate in accordance with law, including MARPOL and SOLAS regulations and guidelines.

Prior to commencement of the EWIC Inspection Surveys the Marine Survey Office of the Department of Transport requires publication of a Notice to Mariners. MARA also requires prior notice of commencement of permitted maritime usages.

While a section 115 declaration is not strictly necessary before the already authorised EWIC Inspection Surveys are undertaken, it is EirGrid Interconnector DAC's preference that it should have the requisite legal and procedural certainty that a MUL is not required before the EWIC Inspection Surveys are undertaken in the Irish maritime area. No such additional consents, authorisations or declarations are required for the EWIC Inspection Survey in UK waters.¹

In summary, EWIC Inspection Survey Activities will include:

- **Geophysical survey:** The geophysical survey will comprise hull mounted multibeam echosounder (MBES) and towed sidescan sonar (SSS) survey sensors to determine seabed conditions within the EWIC Inspection Survey area. The SSS will be positioned using an Ultra Short Baseline (USBL) subsea acoustic positioning system. Surveys could be undertaken at any time of the year (subject to weather conditions) and will be carried out over a period of approximately 25 days (including downtime), this is broken down by 6 days in ROI and 4 days in Great Britain and 15 days have been allowed for downtime.

¹ For the avoidance of doubt, this Report assesses the implications for European sites of EWIC Inspection Surveys being undertaken at any time of year with no seasonal restrictions. In practice, however, such surveys tend to be limited to periods of calmer sea conditions from late Spring to early Autumn.

- **Environmental (Visual) Survey:** Should features of concern to cable integrity be identified during the geophysical survey (i.e. freespan, potential damage to protection structures), an environmental camera system may be deployed for visual EWIC Inspection. This camera will be deployed during the geophysical survey from the same vessel. The camera system is housed within a frame and will be positioned above the seabed, with no interaction with the seabed. The camera will be USBL positioned.

Survey line spacing will be determined by the swathe widths achievable with each instrument, which are dependent on local water depth. The survey vessel and towfish will operate on lines running parallel to, and offset from, the cable route. It is anticipated that survey lines will typically be positioned approximately 25 m either side of the cable centreline (or as required based on survey conditions and instrument performance). The resulting swathes will extend across the cable route corridor and will be planned to provide approximately 50% overlap between adjacent swathes, ensuring full seabed coverage and sufficient data redundancy for accurate condition assessment. The geophysical and visual inspections are entirely non-intrusive survey techniques that do not physically interact with, disturb, or alter the seabed and only involve data collection methods using remote sensing and observational methods.

2. LEGISLATIVE CONTEXT

2.1 Habitats Directive (92/43/EEC)

The Birds Directive (2009/147/EC) and the Habitats Directive (92/42/EEC), transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477 of 2011) (the “Habitats Regulations”) require European Union (EU) Member States to establish a network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU. This network of sites is known as the Natura 2000 network. The network comprises Special Areas of Conservation’s (SAC’s) designated under the Habitats Directive, and Special Protection Area’s (SPA’s) designated under the Birds Directive. SPAs and SACs are designated by the individual member states and are collectively referred to in the Habitats Regulations as European Sites.

The Natura 2000 network in Ireland is made up of European Sites which include SACs, SPAs, candidate SACs (cSACs) and proposed SPAs (pSPAs). cSACs and pSPAs also form part of the network and are treated as if fully designated. SACs are designated for the protection of Annex I habitats and Annex II species referred to as the Qualifying Interest (QI) of the site. SPAs are established for the protection of endangered species of wild birds designated under Annex I of the Birds Directive, along with regularly occurring migratory species, such as ducks, geese and waders and areas of wetland and they are referred to as the Special Conservation Interests (SCI) for the site.

A key requirement of the Habitats Directive is that the effects of any plan or project, alone, or in combination with other plans or projects, on the European Site network, should be assessed before any decision is made to allow that plan or project to proceed. This process is known as AA. Each plan or project considered for approval, must take into consideration the possible effects it may have in combination with other plans and projects when going through the AA process.

The obligation to undertake AA derives from Articles 6(3) and 6(4) of the Habitats Directive.

Article 6(3) of the Habitats Directive states that:

“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.”

This provision is transposed into Irish law in respect of this Statutory Declaration by Part 5 of the Habitats Regulations. Regulation 42(1) of the 2011 Regulations provides for screening for Appropriate Assessment as follows:

“A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European Site.”

Regulations 42(6) and 42(7) provide for the outcome of screening for Appropriate Assessment. Under Regulation 42(6), a public authority shall determine that an Appropriate Assessment of a plan or project is required where the plan or project is not directly connected with, or necessary to, the management of a European site and where it cannot be excluded, on the basis of objective scientific

information following screening, that the plan or project, either individually or in combination with other plans or projects, will have a significant effect on a European site.

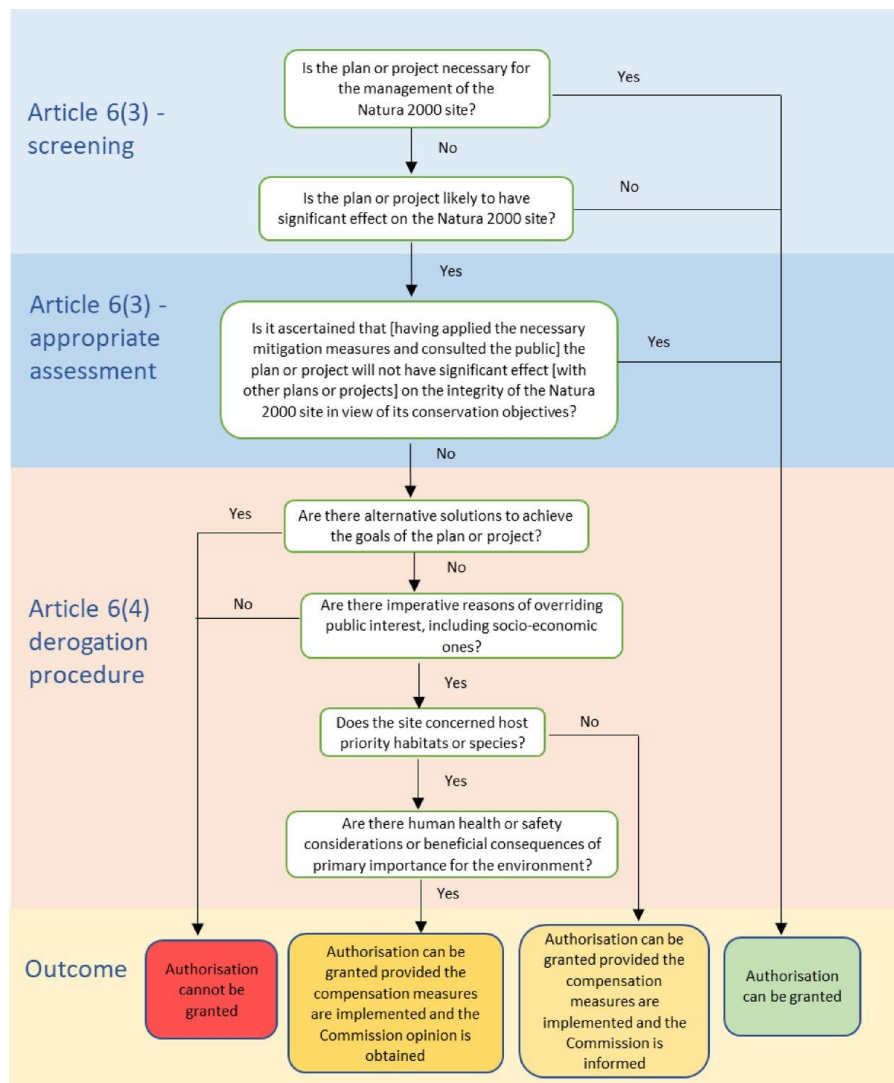
Conversely, under Regulation 42(7), a public authority shall determine that an Appropriate Assessment of a plan or project is not required where the plan or project is not directly connected with, or necessary to, the management of a European site and where it can be excluded, on the basis of objective scientific information following screening, that the plan or project, either individually or in combination with other plans or projects, will have a significant effect on a European site .It is considered that EirGrid Interconnector DAC is a "public authority" as defined and with specific responsibilities and obligations under Regulation 27 and Regulation 42 of the Habitats Regulations with respect to the AA process and compliance with the Habitats and Birds Directives.

As a public authority proposing to undertake the EWIC Inspection Survey activities pursuant to the Licence, EirGrid Interconnector DAC is obliged to determine whether doing so is likely to have a significant effect on a European site and to ensure if significant effects cannot be excluded that an Appropriate Assessment is undertaken before the proposed activity is carried out. Regulation 42 expressly prescribes the procedure whereby a public authority shall undertake an AA screening of a plan or project it wishes to undertake or adopt, even where further development consent or statutory authorisation is not required.

2.2 The Appropriate Assessment Process

The EC's methodological guidance (EC 2021) outlines a three-stage approach to the AA process, where the outcome at each successive stage determines whether a further stage in the process is required. The results at each step must be documented so there is transparency of the decisions made. The guidance is not expressly directed at plans and projects that a public authority wishes to undertake or adopt itself, but the principles outlined are equally applicable to that scenario. The three stages are shown in Figure 2-1 and described below.

Figure 2-1 Stages of AA



Source: European Commission, 2021

2.2.2 Stage 1 - Screening for Appropriate Assessment

Stage 1 of the AA process is referred to as screening for Appropriate Assessment and identifies whether the proposed plan or project, either on its own or in combination with other plans or projects, would be “likely to have a significant effect” upon any European Site. A likely effect is one that cannot be ruled out on the basis of objective information. The test is a ‘possibility’ of effects rather than a ‘certainty’ of effects. The test of significance is whether a plan or project could undermine the site’s conservation objectives. For the avoidance of doubt, it is confirmed that no impermissible measures intended to avoid or prevent any potential harmful effects of the project on any European Site have been considered when carrying out this screening exercise.

2.2.3 Stage 2 - Appropriate Assessment

If effects are considered likely to be significant, potentially significant or uncertain, or if the screening process becomes overly complicated, the process must proceed to Stage 2: Appropriate Assessment, with the preparation of a Natura Impact Statement (NIS) to inform the Appropriate Assessment that is to be conducted by the competent authority.

The European Court of Justice has also made a relevant ruling on what should be contained within an Appropriate Assessment:

"[The Appropriate Assessment] cannot have lacunae and must contain complete, precise and definitive findings and conclusions capable of removing all reasonable scientific doubt as to the effects of the works proposed on the protected site concerned".

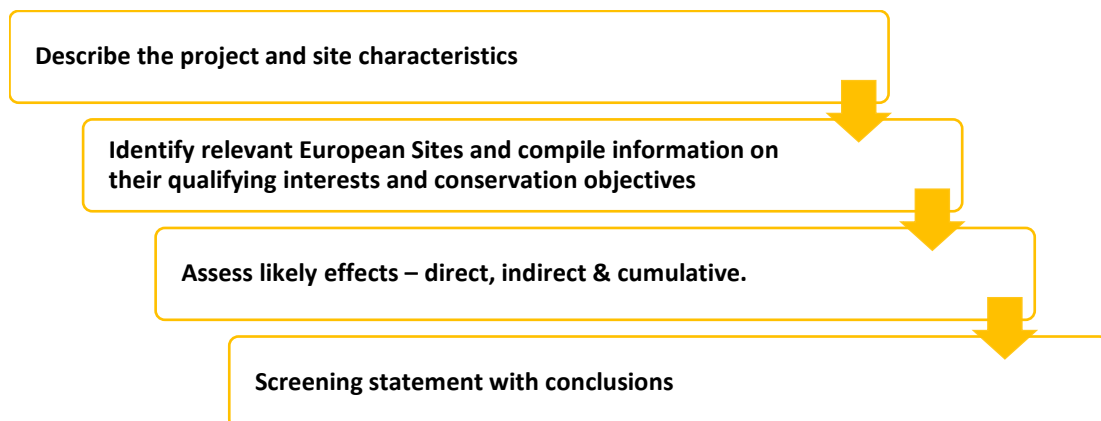
2.2.4 Stage 3 – Derogation from Article 6(3) Under Certain Conditions

This stage of the procedure, governed by Article 6(4), only comes into play if, despite a negative assessment, the developer considers that the plan or project should still be carried out for imperative reasons of overriding public interest. This is only possible if there are no alternative solutions, the imperative reasons of overriding public interest are duly justified, and if suitable compensatory measures are adopted to ensure that the overall coherence of Nature 2000 is protected.

2.3 Approach to Screening for Appropriate Assessment

This Screening for AA has been undertaken according to relevant case law and guidance including the process set out in the National Parks and Wildlife Service (NPWS) and DEHLG (2010) Guidance; following the process illustrated in Figure 2-2.

Figure 2-2 Screening for AA Process



The structure for the remainder of the Screening for AA therefore reflects the key steps in this process.

2.4 Site Characteristics

2.4.1 Baseline Environmental Characteristics

The baseline environment exceptionally well understood as a consequence of these prior surveys and the original EWIC site investigations and surveys. The site consists of a dynamic marine environment consisting of sandy and mixed sediment seabed habitats, varied ecological receptors and active maritime users. The main environmental sensitivities relate to marine ecology, designated conservation interests, cultural heritage assets and existing navigation and fisheries activity.

The study area as outlined in Section 1.1, is predominantly characterised by gently sloping sandy foreshore at the Irish landfall location and deeper offshore waters. Water depths increase from the shoreline to approximately 120m offshore, with seabed conditions influenced by regional geological processes and sediment transport patterns.

The assessment has been informed by an extensive body of existing survey information gathered during the development, installation and operation of the EWIC. In particular, the 2015 depth of burial survey and the 2018 and 2022 geophysical condition surveys have provided a detailed and evolving

understanding of seabed conditions, sediment mobility and cable-seabed interactions along the route (Intertek 2023). As a result, the physical characteristics of the survey corridor are exceptionally well understood relative to many offshore infrastructure projects, enabling a high degree of confidence in the assessment of potential impact pathways and the conclusion of this Screening.

A high-level summary of the environment within the EWIC Inspection Survey Area in ROI is provided below:

2.4.1.1 Physical Environment

A mixture of sand, gravel and locally exposed rock dominates the seabed within the area. Bathymetry follows the broader geological structure of the Irish Sea. Tidal and wave action allow naturally occurring sediment mobility, although overall much of the cable route is relatively stable. Within the wider area there is existing marine infrastructure, including cables, pipelines and wrecks. Water quality is generally high and reflecting normal coastal and offshore Irish sea conditions, regional marine monitoring data published by the Marine Institute and EPA indicate that water quality and sediment conditions in Irish waters are routinely monitored and there is no evidence of widespread contamination.

2.4.1.2 Ecology

The EWIC Inspection Survey Area has a range of ecological receptors typical of the Irish Sea. The Irish Sea Sensitivity Analysis identified the western Irish Sea as supporting a range of ecologically important features, including benthic habitats, fish communities, marine mammals and seabirds (Department of Housing, Local Government and Heritage, 2023). Benthic habitats support diverse invertebrate communities that vary according to sediment type and water depth. Fish and shellfish occur throughout the area and there are several important species for both commercial and ecological use, such as cod, plaice, lemon sole, sprat and Nephrops.

Marine mammals are also an important ecological receptor with the EWIC Inspection Survey Area and wider environment; these include seals and cetaceans. In addition, the area supports seabirds and overwintering waders within coastal and nearshore environments. Ecological sensitivities are greatest during breeding and overwintering periods. Designated conservation sites such as North Irish Seas pSPA overlaps with the Project area which highlights the ecological importance of the coastal and marine habitats.

2.4.1.3 Landscape and Seascape

The site lies within a coastal landscape characterised by open coastal views and sandy beaches. The seascape is natural in appearance but influence by existing maritime activity such as commercial shipping, fishing and marine infrastructure. The offshore environment is characterised by expansive open water with no permanent natural infrastructure visual features.

2.4.1.4 Cultural Heritage

Geophysical surveys identified existing marine features and confirmed the potential for previously unrecorded archaeological remains within the wider seabed environment.

2.4.1.5 Human Use

Shipping routes through the Irish Sea are heavily used for commercial shipping and fishing activity and recreational boating is also prevalent. Closer to the coast, recreational and amenity value is associated with beaches with wider marine environment.

2.5 Identification of Relevant European Sites

2.5.1 Site Identification Process

The potential for a European Site to have a LSE is based on the source-pathway-receptor (SPR) model. An LSE can occur where:

- a. The EWIC Inspection Survey generates a source of impact or disturbance e.g. noise
- b. A pathway exists that allows the impact to reach a qualifying interest (QI) or special conversation Interest (SCI); and
- c. The QI/SCI (the receptors) are present and sensitive to the defined impact.

:

Identifying relevant European Sites has therefore been achieved by applying the following steps:

1. Identify the potential sources of impact associated with the proposed EWIC Inspection Survey activities.
2. Identify potential impact pathways the proposed inspection surveys activities and define the zone of influence (ZOI) and area of search (AOS):
 - a. ZOI - the geographical spatial extent over which the activities are predicted to have an impact on the receiving environment. This will vary for different activities and for the different stages of the Project (installation, operation, and decommissioning).
 - b. AOS - using zones of influence as a guide and expert judgement on the basis of best scientific knowledge, define a search area within which protected sites are identified to determine if the relevant receptor is a designated feature of the site.
3. Identify European Sites within the AoS for SACs and SPAs within these search areas to identify QIs / SCIs and assess whether Interest Features of the European Site could be significantly affected by the proposed inspection surveys through a plausible impact pathway. This includes consideration of mobile QIs and SCIs, such as marine mammals, fish, and seabirds, where movements beyond site boundaries may result in an interaction with the survey activities within the ZOI.
4. Assess whether LSE can be excluded for any identified SACs and SPAs further afield from the survey area have mobile QIs / SCIs which may travel into the ZOI and have the potential to be significantly affected, either alone or in combination with other plans or projects.

2.5.2 Identification of Sensitive Receptors

The key receptors which could potentially be affected by the proposed EWIC Inspection surveys and could be the QIs / SCIs of designated European Sites in the region include:

- Intertidal and benthic habitats;
- Bats;
- Fish;
- Birds; and
- Marine mammals (cetaceans, pinnipeds and European otter).

3. POTENTIAL EFFECTS ON EUROPEAN SITES AND THEIR QUALIFYING FEATURES OF PROPOSED ACTIVITIES

3.1 Introduction

Potential pressures associated with the proposed EWIC Inspection surveys have been identified based on current scientific understanding of the effects of marine geophysical and geotechnical surveys on fish and shellfish. Key pressures may include underwater noise, physical disturbance of the seabed, habitat loss or alteration, increased suspended sediments and smothering, and cumulative effects (Long et al., 2026). These pressures may result in direct or indirect, temporary or permanent, beneficial or adverse effects. The Zone of Influence (ZOI), representing the spatial extent over which effects may occur, has also been defined. Consideration has been given to how sensitive receptors could be affected and what the ZOI (the geographical extent over which an effect on the receiving environment is predicted to occur) is likely to be in defining the search area for relevant European Sites.

The geographical extent of the likely ZOI for non-mobile receptors such as benthic communities will represent the required search area for relevant European Sites. For highly mobile species such as bats, fish, birds and marine mammals the European Sites which are most likely to be significantly affected will be those within or near the ZOI. A justification for the established ZOI and search area for each receptor is explained below in Table 3-1.

3.2 Bats

Bats have the potential to be affected by light emitting from survey vessels. Such visual disturbance has the potential to affect foraging effort.

The Bat Conservation Trust has developed Core Sustainance Zones (CSZs) around communal bat roosts, within which habitat availability and quality will have a significant influence on the resilience and conservation status of the colony using the roost (BCT, 2016). Of the 15 bat species studied CSZs ranged from 1km to 6kms. To allow for the mobility of bat species which could forage into the ZOI, all SACs within 6km have been screened.

3.3 Fish

Fish have the potential to be affected by the geophysical survey from changes in underwater sound. The potential for effects may range from temporary behavioural changes, or temporary hearing loss, through to migration pathways being impeded by a noise barrier. Of the four migratory Annex II species known to be present in the vicinity of the MULA, only twaite shad are known to be sensitive to underwater noise generated from geophysical survey. Species, such as Atlantic salmon (*Salmo salar*) and sea (Petromyzon marinus) and river lamprey (Lampetra fluviatilis) have a lower sensitivity to sound as for salmon their swim bladder is located far from the ear and lamprey lack a swim bladder altogether (Popper et al., 2014). Therefore, these species will only be sensitive to sound sources with a rapid pressure change, i.e. unexploded ordnance detonation, which is not proposed or anticipated under this MULA. The ZOI for direct effects from underwater noise to hearing sensitive fish species has been estimated as 2.2km (Intertek 2019).

There is the potential that noise could also impede migration to/from rivers near the EWIC Inspection Survey Area as twaite shad migrate from the sea to spawn in spring, usually between April and June (JNCC, 2022a). A study conducted by Davies *et al.* (2020) reported that of 73 twaite shad tagged 12

individuals were recorded 200 km from their original location after migrating to sea. Whilst it is acknowledged that twaite shad may migrate distances greater than 100km, it is recognised that species from protected sites further away are less likely to travel to the proposed EWIC Inspection Survey Area in high enough numbers for the population of qualifying species and within the short EWIC Inspection Survey duration of 10 - 25 days every few years under the Licence to be significantly affected. Therefore, a highly precautionary screening distance of 100km from the EWIC Inspection Survey Area has been applied based on professional judgement and the general acceptance of this figure in ecological assessments of migratory fish in OWF site investigations.

3.4 Marine Birds

Marine birds – Advice on how to present assessment information on the extent and potential consequences of seabird displacement from offshore wind farm developments published by the UK Joint Statutory Nature Conservation Bodies (JNCC) 2017) states that for most bird species a standard displacement buffer of 2km is recommended. For divers and sea ducks this should be extended to 4km. More recent advice from JNCC notes that red-throated diver (*Gavia stellata*) avoid a much larger area. For non-breeding red-throated diver, a pragmatic displacement buffer of at least 10km is recommended (JNCC, 2022b). The most vulnerable birds to disturbance would be nesting birds in the breeding season in the immediate vicinity of the proposed EWIC Inspection surveys. Disturbance to nesting birds caused by the presence of the survey vessel could have an effect on the success rate of the breeding population. The ZOI of disturbance on nesting birds has been assessed as up to 2km from the EWIC Inspection Survey Area.

To allow for the mobility of bird species which could forage into the ZOI, all SPAs within 15km of the EWIC Inspection Survey Area boundary have been screened as a starting point. Additionally, Woodward *et al.* (2019) was used to determine foraging ranges for seabirds during the breeding season to establish if seabirds were likely to be present in project area.

It is noted that seabirds from other, more distant SPAs occasionally forage in, travel through, or engage in other behaviours inside the EWIC Inspection Survey Area due to their typically wide foraging ranges. As the MULA is outside any core habitat use areas of the more distant SPAs, the frequency of birds with larger foraging ranges from these SPAs occurring within the EWIC Inspection Survey Area declines i.e. as the distance between the MULA and the further SPAs increases. It is unlikely that the population of longer ranging species from further SPAs will be in the vicinity of the proposed works in significant numbers or for a significant period of time, therefore the conservation objectives of sites with these species listed as a qualifying species will not be affected. The standard area of search for installation of OWF's is 100km and thus this highly precautionary range has been selected as an area of search for SPAs relevant to the EWIC Inspection Survey Area. However, only those SPAs that directly overlap or are within 15 km of the EWIC Inspection Survey Area are considered to have the potential of being impacted due to the highly localised, transient, and brief nature of the proposed EWIC inspection survey works.

3.5 Marine Mammals

Marine mammals have the potential to be affected by changes in underwater noise. EC Habitats Directive Annex II listed species likely to be observed in the EWIC Inspection Survey Area include grey seal (*Halichoerus grypus*), harbour (common) seal (*Phoca vitulina*), and European otter (*Lutra lutra*), common bottlenose dolphin (*Tursiops truncatus*) and harbour porpoise (*Phocoena phocoena*).

There are no published guidelines on distance thresholds to anthropogenic sound sources, due to the varied nature of sound in the marine environment modelled based on seabed morphology, sound velocity etc. In relation to geophysical surveys, the UK JNCC have established an effective deterrent range (EDR) of 5km for geophysical surveys (JNCC, 2020). Relevant sites would include SACs designated for marine mammals within 5km of the EWIC Inspection Survey Area. However, in

recognition of the highly mobile nature of marine mammals, the following has been assumed and used to define the area of search for relevant European Sites:

- Any harbour porpoise or common bottlenose dolphin from European Sites located in the relevant Management Unit (MU) (JNCC, 2015) could be present in the EWIC Inspection Survey Area. The MU for harbour porpoise is the Celtic and Irish Sea; for bottlenose dolphin it is the Irish Sea and Offshore Channel, Celtic Sea and SW England;
- Harbour (common) seals prefer to come ashore in sheltered waters, and they usually feed within 40-50km from their haul-out site, they are not known to make trips greater than 50km from haul out sites (DECC, 2016).
- Grey seal is known to travel large distances to forage up to 100km (Berwickshire & Northumberland Marine Nature Partnership, 2021).
- European otter is known to have a home range of 20km for females and 32km for males (Nature Scot, 2021).

In summary, Table 3-1 defines the search areas used to identify relevant European Sites for screening.

Table 3-1 Search Areas and Zone of Influence (ZOI)

Interest feature	Species	Area of Search (AoS)	Zone of Influence (ZOI)
Fish	Twaite shad	100 km	2.2 km
Birds	Most bird species	100 km	2 km
	Divers, seaduck	100 km	4 km
	Red-throated diver	100 km	10 km
Bats	All species	6 km	<100 m
Cetacean	Harbour porpoise	Celtic and Irish Sea MU	5 km (disturbance)
	Bottlenose dolphin	Irish Sea and offshore Channel and SW England	
Pinniped	Grey seal	100 km	
	Harbour (common) seal	50 km	
European otter		32 km	250 m

3.6 In-combination Effects in Irish Waters

A key requirement of the Habitats Directive is that the effects of any project on the European Site network should be considered in combination with other plans or projects. Following the guidelines outlined by the European Commission (EC, 2021), which recommend sourcing information about “characteristics of other plans or projects (implemented, approved, or proposed) that may cause in-combination or cumulative effects with the project being assessed on Natura 2000 sites,” various databases have been reviewed on the 10th August 2026. These include databases related to EIA, AA of plans and projects, regional or municipal plans, and local authority planning applications available from Competent Authorities.

As part of this SISAA report, all relevant plans and projects within the vicinity of the EWIC Inspection Survey Area have been examined, along with plans and projects within both the Licensed Area (FS004527) and transboundary plans and projects within the vicinity of the EWIC Inspection Survey Area and Licensed Area. All consented activities, developments, and applications for activities or developments within the EWIC Inspection Survey Area have been considered for their potential to

cause cumulative effects in combination with the proposed inspection survey activities on SACs, SPAs, and their qualifying interests

Commercial fisheries, shipping interests and recreational use have been screened out of the cumulative effects assessment as they represent existing baseline conditions rather than discrete projects, plans or licensed activities. Similarly, existing pipelines and cables within the EWIC Inspection Survey Area have been screened out as physical infrastructure, as their presence is not expected to interact with the proposed inspection surveys. However, any known or reasonably foreseeable maintenance, inspection, condition survey, repair or other licensed activities associated with this infrastructure, where information is available and where temporal overlap with the proposed surveys may occur, have been considered separately within the cumulative effects assessment. This includes activities that could result in overlapping vessel presence, underwater noise or seabed disturbance during the same period as the proposed works. Databases which were reviewed as part of this process included:

- The Department of Housing Local Government and Heritage - Foreshore Search Engine
- MARA's MUL and MAC Submitted Application's section of the MARA website
- An Coimisiún Pleanála (ACP) Planning Lists
- The DHLGH EIA Portal
- EPA Licence and Enforcement Access Portal
- Department of Transport – Marine Notices 2026

The review identified a number of projects which have progressed within the EWIC cable zone since installation (Table 3-2). A Foreshore Licence (FS007635) was granted for MaresConnect site investigations surveys from Mean High Water (MHW) to the 12 nm limit, including landfall investigation at south beach Rush.

In addition, the MaresConnect Interconnector has now received a MUL (MUL240008) for site investigation surveys from the 12 nm limit to the EEZ.

Table 3-2 Development Applications Near the EWIC Inspection Survey Area.

Name of development & developer	Reference	Type of activity	Commencement date	Licence Status	Approx. distance from EWIC Inspection Survey Area (km)
MaresConnect Interconnector Ltd	MUL240008	Geophysical and geotechnical site investigations from 12nm limit to the EEZ	2025	Determined – 30/06/2025	Overlaps
MaresConnect - Interconnector Ltd	FS007635	Foreshore site investigation works associated with the proposed Ireland-Wales electricity interconnector, including geophysical, geotechnical and environmental surveys.	2025	Determined	Overlaps
Microsoft Ireland Operations Ltd.	LIC230018	Geophysical survey and site investigations for a proposed subsea	03/07/2024	Determined – licence commenced	Overlaps

Name of development & developer	Reference	Type of activity	Commencement date	Licence Status	Approx. distance from EWIC Inspection Survey Area (km)
		fibre optic cable having a landfall at Portmarnock, County Dublin, with a proposed route traversing the Irish Sea to Abergele, Wales.		03/07/2024; 2-year term	
North Irish Sea Array (NISA) – Statkraft	ABP-319866-24	Marine Development Application for the construction of the North Irish Sea Array Offshore Wind Farm and associated infrastructure.	Not yet confirmed	Under consideration by An Coimisiún Pleanála (ACP)	Overlaps
The Leinster Project – Leinster Offshore Wind Ltd.	FS007162	Site investigation works including geophysical, geotechnical, archaeological, ecological, oceanographic, topographic and meteorological investigations for the proposed offshore wind farm.	2023 onwards	Applied – application remains listed	17.2
Dublin Array – RWE Renewables Ireland Ltd.	ABP-321992-24	Marine Development Application for the Dublin Array Offshore Wind Farm and associated infrastructure.	Not yet confirmed	Under consideration; further information requested	22.0
Codling Wind Park – Codling Wind Park Ltd. / ESB / Fred. Olsen Renewables	ABP-320768-24	Marine Development Application for the Codling Wind Park Offshore Wind Farm and associated infrastructure.	Not yet confirmed	Under consideration by An Coimisiún Pleanála	41.1
Oriel Offshore Wind Farm – Oriel Windfarm Ltd. / Parkwind / ESB	ABP-319799-24	Marine Development Application for the Oriel Offshore Wind Farm and associated infrastructure.	Not yet confirmed	Under consideration – further information submitted	28.9
Iarnród Éireann – East Coast Railway Infrastructure Protection Project	MUL240023	Geotechnical investigation, geophysical site investigation surveys, ecology and marine archaeology surveys to inform design options for coastal railway infrastructure protection.	Not confirmed	Determined	23.8

Name of development & developer	Reference	Type of activity	Commencement date	Licence Status	Approx. distance from EWIC Inspection Survey Area (km)
Wicklow Offshore Wind – Wicklow Offshore Wind Ltd.	FS007588	Foreshore site investigation works for the proposed export cable corridor, including geophysical, geotechnical, ecological and metocean surveys.	2023	Consultation	57.8
Wicklow Sea Wind – Wicklow Sea Wind Ltd.	FS007163	Site investigation works including geophysical, geotechnical, ecological, archaeological and metocean surveys for the proposed offshore wind farm.	Not confirmed	Consultation	60.4
Arklow Bank Wind Park 2 – SSE Renewables / Sure Partners Ltd.	ABP-319864-24	Marine Development Application for the Arklow Bank Wind Park 2 Offshore Wind Farm and associated infrastructure.	Not yet confirmed	Under consideration – further information submitted	65.4

Multiple offshore wind development planning applications have been submitted to ACP at the time of writing and have been identified as being within EWIC Inspection Survey Area (Table 3-2).

As of August 2026, Oriel, Arklow Bank Wind Park 2, NISA, Codling Wind Park and Dublin Array remain under consideration with the ACP Phase 1 offshore renewable energy application process and have not yet been determined. Various Foreshore Licence Applications and MUL applications have been identified as being within the EWIC Inspection Survey Area (Table 3-2).:

The Microsoft Ireland Operations Ltd. marine licence (LIC230018) relates to geophysical survey and site investigations for a proposed subsea fibre optic cable having a landfall at Portmarnock, County Dublin, with a route traversing the Irish Sea to Abergele, Wales. The licence was determined on 3 July 2024. The activity should therefore be considered in the cumulative assessment; however, any potential temporal overlap with the proposed EWIC Inspection survey works should be confirmed against the final survey programme.

The MaresConnect Interconnector is of particular relevance because the authorised MUL240008 area extends from the 12 nm limit to the EEZ and therefore overlaps the offshore extent of the proposed EWIC Inspection Survey Area. The associated Foreshore Licence FS007635 extends from MHW to the 12 nm limit and includes a number of landfall investigation zones, including Rush. The MUL was determined on 30 June 2025, while the Foreshore Licence was determined on 23 August 2024.

The Greater Dublin Drainage project is also considered relevant to the cumulative assessment. MUL250013 was determined by MARA on 7 April 2026 and permits marine site investigation works in Baldoyle Bay and the Irish Sea to inform the detailed engineering design of the GDD project. The potential for interaction with the proposed EWIC works is greatest in the nearshore area and should be considered against the final EWIC survey footprint and programme

Whilst the exact schedule for all marine activities is unknown, some spatial and temporal overlap with other marine operations may occur. However, the proposed EWIC Inspection Survey is a short-term, single-vessel, non-intrusive survey and does not involve seabed disturbance or construction activities. The potential pathway for in-combination effects are temporary increases in underwater noise and vessel presence. However, given the limited duration, localised nature and low intensity of the survey activities, together with existing background levels of marine traffic and disturbance within the Irish Sea, any cumulative effects would be minor and temporary. Therefore, no likely significant in-combination effects on the QI's SCI's or conservation objectives of European Sites are expected.

3.7 Transboundary In-Combination Effects

A review was undertaken to identify other activities and potential plans, projects, and activities in the surrounding area of the EWIC Inspection Survey Area in UK Waters which could have an in-combination effect with EWIC Inspection survey works taking place within the EWIC Inspection Survey Area. This was carried out on 10th of August 2026, and the review concluded that there were surveys and/or other activities which could potentially interact with the proposed site investigation works.

Table 3-3 Transboundary Plans and Projects

Name of development & developer	Licence ref	Type of activity	Commencement date	Licence Status	Approx. distance from EWIC Inspection Survey Area (km)
MaresConnect Limited	CML2331	Geophysical, Geotechnical and environmental surveys	Q1 2025	Determined	Overlaps
Stena Line Ports Ltd	DML1935	Holyhead Harbour Maintenance Dredging	2023-05-17 - 2028-12-31	Determined	40
Morlais renewable energy	ORML1938	Morlais Tidal Stream Demonstration Project	2021-12-14 - 2060-12-13	Determined	42.7

There is a marine licence in place for the MaresConnect project in UK waters (CML2331), which is particularly relevant because the project is an Ireland–Wales electricity interconnector and therefore extends across the Irish Sea. The MaresConnect Irish offshore site investigation licence (MUL240008) and the associated UK marine licence relate to the same overall interconnector project. The main Irish offshore survey activities associated with MUL240008 were authorised in 2025, and any potential further survey activities should be confirmed against the current project programme before commencement of the EWIC works.

Other activities identified in UK waters, including the Morlais Tidal Stream Demonstration Project is sufficiently distant from the proposed EWIC survey corridor and such that significant temporal and spatial interaction is not and therefore there can be no conceivable or likely significant effects.

Therefore, no confirmed transboundary survey activities currently identified which are expected to result in significant spatial and temporal overlap with the proposed EWIC inspection survey works. However, given that the proposed EWIC Inspection Survey area extends from the HWM at North Beach, Rush, offshore towards the EEZ, and because a number of subsea cable and offshore renewable

energy projects are being progressed within the wider Irish Sea, the final survey programme should be reviewed against current UK marine licence records immediately prior to mobilisation.

3.8 Potential Pressures

The OSPAR ICG-C potential pressures provide a framework for identifying potential impact pathways; however only those pressures relevant to the proposed geophysical and visual inspection surveys have been considered further in this assessment (OSPAR, 2011). In addition the MARA commissioned review of geophysical and geotechnical surveys was also reviewed (Long et al., 2026). Consistent with the findings of the MARA review the principal pathways are the following:

- **Visual (and above water noise) disturbance:** The disturbance of biota by anthropogenic activities, e.g. increased vessel movements, such as during construction phases for new infrastructure (bridges, cranes, port buildings etc), increased personnel movements, increased tourism, increased vehicular movements on shore etc disturbing bird roosting areas, seal haul out areas etc.
- **Underwater sound changes:** Increases over and above background noise levels (consisting of environmental noise (ambient) and incidental manmade/anthropogenic noise (apparent)) at a particular location. Species known to be affected are marine mammals and fish. The theoretical zones of noise influence (Richardson *et al.*, 1995) are Underwater noise (e.g. from shipping, underwater acoustic equipment) temporary or permanent hearing loss, discomfort & injury; response; masking and detection. In extreme cases noise pressures may lead to death.
- **In-combination effects:** Effects due to in-combination with other plans or projects.

Table 3-4 Potential Pressures, Zones of Influence and Protected Site Search Area

Receptor		Potential Pressure	Project Activity	Zone of influence (ZOI)
Birds		Visual and above water noise disturbance	Presence of survey vessel Geophysical surveys	Radial distances from EWIC Inspection Survey Area ▪ 10km Red-throated diver (pers coms Alex Robbins, Nature Scot, 13/07/2021) ▪ 4km divers and sea ducks (JNCC 2017) ▪ 2km all other seabird species (JNCC 2017) It is recognised that some seabirds from other SPAs will forage and loaf in the ZOI. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate
Bats		Visual and above water noise disturbance	Presence of survey vessels	<100 m and within EWIC Inspection Survey Area Effects on the bats light emitting from survey vessels.
Cetacean, fish, pinnipeds and otter		Changes to underwater noise (impulsive sound)	Presence of survey vessels Geophysical surveys Geotechnical survey Environmental survey	EDR of 5km for geophysical surveys (JNCC, 2020).
Pinniped	Grey seal		Presence of survey vessels	500m to 900m

Receptor		Potential Pressure	Project Activity	Zone of influence (ZOI)
	Harbour (common) seal	Visual (and above water noise) disturbance		Studies conducted on disturbance of harbour seal to different vessel types found that the largest range was 50 m of a visual (and above water noise) disturbance (Paterson <i>et al.</i>, 2015; Calambokidis <i>et al.</i>, 1991). Between 900m and 1,500m, hauled out grey seals could be expected to detect the presence of vessels and at closer than 900m a flight reaction could be expected (Marine Scotland 2019, Scottish Executive, 2007).
Otter		Visual (and above water noise) disturbance	Presence of survey vessels	250m Guidance on visual disturbance of otter from survey activities found that beyond about 250m, visual disturbance from the proposed activity is unlikely to be an issue. It is expected that there are unlikely to be adverse disturbance on otter beyond these distances along the shoreline (Marine Scotland, 2019).

3.9 Potential Pressures Screened out of Assessment

- The potential pressure on benthic habitats from sediment removal and seabed abrasion has been screened out as the proposed survey works do not include geotechnical sampling, jack-up barge operations, seabed-contacting equipment or the use of seabed anchors. The proposed MBES, SSS and environmental camera surveys will be undertaken from a survey vessel, with the SSS and camera system positioned above the seabed with no direct interaction with the seabed. Therefore, no disturbance, abrasion or displacement of benthic habitats is expected from the proposed survey activities.
- Siltation rate changes, including smothering (depth of vertical sediment overburden), Penetration and/or disturbance of the substrate below the surface of the seabed, including abrasion, have been screened out. The proposed EWIC Inspection Survey comprises non-intrusive geophysical and visual survey techniques and does not include geotechnical investigations, sediment sampling or anchoring. As such, no significant sediment disturbance is expected and there is no credible pathway for siltation or penetration effects on qualifying habitats or species of European Sites. Therefore, these pressures have been screened out from further assessment.
- Unplanned events (accidental oil or chemical spills)
 - The likelihood of a large oil spill occurring from the project vessel is extremely low and the risk is no greater than that for any other vessel in the region. The project vessel will be legally required to adhere to MARPOL Annex I requirements, and the Sea Pollution Acts, which prohibit the discharge of waste and other pollutants, and require the secure storage of fuels and other materials on board.
- Introduction or spread of non-indigenous species & translocations (competition)
 - Fouling organisms on vessel/rig hulls and in ship ballast tanks, introduction of invasive non-native species (INNS) may enter the marine environment. Should these introduced species survive and form established breeding populations, they can result in negative effects on the native biota. However, survey activity is unlikely to change the risk of the INNS as the vessels typically operate in a geographically localised area, and the risk from hull fouling is low, given the geographical working region and project vessels will be managed under the International Convention for the Control and Management of Ships' Ballast Water and Sediments standard.
- Underwater sound changes – Diving birds.

- The likelihood of a noise sensitive diving bird being in the vicinity of a noise generating operation is very low due to the surface activity associated with such operations disturbing the birds prior to commencement of noise generation (BEIS, 2019; Fließbach *et al.*, 2019; Garthe & Hüppop, 2004; Leopold & Camphuysen, 2009).
- Given the very low likelihood of interaction between the sound source and a diving bird due to the relatively short exposure time, the temporary and short-term nature of the survey work, the mobile nature of the surveys and the displacement of most diving species due to flushing disturbance, it can be determined that underwater noise would have no conceivable effect on diving seabirds in the vicinity including those which may forage in the area.
- Collision above and below water with static or moving objects not naturally found in the marine environment
 - There is a risk that marine mammals which are the QIs of SACs could collide with survey vessels. There is also a risk to basking shark, which are known to spend significant time at the surface and are more vulnerable to collision. However, basking shark are not a QI of any protected site in Ireland. Shipping collision is a recognised cause of marine mammal mortality worldwide. The key factor influencing the injury or mortality caused by collisions is the ship size and its travelling speed (Schoeman *et al.*, 2020).
 - A review of vessel collisions with marine animals undertaken by Schoeman *et al.* (2020) identified that most important influences on severity of any potential impact are vessel size and speed, with small vessels being more likely to cause injury. Reduction of speeds to less than 10 knots were observed to reduce the risk of lethal injury to marine animals by 50% (Vanderlaan and Taggart, 2007 within Schoeman *et al.*, 2020). Several organisations recommend reduction of vessel speeds to less than 10-13 knots to reduce the risk of collision with marine mammals, and other marine species (e.g. Federal Register, 2008; Ports of Auckland, 2015; JNCC, 2021).
 - Vessels undertaking the surveys will be either stationary or travelling at a standard survey speed of approximately 5-7km/h, which is equivalent to approximately 2.7-3.8 knots, which is significantly slower than speeds associated with marine mammal collision risk. Additionally, the collision risk is lower than that posed by commercial shipping activity which typically operates at 14 knots. Furthermore, the proposed EWIC Inspection Survey is a short-duration activity undertaken only periodically and confined to a small survey corridor associated with the existing cable route. Therefore, risk of injury to marine mammals QIs from collision is very low, and the significance of any effects will be imperceptible.

4. IDENTIFICATION OF RELEVANT EUROPEAN SITES

4.1 Overview

A geographic information system (GIS) was used to map the boundaries of SACs and SPAs in relation to the EWIC Inspection Survey Area. All SACs and SPAs which are within the defined search areas for identified receptors have been listed along with their QIs / SCIs in Tables 4-1 to Table 4-4. A total of 102 sites were screened in this assessment.

For each European Site, potential effects to the QIs / SCIs were identified and it was determined whether there is the potential for an interaction between the proposed EWIC Inspection surveys and the receptors i.e. whether there is a pressure-receptor pathway. This is determined by comparing information such as the extent of the zone of influence with information regarding the conservation feature e.g. species foraging distances, spatial extent of habitats etc. The interactions were defined as follows:

- Yes: A pathway between the proposed inspection surveys and the QI / SCI can be identified that is likely to result in an effect; or
- No: Either a pathway between the proposed inspection surveys and the QI / SCI cannot be identified or a pathway exists but there are no physical overlap of the impact and the QI / SCI.

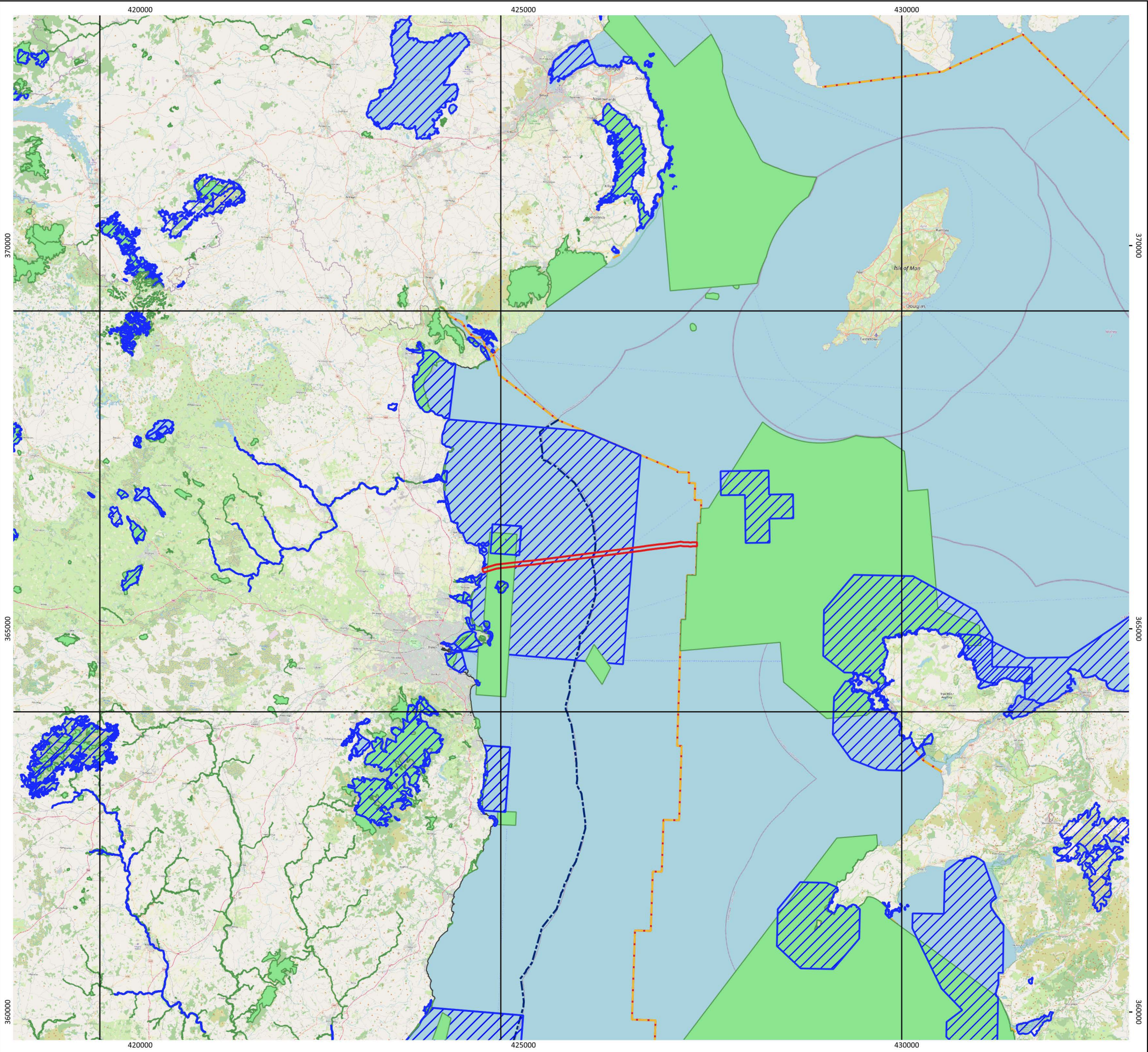
For all QIs / SCIs where it is determined that there is a potential pressure receptor pathway, the likely significance of the effect has been assessed in light of the site's conservation objectives, and with reference to relevant research. The significance of the effect has been assessed in light of the conservation objectives of the relevant European Sites and with reference to relevant scientific literature. The baseline information published data sources and reference documents used to inform the assessment are presented in Section 2.5.

For all QIs / SCIs where it is determined that there is no pathway, the QIs / SCIs have not been included in further assessment and therefore there can be no conceivable or likely significant effect.

4.2 Special Areas of Conservation

In March 2024 the DHLGH added new protection to 16 existing SAC's with harbour porpoise and bottlenose dolphin listed as QI's to the coastal SAC's (IWDG, 2024). The assessment considers the full EWIC Inspection Survey Area, extending from the Irish landfall at the HWM to the outer limit of the Irish EEZ. European Sites were identified and screened on the basis of potential SPR with the proposed inspection surveys, including consideration of mobile QIs and SCI that may interact with the survey area. Accordingly, the assessment is not restricted to European Sites that overlap the survey corridor and includes sites that may be connected through ecological processes or species movements. The Codling Fault Zone SAC and Lambay Island SAC have therefore been included in the assessment due to their harbour porpoise qualifying interests and the potential for individuals associated with these sites to occur within the survey area.

Recent research sets 20% as the threshold for the amount of habitat disturbed by underwater noise (Borsani *et al.*, 2023). Noise associated with operations will not exceed this, as assessed in Section 5.2.2. The assessment of likely significant effects to regional marine mammal populations found that there was no likely significant effect as any disturbance effects from noise associated with operations will be localised, temporary and transient.



EAST WEST INTERCONNECTOR

INSPECTION SURVEY

PROTECTED SITES

Protected Sites Within 100km of Inspection Survey Area

Drawing No: P2226-PROT-001

A

Legend

Maritime Usage Area

Environmental Designation

SPA

SAC

Adminstrative Boundaries

High Water Mark

12nm Territorial Sea Limit

EEZ

N

NOT TO BE USED FOR NAVIGATION

Date	2026-08-27 11:02:43
Coordinate System	WGS 84 / UTM zone 30N
WKID	EPSG:32630
Scale @A3	1:50,000
Data Sources	NPWS; DECE; OPENSTREETMAP
File Reference	J:\P2226\Mxd P2226_SISAA.qgz
Created By	Emma Kilbane-Lourenço
Reviewed By	Adam Johns
Approved By	Simon Bicknell

EirGrid

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Table 4-1 SAC and their Qualifying Interests to be Considered Further in the Screening Process

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Rockabill to Dalkey Island SAC 003000	▪ Reefs	Within	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed inspection surveys.	No
	▪ Harbour Porpoise (<i>Phocoena phocoena</i>)		Underwater sound changes	Yes – harbour porpoise may travel from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC inspection surveys and sound produced by the proposed EWIC Inspection Survey.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Rogerstown Estuary SAC 000208	▪ Estuaries ▪ Mudflats and sandflats not covered by seawater at low tide ▪ Salicornia and other annuals colonising mud and sand ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) ▪ Fixed coastal dunes with herbaceous vegetation (grey dunes)	0.78	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lambay Island SAC 000204	▪ Reefs ▪ Vegetated sea cliffs of the Atlantic and Baltic coasts	4.09	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	▪ Grey Seal (<i>Halichoerus grypus</i>) ▪ Harbour Seal (<i>Phoca vitulina</i>) ▪ Harbour Porpoise (<i>Phocoena phocoena</i>)		Visual (and above water noise disturbance)	Yes – Hauled out seals within the site may be disturbed by the presence of the vessel and by sound produced during the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
			Underwater sound changes	Yes – seal and harbour porpoise may travel from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC Inspection surveys and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Malahide Estuary SAC 000205	▪ Mudflats and sandflats not covered by seawater at low tide ▪ <i>Salicornia</i> and other annuals colonising mud and sand ▪ Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) ▪ Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	5.52	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	Fixed coastal dunes with herbaceous vegetation (grey dunes)					
Baldoyle Bay SAC 000199	- Mudflats and sandflats not covered by seawater at low tide <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	11.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ireland's Eye SAC 002193	- Perennial vegetation of stony banks - Vegetated sea cliffs of the Atlantic and Baltic coasts	12.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Howth Head SAC 000202	- Vegetated sea cliffs of the Atlantic and Baltic coasts - European dry heaths	15.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
North Dublin Bay SAC 000206	- Mudflats and sandflats not covered by seawater at low tide - Annual vegetation of drift lines <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>) - Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	15.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection survey.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Fixed coastal dunes with herbaceous vegetation (grey dunes) - Humid dune slacks - Petalwort (<i>Petalophyllum ralfsii</i>)					
South Dublin Bay SAC 000210	- 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	21.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection survey.	No
Boyne Coast and Estuary SAC 001957	- Estuaries - Mudflats and sandflats not covered by seawater at low tide - Annual vegetation of drift lines <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) - Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - Fixed coastal dunes with herbaceous vegetation (grey dunes)	22.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Codling Fault Zone SAC 003015	Submarine structures made by leaking gases	22.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
	Harbour Porpoise (<i>Phocoena phocoena</i>)		Underwater sound changes	Yes – harbour porpoise may travel from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC Inspection survey and	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
				sound produced by the proposed EWIC Inspection surveys.		
River Boyne And River Blackwater SAC 002299	- Alkaline fens - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) - River Lamprey (<i>Lampetra fluviatilis</i>) - Salmon (<i>Salmo salar</i>) - Otter (<i>Lutra lutra</i>)	26.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Clogher Head SAC 001459	- Vegetated sea cliffs of the Atlantic and Baltic coasts - European dry heaths	30.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Rye Water Valley/Carton SAC 001398	- Petrifying springs with tufa formation (<i>Cratoneurion</i>) - Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) - Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>)	32.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Wicklow Mountains SAC 002122	- Oligotrophic waters containing very few minerals of sandy plains (<i>Littorelletalia uniflorae</i>) - Natural dystrophic lakes and ponds - Northern Atlantic wet heaths with <i>Erica tetralix</i> - European dry heaths - Alpine and Boreal heaths - Calaminarian grasslands of the <i>Violetalia calaminariae</i> - Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas	34.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	(and submountain areas, in Continental Europe) - Blanket bogs (* if active bog) - Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) - Calcareous rocky slopes with chasmophytic vegetation - Siliceous rocky slopes with chasmophytic vegetation - Old sessile oak woods with Ilex and Blechnum in the British Isles - Otter (<i>Lutra lutra</i>)					
Glenasmole Valley SAC 001209	- Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) - Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) - Petrifying springs with tufa formation (<i>Cratoneurion</i>)	35.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ballyman Glen SAC 000713	- Petrifying springs with tufa formation (<i>Cratoneurion</i>) - Alkaline fens	35.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Knocksink Wood SAC 000725	- Petrifying springs with tufa formation (<i>Cratoneurion</i>) - Old sessile oak woods with Ilex and Blechnum in the British Isles	35.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)					
Bray Head SAC 000714	- Vegetated sea cliffs of the Atlantic and Baltic coasts - European dry heaths	36.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Dundalk Bay SAC 000455	- Estuaries - Mudflats and sandflats not covered by seawater at low tide - Perennial vegetation of stony banks <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	41.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glen of the Downs SAC 000719	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	42.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
The Murrough Wetlands SAC 002249	- Annual vegetation of drift lines - Perennial vegetation of stony banks - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>) - Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> - Alkaline fens	45.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Carriggower Bog SAC 000716	Transition mires and quaking bogs	46.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Red Bog, Kildare SAC 000397	Transition mires and quaking bogs	46.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Carlingford Shore SAC 002306	- Annual vegetation of drift lines - Perennial vegetation of stony banks	49.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ballynafagh Bog SAC 000391	- Active raised bogs - Degraded raised bogs still capable of natural regeneration - Depressions on peat substrates of the Rhynchosporion	51.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ballynafagh Lake SAC 001387	- Alkaline fens - Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) - Marsh Fritillary (<i>Euphydryas aurinia</i>)	52.3	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Carlingford Mountain SAC 000453	- Northern Atlantic wet heaths with <i>Erica tetralix</i> - European dry heaths - Alpine and Boreal heaths - Species-rich <i>Nardus</i> grasslands, on siliceous substrates in mountain areas (and submountain areas, in Continental Europe) - Blanket bogs (* if active bog)	53.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Transition mires and quaking bogs - Alkaline fens - Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) - Calcareous rocky slopes with chasmophytic vegetation - Siliceous rocky slopes with chasmophytic vegetation					
Mouds Bog SAC 002331	- Active raised bogs - Degraded raised bogs still capable of natural regeneration - Depressions on peat substrates of the Rhynchosporion	57.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Girley (Drewstown) Bog SAC 002203	Degraded raised bogs still capable of natural regeneration	58.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Wicklow Reef SAC 002274	Reefs	59.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Vale of Clara (Rathdrum Wood) SAC 000733	Old sessile oak woods with Ilex and Blechnum in the British Isles	62.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Pollardstown Fen SAC 000396	- Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> - Petrifying springs with tufa formation (<i>Cratoneurion</i>)	62.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Alkaline fens - Geyer's Whorl Snail (<i>Vertigo geyeri</i>) - Narrow-mouthed Whorl Snail (<i>Vertigo angustior</i>) - Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>)					
Mount Hevey Bog SAC 002342	- Active raised bogs - Degraded raised bogs still capable of natural regeneration - Depressions on peat substrates of the Rhynchosporion	62.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Deputy's Pass Nature Reserve SAC 000717	Old sessile oak woods with Ilex and Blechnum in the British Isles	63.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Slaney River Valley SAC 000781	- Estuaries - Mudflats and sandflats not covered by seawater at low tide - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>) - Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation - Old sessile oak woods with Ilex and Blechnum in the British Isles - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)	64.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) - Sea Lamprey (<i>Petromyzon marinus</i>) - Brook Lamprey (<i>Lampetra planeri</i>) - River Lamprey (<i>Lampetra fluviatilis</i>) - Salmon (<i>Salmo salar</i>) - Otter (<i>Lutra lutra</i>)					
	- Twaite Shad (<i>Alosa fallax fallax</i>) - Harbour Seal (<i>Phoca vitulina</i>)		Underwater sound changes	Yes – Twaite shad may travel from SAC to site and underwater noise from geophysical survey could disturb twaite shad during migration. Seals foraging within the site may be disturbed by the presence of the vessel during the proposed EWIC Inspection surveys and sound produced by the proposed EWIC Inspection surveys. Atlantic salmon, sea lamprey, brook lamprey, and river lamprey are not considered sensitive to underwater sound changes.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
	Harbour Seal (<i>Phoca vitulina</i>)		Visual (and above water noise disturbance)	Yes – seals may travel from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC Inspection surveys and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
The Long Derries, Edenderry SAC 000925	Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites)	64.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Killyconny Bog (Cloghbally) SAC 000006	- Active raised bogs - Degraded raised bogs still capable of natural regeneration	64.6	None	Yes – harbour seal may travel from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC Inspection survey and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Magherabeg Dunes SAC 001766	- Annual vegetation of drift lines - Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - Fixed coastal dunes with herbaceous vegetation (grey dunes) - Petrifying springs with tufa formation (Cratoneurion)	65.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Buckroney-Brittas Dunes and Fen SAC 000729	- Annual vegetation of drift lines - Perennial vegetation of stony banks <i>Juncetalia maritimi</i> (Mediterranean salt meadows) - Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - Fixed coastal dunes with herbaceous vegetation (grey dunes) - Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>)	69.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) - Humid dune slacks - Alkaline fens					
Lough Bane and Lough Glass SAC 002120	- Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. - White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	72.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
River Barrow And River Nore SAC 002162	- Estuaries - Mudflats and sandflats not covered by seawater at low tide - Reefs <i>Salicornia</i> and other annuals colonising mud and sand - Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) - Mediterranean salt meadows (<i>Juncetalia maritimi</i>) - Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation [3260] - European dry heaths [4030] - Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels - Petrifying springs with tufa formation (Cratoneurion) - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	73.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) - Desmoulin's Whorl Snail (<i>Vertigo moulinsiana</i>) - Freshwater Pearl Mussel (<i>Margaritifera margaritifera</i>) - White-clawed Crayfish (<i>Austropotamobius pallipes</i>) - Sea Lamprey (<i>Petromyzon marinus</i>) - Brook Lamprey (<i>Lampetra planeri</i>) - River Lamprey (<i>Lampetra fluviatilis</i>) - Salmon (<i>Salmo salar</i>) - Otter (<i>Lutra lutra</i>) - Killarney Fern (<i>Trichomanes speciosum</i>) - Nore Pearl Mussel (<i>Margaritifera durrovensis</i>)					
	Twaite Shad (<i>Alosa fallax fallax</i>)		Underwater sound changes	Yes – Twaite shad may travel from SAC to site and underwater noise from geophysical survey could disturb twaite shad during migration. Atlantic salmon, sea lamprey, brook lamprey, and river lamprey are not considered sensitive to underwater sound changes.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Lough Lene SAC 002121	- Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp. - White-clawed Crayfish (<i>Austropotamobius pallipes</i>)	75.0	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
White Lough, Ben Loughs and	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	76.3	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Lough Doo SAC 001810	White-clawed Crayfish (<i>Austropotamobius pallipes</i>)				effect with the proposed EWIC Inspection surveys.	
Magherabeg Dunes SAC 001766	- Annual vegetation of drift lines - Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - Fixed coastal dunes with herbaceous vegetation (grey dunes) - Petrifying springs with tufa formation (<i>Cratoneurion</i>)	76.3	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Wooddown Bog SAC 002205	Degraded raised bogs still capable of natural regeneration	77.5	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Holdenstown Bog SAC 001757	Transition mires and quaking bogs	79.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Scragh Bog SAC 000692	- Transition mires and quaking bogs - Alkaline fens - Slender Green Feather-moss (<i>Hamatocaulis vernicosus</i>)	84.4	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lough Ennell SAC 000685	Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara</i> spp.	84.8	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Lough Owel SAC 000688	▪ Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	84.8	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Raheenmore Bog SAC 000582	▪ Active raised bogs Degraded raised bogs still capable of natural regeneration Depressions on peat substrates of the Rhynchosporion	85.1	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Moneybeg and Clareisland Bogs SAC 002340	▪ Active raised bogs	85.6	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Kilpatrick Sandhills SAC 001742	▪ Annual vegetation of drift lines Embryonic shifting dunes Shifting dunes along the shoreline with Ammophila arenaria (white dunes) Fixed coastal dunes with herbaceous vegetation (grey dunes) Atlantic decalcified fixed dunes (Calluno-Ulicetea)	87.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Garriskil Bog SAC 000679	▪ Active raised bogs	88.9	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Mountmellick SAC 002141	▪ Vertigo moulinsiana (Desmoulin's Whorl Snail)	89.9	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Split Hills and Long Hill Esker SAC 001831	▪ Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\ important orchid sites)	90.5	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Derragh Bog SAC 002201	▪ Active raised bogs	91.3	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ballyprior Grassland SAC 002256	▪ Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (\ important orchid sites)	91.5	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ardagullion Bog SAC 002341	▪ Active raised bogs	97.1	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Charleville Wood SAC 000571	▪ Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	99.1	None	No – No pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Table 4-2 SPAs and Their Qualifying Interests to be Considered Further in the Screening Process

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
North-West Irish Sea SPA 004236	- Red-throated Diver (<i>Gavia stellata</i>) - Great Northern Diver (<i>Gavia immer</i>) - Fulmar (<i>Fulmarus glacialis</i>) - Manx Shearwater (<i>Puffinus puffinus</i>) - Cormorant (<i>Phalacrocorax carbo</i>) - Shag (<i>Phalacrocorax aristotelis</i>) - Common Scoter (<i>Melanitta nigra</i>) - Little Gull (<i>Larus minutus</i>) - Black-headed Gull (<i>Chroicocephalus ridibundus</i>) - Common Gull (<i>Larus canus</i>) - Lesser Black-backed Gull (<i>Larus fuscus</i>) - Herring Gull (<i>Larus argentatus</i>) - Great Black-backed Gull (<i>Larus marinus</i>) - Kittiwake (<i>Rissa tridactyla</i>) - Roseate Tern (<i>Sterna dougallii</i>) - Common Tern (<i>Sterna hirundo</i>) - Arctic Tern (<i>Sterna paradisaea</i>) - Little Tern (<i>Sterna albifrons</i>) - Guillemot (<i>Uria aalge</i>) - Razorbill (<i>Alca torda</i>) - Puffin (<i>Fratercula arctica</i>)	Within	Visual (and above water noise) disturbance	Yes – It is possible that survey activities could disturb breeding and nesting birds if present in the proposed site.	Yes – Proposed EWIC Inspection surveys could potentially overlap with surveys for the other offshore developments in the area.	Yes
Rogerstown Estuary SPA 004015	- Greylag Goose (<i>Anser anser</i>) - Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Shelduck (<i>Tadorna tadorna</i>) - Shoveler (<i>Anas clypeata</i>)	0.71	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Oystercatcher (<i>Haematopus ostralegus</i>) - Ringed Plover (<i>Charadrius hiaticula</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Knot (<i>Calidris canutus</i>) - Dunlin (<i>Calidris alpina</i>) - Black-tailed Godwit (<i>Limosa limosa</i>) - Redshank (<i>Tringa totanus</i>) - Wetland and Waterbirds			species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.		
Rockabill SPA 004014	- Purple Sandpiper (<i>Calidris maritima</i>) - Roseate Tern (<i>Sterna dougallii</i>) - Common Tern (<i>Sterna hirundo</i>) - Arctic Tern (<i>Sterna paradisaea</i>)	2.19	Visual (and above water noise) disturbance	Yes – It is possible that the Roseate Tern (max foraging distance 30km), Arctic Tern (max foraging distance 25km) and Common Tern (max foraging distance 18km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Lambay Island SPA 004069	- Fulmar (<i>Fulmarus glacialis</i>) - Cormorant (<i>Phalacrocorax carbo</i>) - Shag (<i>Phalacrocorax aristotelis</i>) - Greylag Goose (<i>Anser anser</i>) - Lesser Black-backed Gull (<i>Larus fuscus</i>) - Herring Gull (<i>Larus argentatus</i>) - Kittiwake (<i>Rissa tridactyla</i>) - Guillemot (<i>Uria aalge</i>) - Razorbill (<i>Alca torda</i>) - Puffin (<i>Fratercula arctica</i>)	3.65	Visual (and above water noise) disturbance	Yes – It is possible that the fulmar (max foraging distance 100km), cormorant (max foraging distance of 25km), lesser black-backed gull (max foraging distance of 127km), herring gull (max foraging distance of 59km), kittiwake (max foraging distance of 156km), razorbill (max foraging distance of 88km), puffin (max foraging distance of 137km) and guillemot (max foraging range of 73km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Skerries Islands SPA 004122	- Cormorant (<i>Phalacrocorax carbo</i>) - Shag (<i>Phalacrocorax aristotelis</i>) - Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Purple Sandpiper (<i>Calidris maritima</i>)	4.30	Visual (and above water noise) disturbance	Yes – It is possible that the cormorant (max foraging distance of 25km), herring gull (max foraging distance of 59km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Turnstone (<i>Arenaria interpres</i>) - Herring Gull (<i>Larus argentatus</i>)					
Malahide Estuary SPA004025	- Great Crested Grebe (<i>Podiceps cristatus</i>) - Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Shelduck (<i>Tadorna tadorna</i>) - Pintail (<i>Anas acuta</i>) - Goldeneye (<i>Bucephala clangula</i>) - Red-breasted Merganser (<i>Mergus serrator</i>) - Oystercatcher (<i>Haematopus ostralegus</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Knot (<i>Calidris canutus</i>) - Dunlin (<i>Calidris alpina</i>) - Black-tailed Godwit (<i>Limosa limosa</i>) - Bar-tailed Godwit (<i>Limosa lapponica</i>) - Redshank (<i>Tringa totanus</i>) - Wetland and Waterbirds	6.77	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Baldoyle Bay SPA 004016	- Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Shelduck (<i>Tadorna tadorna</i>) - Ringed Plover (<i>Charadrius hiaticula</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Bar-tailed Godwit (<i>Limosa lapponica</i>) - Wetland and Waterbirds	12.0	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
				capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.		
Ireland's Eye SPA 004117	- Cormorant (<i>Phalacrocorax carbo</i>) - Herring Gull (<i>Larus argentatus</i>) - Kittiwake (<i>Rissa tridactyla</i>) - Guillemot (<i>Uria aalge</i>) - Razorbill (<i>Alca torda</i>)	12.4	Visual (and above water noise) disturbance	Yes – It is possible that the cormorant (max foraging distance of 25km), herring gull (max foraging distance of 59km), kittiwake (max foraging distance of 156km), razorbill (max foraging distance of 88km) and guillemot (max foraging range of 73km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Howth Head Coast SPA 004113	Kittiwake (<i>Rissa tridactyla</i>)	14.9	Visual (and above water noise) disturbance	Yes – It is possible that the kittiwake (max foraging distance of 156km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
North Bull Island SPA004006	- Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Shelduck (<i>Tadorna tadorna</i>) - Teal (<i>Anas crecca</i>) - Pintail (<i>Anas acuta</i>) - Shoveler (<i>Anas clypeata</i>) - Oystercatcher (<i>Haematopus ostralegus</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Knot (<i>Calidris canutus</i>) - Sanderling (<i>Calidris alba</i>) - Dunlin (<i>Calidris alpina</i>) - Black-tailed Godwit (<i>Limosa limosa</i>) - Bar-tailed Godwit (<i>Limosa lapponica</i>) - Curlew (<i>Numenius arquata</i>)	15.2	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Redshank (<i>Tringa totanus</i>) - Turnstone (<i>Arenaria interpres</i>) - Black-headed Gull (<i>Chroicocephalus ridibundus</i>) - Wetland and Waterbirds					
River Nanny Estuary and Shore SPA 004158	- Oystercatcher (<i>Haematopus ostralegus</i>) - Ringed Plover (<i>Charadrius hiaticula</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Knot (<i>Calidris canutus</i>) - Sanderling (<i>Calidris alba</i>) - Herring Gull (<i>Larus argentatus</i>) - Wetland and Waterbirds	16.4	Visual (and above water noise) disturbance	Yes – It is possible that the herring gull (max foraging distance of 59km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
South Dublin Bay and River Tolka Estuary SPA 004024	- Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Oystercatcher (<i>Haematopus ostralegus</i>) - Ringed Plover (<i>Charadrius hiaticula</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Knot (<i>Calidris canutus</i>) - Sanderling (<i>Calidris alba</i>) - Dunlin (<i>Calidris alpina</i>) - Bar-tailed Godwit (<i>Limosa lapponica</i>) - Redshank (<i>Tringa totanus</i>) - Black-headed Gull (<i>Chroicocephalus ridibundus</i>) - Roseate Tern (<i>Sterna dougallii</i>) - Common Tern (<i>Sterna hirundo</i>) - Arctic Tern (<i>Sterna paradisaea</i>) - Wetland and Waterbirds	19.3	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Boyne Estuary SPA 004080	- Shelduck (<i>Tadorna tadorna</i>) - Oystercatcher (<i>Haematopus ostralegus</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Lapwing (<i>Vanellus vanellus</i>) - Knot (<i>Calidris canutus</i>) - Sanderling (<i>Calidris alba</i>) - Black-tailed Godwit (<i>Limosa limosa</i>) - Redshank (<i>Tringa totanus</i>) - Turnstone (<i>Arenaria interpres</i>) - Little Tern (<i>Sterna albifrons</i>) - Wetland and Waterbirds	23.8	Visual (and above water noise) disturbance	No – Birds identified as being sensitive to the proposed EWIC Inspection surveys are nesting birds and individuals within 2km of the EWIC Inspection Survey Area. It is bird species from this site that could be foraging in the zone of influence. However, disturbance will be limited in extent and duration and there is sufficient space in the surrounding environment for birds to temporarily relocate. Therefore, the proposed EWIC Inspection surveys are not capable of undermining the site's conservation objectives. This SPA and qualifying interests are intertidal, and foraging ranges are unlikely to overlap with the EWIC Inspection Survey Area.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Dalkey Islands SPA 004172	- Roseate Tern (<i>Sterna dougallii</i>) - Common Tern (<i>Sterna hirundo</i>) - Arctic Tern (<i>Sterna paradisaea</i>)	27.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
River Boyne and River Blackwater SPA 004232	Kingfisher (<i>Alcedo atthis</i>)	29.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Wicklow Mountains SPA 004040	- Merlin (<i>Falco columbarius</i>) - Peregrine (<i>Falco peregrinus</i>)	34.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Dundalk Bay SPA004026	- Great Crested Grebe (<i>Podiceps cristatus</i>) - Greylag Goose (<i>Anser anser</i>) - Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Shelduck (<i>Tadorna tadorna</i>) - Teal (<i>Anas crecca</i>)	38.5	Visual (and above water noise) disturbance	Yes – It is possible that the herring gull (max foraging distance of 100km) and common gull (max foraging distance of 50km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Mallard (<i>Anas platyrhynchos</i>) - Pintail (<i>Anas acuta</i>) - Common Scoter (<i>Melanitta nigra</i>) - Red-breasted Merganser (<i>Mergus serrator</i>) - Oystercatcher (<i>Haematopus ostralegus</i>) - Ringed Plover (<i>Charadrius hiaticula</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Grey Plover (<i>Pluvialis squatarola</i>) - Lapwing (<i>Vanellus vanellus</i>) - Knot (<i>Calidris canutus</i>) - Dunlin (<i>Calidris alpina</i>) - Black-tailed Godwit (<i>Limosa limosa</i>) - Bar-tailed Godwit (<i>Limosa lapponica</i>) - Curlew (<i>Numenius arquata</i>) - Redshank (<i>Tringa totanus</i>) - Black-headed Gull (<i>Chroicocephalus ridibundus</i>) - Common Gull (<i>Larus canus</i>) - Herring Gull (<i>Larus argentatus</i>) - Wetland and Waterbirds					
The Murrough SPA 004186	- Red-throated Diver (<i>Gavia stellata</i>) - Greylag Goose (<i>Anser anser</i>) - Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) - Wigeon (<i>Anas penelope</i>) - Teal (<i>Anas crecca</i>) - Black-headed Gull (<i>Chroicocephalus ridibundus</i>) - Herring Gull (<i>Larus argentatus</i>) - Little Tern (<i>Sterna albifrons</i>) - Wetland and Waterbirds	43.4	Visual (and above water noise) disturbance	Yes – It is possible that the herring gull (max foraging distance of 100km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Stabannan-Braganstown SPA 004091	▪ Greylag Goose (<i>Anser anser</i>)	45.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Poulaphouca Reservoir SPA 004063	▪ Greylag Goose (<i>Anser anser</i>) ▪ Lesser Black-backed Gull (<i>Larus fuscus</i>)	46.5	Visual (and above water noise) disturbance	Yes – It is possible that the lesser black-backed gull (max foraging distance of 127km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Carlingford Lough SPA 004078	▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) ▪ Wetland and Waterbirds	51.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Wicklow Head SPA 004127	▪ Kittiwake (<i>Rissa tridactyla</i>)	60.6	Visual (and above water noise) disturbance	Yes – It is possible that the kittiwake (max foraging distance of 156km) could be disturbed by survey activities.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Lough Derravarragh SPA 004043	▪ Whooper Swan (<i>Cygnus cygnus</i>) ▪ Pochard (<i>Aythya ferina</i>) ▪ Tufted Duck (<i>Aythya fuligula</i>) ▪ Coot (<i>Fulica atra</i>) ▪ Wetland and Waterbirds	80.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lough Owel SPA 004047	▪ Coot (<i>Fulica atra</i>) ▪ Shoveler (<i>Spatula clypeata</i>) ▪ Wetland and Waterbirds	84.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lough Sheelin SPA 004065	▪ Great Crested Grebe (<i>Podiceps cristatus</i>) ▪ Pochard (<i>Aythya ferina</i>) ▪ Tufted Duck (<i>Aythya fuligula</i>) ▪ Goldeneye (<i>Bucephala clangula</i>) ▪ Wetland and Waterbirds	85.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction EWIC Inspection Survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Lough Ennell SPA004044	- Pochard (<i>Aythya ferina</i>) - Tufted Duck (<i>Aythya fuligula</i>) - Coot (<i>Fulica atra</i>) - Wetland and Waterbirds	85.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Garriskil Bog SPA 004102	Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>)	90.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lough Iron SPA 004046	- Whooper Swan (<i>Cygnus cygnus</i>) - Teal (<i>Anas crecca</i>) - Coot (<i>Fulica atra</i>) - Golden Plover (<i>Pluvialis apricaria</i>) - Greenland White-fronted Goose (<i>Anser albifrons flavirostris</i>) - Wigeon (<i>Mareca penelope</i>) - Shoveler (<i>Spatula clypeata</i>) - Wetland and Waterbirds	90.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lough Kinale and Derragh Lough SPA 004061	- Pochard (<i>Aythya ferina</i>) - Tufted Duck (<i>Aythya fuligula</i>) - Wetland and Waterbirds	90.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glen Lough SPA 004045	Whooper Swan (<i>Cygnus cygnus</i>)	98.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Slieve Bloom Mountains SPA 004160	Hen Harrier (<i>Circus cyaneus</i>)	98.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Table 4-3 Screening Transboundary SACs

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
North Anglesey Marine / Gogledd Môn Forol SAC UK0030398	Harbour porpoise (<i>Phocoena phocoena</i>)	Within	Underwater noise changes	Yes – Harbour porpoise may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	Yes – Proposed EWIC Inspection survey could potentially overlap with geophysical surveys for the other offshore developments in the area.	Yes
Croker Carbonate Slabs SAC UK0030381	Submarine structures made by leaking gases	7.82	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glannau Ynys Gybi/ Holy Island Coast SAC UK0013046	- Vegetated sea cliffs of the Atlantic and Baltic Coasts - European dry heaths - Northern Atlantic wet heaths with <i>Erica tetralix</i>	50.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Pisces Reef Complex SAC UK0030379	Reefs	53.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Bae Cemlyn/ Cemlyn Bay SAC UK0030114	- Coastal lagoons - Perennial vegetation of stony banks	54.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Llyn Dinam SAC UK0030186	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	61.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Rostrevor Wood SAC UK0030268	Old sessile oak woods with Ilex and Blechnum in the British Isles	62.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Murlough SAC UK0016612	- Fixed coastal dunes with herbaceous vegetation (grey dunes) - Atlantic decalcified fixed dunes (<i>Calluno-Ulicetea</i>) - Sandbanks which are slightly covered by sea water all the time - Mudflats and sandflats not covered by seawater at low tide - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) - Embryonic shifting dunes "Shifting dunes along the shoreline with <i>Ammophila arenaria</i> ("white dunes")" - Dunes with <i>Salix repens</i> ssp. <i>argentea</i> (<i>Salicion arenariae</i>) - Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>	62.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	Harbour seal (<i>Phoca vitulina</i>)		Visual and above water noise disturbance	Yes – Harbour seal may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
			Underwater noise changes	Yes – Harbour seal may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
North Channel SAC UK0030399	Harbour porpoise (<i>Phocoena phocoena</i>)	63.1	Underwater noise changes	Yes – Harbour porpoise may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Eastern Mourne SAC UK0016615	- Northern Atlantic wet heaths with <i>Erica tetralix</i> - European dry heaths - Alpine and Boreal heaths - Siliceous alpine and boreal grasslands - Blanket bogs (* if active bog) * Priority feature - Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>) - Siliceous rocky slopes with chasmophytic vegetation	63.4	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Slieve Gullion SAC UK0030277	European dry heaths	68.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Derryleckagh SAC UK0016620	- Transition mires and quaking bogs - Old sessile oak woods with Ilex and Blechnum in the British Isles	70.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes SAC UK0020021	- Embryonic shifting dunes - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes) - Fixed coastal dunes with herbaceous vegetation (grey dunes) - Dunes with <i>Salix repens ssp. argentea</i> (<i>Salicion arenariae</i>) - Humid dune slacks - Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation - Petalwort (<i>Petalophyllum ralfsii</i>) - Shore dock (<i>Rumex rupestris</i>)	71.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glannau Mn: Cors heli / Anglesey Coast: Saltmarsh SAC UK0020025	- Salicornia and other annuals colonizing mud and sand - Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) - Estuaries - Mudflats and sandflats not covered by seawater at low tide	71.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Corsydd Mn/ Anglesey Fens SAC UK0012884	▪ Hard oligo-mesotrophic waters with benthic vegetation of Chara spp. ▪ Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> ▪ Alkaline fens ▪ Northern Atlantic wet heaths with <i>Erica tetralix</i> ▪ Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caerulea</i>) ▪ Geyer's whorl snail (<i>Vertigo geyeri</i>) ▪ Southern damselfly (<i>Coenagrion mercurial</i>) ▪ Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>	72.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Lecale Fens SAC UK0030180	▪ Alkaline fens	73.2	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Y Fenai a Bae Conwy/ Menai Strait and Conwy Bay SAC UK0030202	▪ Sandbanks which are slightly covered by sea water all the time ▪ Mudflats and sandflats not covered by seawater at low tide ▪ Reefs ▪ Large shallow inlets and bays ▪ Submerged or partially submerged sea caves	73.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Glan-traeth SAC UK0030042	Great crested newt (<i>Triturus cristatus</i>)	77.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Strangford Lough SAC UK0016618	- Mudflats and sandflats not covered by seawater at low tide - Coastal lagoons - Large shallow inlets and bays - Reefs - Annual vegetation of drift lines - Perennial vegetation of stony banks - Salicornia and other annuals colonizing mud and sand - Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>)	78.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
			Visual (and above water noise) disturbance	Yes – Hauled out seals within the site may be disturbed by the presence of the vessel and by sound produced during the proposed EWIC Inspection surveys	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
			Underwater sound changes	Yes – Harbour seal may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Ballykilbeg SAC UK0030319	Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>	79.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
West Wales Marine / Gorllewin Cymru Forol SAC UK0030397	Harbour porpoise (<i>Phocoena phocoena</i>)	81.1	Underwater noise changes	Yes – Harbour porpoise may travel from SAC to site to forage and may be disturbed by the presence of the vessel and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Hollymount SAC UK0030169	- Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae) - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles	82.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC UK0013117	- Sandbanks which are slightly covered by sea water all the time - Estuaries - Coastal lagoons - Large shallow inlets and bays - Reefs - Mudflats and sandflats not covered by seawater at low tide - Salicornia and other annuals colonizing mud and sand - Atlantic salt meadows (<i>Glaucopuccinellietalia maritimae</i>) - Submerged or partially submerged sea caves - Otter (<i>Lutra lutra</i>)	83.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
	Grey seal (<i>Halichoerus grypus</i>)		Visual (and above water noise) disturbance	Yes – Hauled out seals within the site may be disturbed by the presence of the vessel and by sound produced during the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Bottlenose dolphin (<i>Tursiops truncatus</i>) - Grey seal (<i>Halichoerus grypus</i>)		Underwater sound changes	Yes – seal and cetaceans may move from SAC to the site and may be disturbed by the presence of the vessel during the proposed EWIC Inspection surveys and sound produced by the proposed EWIC Inspection surveys.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	Yes
Afon Gwyrfaï a Llyn Cwellyn SAC UK0030046	- Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetea</i> - Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation - Atlantic salmon (<i>Salmo salar</i>) - Floating water-plantain (<i>Luronium natans</i>) - Otter (<i>Lutra lutra</i>)	85.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Clogwyni Pen Llyn/ Seacliffs of Llyn SAC UK0030271	Vegetated sea cliffs of the Atlantic and Baltic Coasts	87.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glynllifon SAC UK0012661		87.3		No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	
Corsydd Llyn/ Llyn Fens SAC UK0030187	- Alkaline fens - Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> - Desmoulin's whorl snail (<i>Vertigo moulinsiana</i>)	88.0	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	Geyer's whorl snail (<i>Vertigo geyeri</i>)					
Turmennan SAC UK0030291	Transition mires and quaking bogs	88.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Corsydd Eifionydd SAC UK0030121	- Transition mires and quaking bogs - Marsh fritillary butterfly (<i>Euphydryas aurinia</i>) - Slender green feather-moss (<i>Hamatocaulis vernicosus</i>)	90.7	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Eryri/ Snowdonia UK0012946	- Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or <i>Isoëto-Nanojuncetea</i> - Siliceous alpine and boreal grasslands - Hydrophilous tall-herb fringe communities of plains and of the montane to alpine levels - Siliceous scree of the montane to snow levels - Calcareous rocky slopes with chasmophytic vegetation - Siliceous rocky slopes with chasmophytic vegetation - Northern Atlantic wet heaths with <i>Erica tetralix</i> - European dry heaths	90.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	- Alpine and Boreal heaths - Alpine and subalpine calcareous grasslands - Species-rich <i>Nardus</i> grasslands on siliceous substrates in mountain areas - Blanket bogs - Depressions on peat substrates of the <i>Rhynchosporion</i> - Petrifying springs with tufa formation (<i>Cratoneurion</i>) - Alkaline fens - Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i> - Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles - Slender green feather-moss (<i>Hamatocaulis vernicosus</i>) - Floating water-plantain (<i>Luronium natans</i>)					
Coedydd Aber UK0030118	- Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles - Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>)	93.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Great Orme's Head/ Pen y Gogarth UK0014788	- European dry heaths - Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) – important orchid sites	97.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey works and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
	Vegetated sea cliffs of the Atlantic and Baltic Coasts					
Aughnadarragh Lough SAC UK0030318	Marsh fritillary butterfly <i>Euphydryas</i> (<i>Eurodryas</i>, <i>Hypodryas</i>) <i>aurinia</i>	98.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Table 4-4 Screening Transboundary SPAs

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Irish Sea Front SPA UK9020328	Manx shearwater (<i>Puffinus puffinus</i>)	12.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Anglesey Terns / Morwenoliaid Ynys Môn SPA UK9013061	- Arctic tern (<i>Sterna paradisae</i>) - Common tern (<i>Sterna hirundo</i>) - Roseate tern (<i>Sterna dougallii</i>) - Sandwich tern (<i>Sterna sandvicensis</i>)	35.6	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Glannau Ynys Gybi/ Holy Island Coast UK9013101	▪ Chough (<i>Pyrrhocorax pyrrhocorax</i>)	50.5	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Carlingford Lough UK9020161	▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) ▪ Common tern (<i>Sterna hirundo</i>) ▪ Sandwich tern (<i>Sterna sandvicensis</i>)	53.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Liverpool Bay / Bae Lerpwl SPA UK9020294	▪ Red-throated diver (<i>Gavia stellata</i>) ▪ Common scoter (<i>Melanitta nigra</i>) ▪ Little gull (<i>Hydrocoloeus minutus</i>) ▪ Common tern (<i>Sterna hirundo</i>) ▪ Little tern (<i>Sterna albifrons</i>)	69.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Killough Bay SPA UK9020221	▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>)	73.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Strangford Lough SPA UK9020111	▪ Sandwich Tern (<i>Sterna sandvicensis</i>) ▪ Common Tern (<i>Sterna hirundo</i>) ▪ Arctic Tern (<i>Sterna paradisaea</i>) ▪ Waterbird assemblage	78.8	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Outer Ards SPA UK9020271	▪ Golden plover (<i>Pluvialis apricaria</i>) ▪ Arctic Tern (<i>Sterna paradisaea</i>) ▪ Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) ▪ Ringed plover (<i>Charadrius hiaticula</i>) ▪ Turnstone (<i>Arenaria interpres</i>)	82.3	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

Site Name & Code	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Potential Pressures	Likelihood of interaction between EWIC Inspection survey and designating feature(s)	Potential for In-combination effects	Considered for Screening (Yes or No)
Traeth Lafan/ Lavan Sands, Conway Bay UK9013031	- Oystercatcher (<i>Haematopus ostralegus</i>) - Red-breasted merganser (<i>Mergus serrator</i>) - Curlew (<i>Numenius arquata</i>) - Great crested grebe (<i>Podiceps cristatus</i>) - Redshank (<i>Tringa totanus</i>)	87.3	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA UK9013121	- Manx Shearwater (<i>Puffinus puffinus</i>) - Chough (<i>Pyrrhocorax pyrrhocorax</i>)	88.1	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No
Ynys Seiriol / Puffin Island UK9020285	Cormorant (<i>Phalacrocorax carbo</i>)	88.9	None	No – No pressures with potential to impact receptor present and no pressure receptor pathway identified.	No potential for in-combination effect as there is no pathway for effect with the proposed EWIC Inspection surveys.	No

5. ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS

5.1 Introduction

An initial screening identified 109 European sites within the defined search areas, as listed in Tables 4-1 to 4-4. Tables 4-1 to 4-4 identified that there are 28 pressure-receptor pathways existing for 23 of the sites; for the remaining 86 sites, there is no spatial or temporal overlap between the proposed EWIC Inspection surveys and QIs/SCIs of the site and therefore there can be no conceivable or likely significant effect.

Tables 4-1 to 4-4 identified that there are three pressures from the proposed EWIC Inspection surveys that could affect the QIs / SCIs of European Sites. These are:

- Visual (and above water noise) disturbance
- Underwater sound changes
- In-combination effects

This section describes the possible pressures and potential effects of the proposed EWIC Inspection surveys on the QIs and SCIs and assesses the potential for a likely significant effect (LSE).

One source of disturbance has been identified:

- Disturbance from presence of the vessels during the proposed EWIC Inspection surveys and sound produced by the proposed EWIC Inspection surveys and survey vessel movements; and

5.2 Visual (and Above Water Noise) Disturbance

Visual disturbance is only relevant to species that respond to visual cues, for hunting, behavioural responses or predator avoidance, and that have the visual range to perceive cues at distance. It is particularly relevant to fish, birds, reptiles and mammals that depend on sight but less relevant to benthic invertebrates (ICG-C, 2011).

MARSea identification of pressure benchmarks lists the following:

- Daily duration of transient visual cues exceeds 10% of the period of site occupancy by the feature

One source of disturbance has been identified:

- Disturbance from survey vessel movements

Tables 4-1 to 4-4 identified a pressure-receptor pathway between the proposed EWIC Inspection surveys and the QIs / SCIs of 16 of the European Sites for visual (and above water noise) disturbance.

Table 5-1 SACs Screened in for the Potential Pressure Visual (and Above Noise) Disturbance

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
Lambay Island SAC	Grey Seal (<i>Halichoerus grypus</i>) Harbour Seal (<i>Phoca vitulina</i>)	4.09	To maintain the favourable conservation condition of Grey Seal To maintain the favourable conservation condition of Harbour Seal
Slaney River Valley SAC	Harbour Seal (<i>Phoca vitulina</i>)	64.4	To maintain the favourable conservation condition of Harbour Seal
Murlough SAC	Harbour Seal (<i>Phoca vitulina</i>)	62.6	To maintain (or restore where appropriate) Harbour (Common) Seal <i>Phoca vitulina</i> to favourable condition.
Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC	Grey Seal (<i>Halichoerus grypus</i>)	83	To maintain (or restore) Grey Seal to favourable conservation status
Strangford Lough SAC	Harbour Seal (<i>Phoca vitulina</i>)	78.8	To maintain (or restore where appropriate) Harbour (Common) Seal <i>Phoca vitulina</i> to favourable condition.

Table 5-2 SPAs Screened in for the Potential Pressure Visual (and Above Water Noise) Disturbance

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
North-West Irish Sea SPA	Red-throated Diver (<i>Gavia stellata</i>) Great Northern Diver (<i>Gavia immer</i>) Fulmar (<i>Fulmarus glacialis</i>) Manx Shearwater (<i>Puffinus puffinus</i>) Cormorant (<i>Phalacrocorax carbo</i>) Shag (<i>Phalacrocorax aristotelis</i>) Common Scoter (<i>Melanitta nigra</i>) Little Gull (<i>Larus minutus</i>) Black-headed Gull (<i>Chroicocephalus ridibundus</i>) Common Gull (<i>Larus canus</i>) Lesser Black-backed Gull (<i>Larus fuscus</i>) Herring Gull (<i>Larus argentatus</i>) Great Black-backed Gull (<i>Larus marinus</i>) Kittiwake (<i>Rissa tridactyla</i>) Roseate Tern (<i>Sterna dougallii</i>) Common Tern (<i>Sterna hirundo</i>) Arctic Tern (<i>Sterna paradisaea</i>) Little Tern (<i>Sterna albifrons</i>) Guillemot (<i>Uria aalge</i>)	Within	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
	Razorbill (<i>Alca torda</i>) Puffin (<i>Fratercula arctica</i>)		
Rockabill SPA	Roseate Tern (<i>Sterna dougallii</i>) Common Tern (<i>Sterna hirundo</i>) Arctic Tern (<i>Sterna paradisaea</i>)	2.19	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
Lambay Island SPA	Fulmar (<i>Fulmarus glacialis</i>) Cormorant (<i>Phalacrocorax carbo</i>) Lesser Black-backed Gull (<i>Larus fuscus</i>) Herring Gull (<i>Larus argentatus</i>) Kittiwake (<i>Rissa tridactyla</i>) Guillemot (<i>Uria aalge</i>) Razorbill (<i>Alca torda</i>) Puffin (<i>Fratercula arctica</i>)	3.65	To maintain or restore the favourable conservation condition of the bird species
Skerries Islands SPA	Cormorant (<i>Phalacrocorax carbo</i>) Herring Gull (<i>Larus argentatus</i>)	4.3	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
Ireland's Eye SPA	Cormorant (<i>Phalacrocorax carbo</i>) Herring Gull (<i>Larus argentatus</i>) Kittiwake (<i>Rissa tridactyla</i>) Guillemot (<i>Uria aalge</i>) Razorbill (<i>Alca torda</i>)	12.8	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
Howth Head Coast SPA	Kittiwake (<i>Rissa tridactyla</i>)	14.9	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
River Nanny Estuary and Shore SPA	Herring Gull (<i>Larus argentatus</i>)	16.4	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA To maintain the favourable conservation condition of the wetland habitat in River Nanny Estuary and Shore SPA as a resource for the regularly occurring migratory waterbirds that utilise it
Dundalk Bay SPA	Common Gull (<i>Larus canus</i>)	38.5	To maintain or restore the favourable conservation

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
	Herring Gull (<i>Larus argentatus</i>)		condition of the bird species listed as Special Conservation Interests for this SPA
The Murrough SPA	Herring Gull (<i>Larus argentatus</i>)	43.4	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
Wicklow Head SPA	Kittiwake (<i>Rissa tridactyla</i>)	60.6	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA
Poulaphouca Reservoir SPA	Lesser Black-backed Gull (<i>Larus fuscus</i>)	46.5	To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for this SPA

Birds

The most vulnerable receptor to this disturbance would be nesting and breeding birds during the breeding season (February to October) within 2km (4km for diving birds, 10km for red-throated diver) of the proposed EWIC Inspection surveys. The potential effect to be assessed is that breeding, and nesting birds are disturbed by the presence of survey vessels and equipment. Both visual and noise disturbance could result from the presence of the vessels and equipment. Prolonged disturbance could result in impaired breeding, disruption to incubation, increased nest failures due to predation and nest abandonment (Valente and Fischer, 2011). These factors could affect the demographic characteristics of the population.

Birds with large foraging distances and overwintering birds within 2km (4km for diving birds, 10km for red-throated diver) of the proposed EWIC Inspection Survey Area also have the potential to be disturbed by the presence of survey vessels and equipment use. Visual and noise disturbance can occur within the ZOI resulting in a reduction in the time spent feeding due to higher vigilance, taking flight thus increasing energetic costs and avoidance of habitat which would have been suitable for feeding/roosting potentially leading to the use of poorer quality areas (Nolet *et al.*, 2002; Burton, Rehfish and Clark, 2003; Yasué, 2005; Thiel *et al.*, 2011; Ross and Liley, 2014).

The extent to which a seabird responds to disturbance is dependent upon factors including period of breeding cycle during which disturbance occurs; duration, type and intensity of the disturbance; presence of opportunistic predators; and the degree of habituation with the disturbance (Garthe & Hüppop, 2004; Showler *et al.*, 2010; Fliessbach *et al.*, 2019). Some seabirds are more resilient to disturbance than others. The Joint Statutory Nature Conservation Bodies (SNCB) Interim Displacement Advice Note (2017) categorises species by their sensitivity to disturbance and their habitat specialisation, when offshore. This advice note has been used in the assessments below to inform the assessment of LSE.

The survey is a transient activity allowing birds to return to areas within the survey corridor within a matter of hours. The proposed survey will not reduce the natural range of qualifying seabirds, nor will it have a significant effect on the habitat that the species require to maintain the population. All vessels will be slow moving (as discussed above), and the addition of one survey vessel is unlikely to be noticed against existing vessel activity in the areas.

Screening Conclusion: No likely significant effects / AA is not required.

Marine Mammals

There is potential that pinnipeds within 100km (grey seal) and 50km (harbour seal) could be disturbed by the presence of the vessel and EWIC Inspection Survey activities. Four relevant sites were identified, namely:

- Lambay Island SAC
- Slaney River Valley SAC
- Murlough SAC
- Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC
- Strangford Lough SAC

Seals typically can be disturbed at haul-out sites at a distance of 900m or less (Brassuer and Reijnders, 1994). The designated sites above are located more than 900m from the EWIC Inspection Survey Area, the closest of which, Lambay Island SAC, is located 3.65 km from the EWIC Inspection Survey Area; therefore, survey activities are unlikely to result in the disturbance of seals at haul-out sites.

The presence of a survey vessel will not affect the breeding, moulting and resting behaviour of seals within the SACs and the population composition of these sites will not be affected, due to the distance of EWIC Inspection Survey Area from haul-out sites. While any individuals present within the waters of the EWIC Inspection Survey Area may be disturbed by the survey activities, this disturbance effect will be temporary. As the area is also busy for vessel and fishing traffic within the SAC, there is a degree of background noise which seals will already be accustomed to. Therefore, EWIC Inspection Survey works will not cause disturbance at a level which will adversely affect the harbour seal population at the site and will not prevent harbour seal from accessing suitable habitat.

Taking into account the discussion above it has been concluded that the proposed EWIC Inspection surveys are not capable of undermining the conservation objectives of Lambay Island SAC, Strangford Lough SAC, Murlough SAC, Slaney River Valley SAC and/or Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC, therefore there will be no LSEs on this site.

Screening Conclusion: No likely significant effects / AA are not required.

5.3 Underwater Noise Changes

Tables 4-1 to 4-4 identified a pressure-receptor pathway between the proposed EWIC Inspection surveys and the QIs / SCIs of 11 of the European Sites for underwater noise changes.

Table 5-3 SACs Screened in for the Potential Pressure Visual (and Above Water Noise) Disturbance

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
Codling Fault Zone SAC	Harbour Porpoise (<i>Phocoena phocoena</i>)	22.2	To maintain the favourable conservation condition of Harbour porpoise
Rockabill to Dalkey Island SAC	Harbour Porpoise (<i>Phocoena phocoena</i>)	Within	To maintain the favourable conservation condition of Harbour porpoise
Lambay Island SAC	- Grey Seal (<i>Halichoerus grypus</i>) - Harbour Seal (<i>Phoca vitulina</i>) - Harbour Porpoise (<i>Phocoena phocoena</i>)	4.09	To maintain the favourable conservation condition of Grey Seal To maintain the favourable conservation condition of Harbour Seal To maintain the favourable conservation condition of Harbour porpoise
Slaney River Valley SAC	- Twaite Shad (<i>Alosa fallax fallax</i>) - Harbour Seal (<i>Phoca vitulina</i>)	64.4	To restore the favourable conservation condition of Twaite shad To maintain the favourable conservation condition of Harbour Seal
River Barrow And River Nore SAC	Twaite Shad (<i>Alosa fallax fallax</i>)	73.2	To restore the favourable conservation condition of Twaite shad
North Anglesey Marine / Gogledd Môn Forol SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	Within	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
Murlough SAC	Harbour seal (<i>Phoca vitulina</i>)	62.6	To maintain (or restore where appropriate) Harbour (Common) Seal <i>Phoca vitulina</i> to favourable condition.
North Channel SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	57.3	To ensure that the integrity of the site is maintained and that it makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for harbour porpoise in UK waters.

Designated Site	Qualifying Interests	Distance to EWIC Inspection Survey Area (km)	Conservation Objectives
West Wales Marine / Gorllewin Cymru Forol SAC	Harbour porpoise (<i>Phocoena phocoena</i>)	81.1	To ensure that the integrity of the site is maintained and that it makes an appropriate contribution to maintaining Favourable Conservation Status (FCS) for harbour porpoise in UK waters.
Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC	- Bottlenose dolphin (<i>Tursiops truncatus</i>) - Grey seal (<i>Halichoerus grypus</i>)	83.0	To restore the favourable conservation condition of Bottlenose dolphin and grey seal.
Strangford Lough SAC	Harbour seal (<i>Phoca vitulina</i>)	78.8	To maintain (or restore where appropriate) Harbour (Common) Seal <i>Phoca vitulina</i> to favourable condition.

5.3.2 Marine Mammals

Exposure to anthropogenic sounds can induce a range of behavioural effects to permanent injury in marine mammals. Loud and prolonged noise may mask communicative or hunting vocalisations, preventing social interactions and effective hunting. Where the threshold of hearing is temporarily damaged, it is considered a Temporary Threshold Shift (TTS), and the animal is expected to recover. If there is permanent damage (PTS) where the animal does not recover, social isolation and a restricted ability to locate food may occur, potentially leading to the death of the animal (Southall *et al.*, 2007).

Southall *et al.* (2019) separated marine mammals into auditory groups based on their functional hearing sensitivity. The generalised hearing ranges of these groups are provided by the National Marine Fisheries Services (NMFS) (2018) as summarised in Table 5-4.

Table 5-4 Marine Mammal Groups Based on Auditory Bandwidth

Group (based on auditory bandwidth)	Species observed within and in proximity to the Maritime Usage Licence Area	Auditory range
Low-frequency cetaceans (LF)	Minke whale, Humpback whale, Fin whale	7Hz – 35kHz
High frequency cetaceans (HF)	Short-beaked common dolphin, Common bottlenose dolphin, White-beaked dolphin, Long-finned pilot whale, Northern bottlenose whale	150Hz – 160kHz

Group (based on auditory bandwidth)	Species observed within and in proximity to the Maritime Usage Licence Area	Auditory range
Very high frequency cetaceans (VHF)	Harbour porpoise	275Hz – 86kHz
Phocid carnivores in water (PCW)	European otter and seals	60Hz – 39kHz

The thresholds for the onset of PTS and TTS, as published in Southall *et al.* (2019) are provided in Table 5-5. These reflect the current peer-reviewed published state of scientific knowledge.

Table 5-5 Injury Thresholds for Marine Mammals from Impulsive (Sound Pressure Level (SPL), Unweighted) and Continuous (Sound Exposure Level (SEL), Weighted) Sound

Auditory group	Impulsive noise		Continuous noise	
	SPL (unweighted) – dB re 1 µPa (peak)		SEL (24 hr, weighted) – dB re 1 µPa-2s	
	PTS onset	TTS onset	PTS onset	TTS onset
LF	219	213	199	179
HF	230	224	198	178
VHF	202	196	173	153
PCW	232	226	219	199

5.3.2.2 Geophysical Survey

The geophysical survey includes the use of multi-beam echo-sounders (MBES), side scan sonars (SSS), and Ultra-short baseline (USBL) positioning beacons. The geophysical survey represents the main activity with the potential to generate underwater sound during the proposed survey works. MBES, SSS, USBL systems all generate acoustic signals underwater although frequency source levels of these systems vary. However, the acoustic sources associated with this equipment are substantially different from high-energy seismic sources such as airgun arrays or Sub-bottom profilers (SBPs).

One of the most important environmental concerns related to the proposed EWIC Inspection surveys is the potential effects of underwater sound on marine mammals. Pinnipeds have evolved to use sound as an important aid in navigation, communication and hunting (Richardson, 1995). It is generally accepted that exposure to anthropogenic sound can induce a range of effects on pinnipeds. These range from insignificant effects to behavioural changes, non-injurious type effects (including masking of biologically relevant sound signals, such as communication signals), and in extreme circumstances can lead to physical injury and death if the sound source is sufficiently intense.

In order to evaluate the potential of the geophysical survey to cause harm to marine mammals, an assessment has been conducted using the American National Marine Fisheries Service (NMFS) (2018) thresholds for the onset of PTS and TTS. The approach separates marine mammals into five groups based on their functional hearing, namely: low-frequency cetaceans; mid frequency cetaceans; high frequency cetaceans; pinnipeds (Phocid) in water; and pinnipeds (Otariid) in water. Table 5-6 presents the species identified as present in the survey area according to their functional hearing category.

Table 5-6 Marine Mammal Auditory Bandwidth

Group	Low-frequency cetaceans	Mid-frequency cetaceans	High-frequency cetaceans	Pinnipeds (Phocid) in water
Generalised hearing range (NMFS 2018)	7Hz – 35kHz	150hz – 160kHz	275Hz – 160kHz	50Hz – 86kHz
Species	Baleen whales	Most toothed whales, dolphins	Certain toothed whales, porpoises	True seals
Species potentially in inspection survey area during April to October	Minke whale Humpback whale Fin whale	Short-beaked common dolphin Bottlenose dolphin Striped dolphin Risso's dolphin White-beaked dolphin Long-finned pilot whale Killer whale	Harbour porpoise	Grey seal Harbour seal

Source: NFMS (2018)

For the proposed survey, the MBES is hull-mounted on the survey vessel, while the SSS is towed along the cable route. The USBL will provide subsea positioning of the SSS. The acoustic signals generated by these systems will therefore be localised around the survey vessel and towed equipment and will move along the survey route as the vessels undertakes the route.

The proposed EWIC Inspection Survey is temporary in nature and is anticipated to require up to 25 days to complete, including contingency allowances for weather delays, operational pauses and any mitigation-related shutdowns intended for September/October 2026. The survey comprises a periodic inspection of the existing EWIC cable and may be repeated during the lifetime of the relevant consents; however, each survey campaign would be of similarly short duration. To ensure a precautionary assessment, it has been assumed that survey activities could be undertaken at any time of year when considering potential effects on ecological receptors and European Sites.

The environmental visual survey, if required will involve deployment of a camera system housed within a frame and positioned above the seabed to visually inspect features identified during the geophysical survey that may be a concern to the cable integrity. The camera will be USBL positioned and will not interact or disturb the seabed. Therefore, no significant source of underwater noise is expected.

The zone of ensonification (area of the marine environment exposed to sound generated by a survey activity or other underwater acoustic source) based on the above geophysical survey methods are within proximity to the source, therefore marine mammals would need to be present in close proximity (5 km EDR) to the survey vessel and remain within the localised zone of ensonification for an extended period of time to experience injurious effects.

The proposed geophysical survey will be a one-off event and will progress slowly along the proposed survey corridor. Animals will have sufficient time to avoid the survey spread, and it is unlikely that they will swim under operating equipment. If a marine mammal were to find itself within the EDR of 5 km given for geophysical surveys (JNCC, 2020), it is calculated they would be able to move out of this EDR in less than 1 hour.

Screening Conclusion: No likely significant effects / AA is not required.

5.3.3 Annex II Fish Species

Tables 4-1 to 4-4 identified a pressure-receptor pathway for the pressure underwater sound changes between the geophysical survey and two European Sites for which the QIs are twaite shad. These sites are:

- Slaney River Valley SAC
- River Barrow And River Nore SAC

It is recognised that fish are mobile species and therefore Annex II listed migratory species have the potential to cross the EWIC Inspection Survey Area during the survey operations. Twaite shad are sensitive to noise changes and therefore potentially vulnerable to the proposed EWIC Inspection surveys.

Twaite shad occur in coastal waters and in estuaries along the southeast coast of Ireland. Twaite shad are anadromous, migrating to freshwater to spawn in early summer (May to July). At maturity (3 years old for males and 5 years old for females), they stop feeding and congregate in the estuaries of suitable rivers in April and May. Upstream migration from the estuaries appears to be triggered by temperature, with peak migratory activity occurring at water temperatures of 10–14°C. Given that twaite shad reach maturity at age 3-5, twaite shad are likely to be found in coastal areas of the EWIC Inspection Survey Area all year round, with the greatest density likely to be observed during the May-July migration.

The ability of fish to hear noise is dependent on their hearing structures, which indicate their sensitivity to sound. Sound pressure is only detected by those species possessing a swim bladder; the otolith organ, located directly behind the brain, acts as a particle motion detector and where linked to the swim bladder, converts sound pressure into particle motion, which is detected by the inner ear. High sensitivity hearing species such as clupeids (twaite shad) have specialisations of the auditory apparatus where the swim bladder and inner ear are intimately connected and are able to detect frequencies to over 3kHz; with optimum sensitivity between 300Hz-1kHz (Nedwell *et al.*, 2004).

Different fish species react differently to sound. The typical behavioural response to sounds by fish might range from no change in behaviour, to a mild awareness (startle response) to larger movements of temporary displacement for the duration of the sound (Popper and Hastings, 2009). Popper *et al.*, (2014) identified that there is no direct evidence of permanent injury to fish species from shipping and other continuous noise (such as the near-continuous noise produced by geophysical equipment).

5.3.3.1 Geophysical Survey

Most noise from a geophysical survey is generated at frequencies greater than 1kHz, above the auditory capacity of fish (generally between 0.2Hz to 1kHz). In addition, sound from survey equipment is targeted towards the seabed, meaning that effects to fish are only expected if they are within the immediate zone of ensonification below the survey vessel.

A recent MARA-commissioned review of the impacts of geophysical and geotechnical surveys on marine fish and shellfish in Irish waters concluded that the effects of geophysical surveys on fish are generally localised and temporary in nature, with behavioural responses such as avoidance and short-term displacement being the most commonly reported effects. The review also noted that sensitivity may be greater for certain life stages, including spawning fish, eggs and larvae (Long *et al.*, 2026).

Shad and herring are members of the Clupeiformes family. Herring has a hearing range between 30Hz and 4kHz, with a peak frequency of between 30Hz and 1kHz (Nedwell *et al.*, 2004). Teague & Clough (2011) observed that young-of-year twaite shad showed significant reactions at frequencies between 30 and 60kHz, peaking at 45kHz.

Acoustic Thresholds for onset of permanent and temporary threshold shift (NMFS 2016) spreading model was used for this assessment to calculate the distance at which sound generated by the survey activities will attenuate to below the injury and disturbance thresholds. It assumes that sound is spread geometrically away from the source but does not account for attenuation or directional sources; it therefore provides conservative estimates. It also does not take into consideration the conditions within the inspection survey area, such as bathymetry, water depth or sediment type and thickness.

Table 5-7 Impulsive Sound Sources

Geophysical Equipment type	Purpose	Frequency (kHz)	Source level SPL (peak) in dB re 1 μ Pa@1m	Source
Multibeam Echosounder (MBES)	A remote sensing acoustic device typically attached to a vessel's hull. The purpose is to map the water depth to seabed (bathymetry).	Typically 400 for this water depth but systems range from 200 – 500	210 - 245	Danson (2005), Hopkins (2007), Genesis (2011), Lurton and DeReutier (2011), BEIS (2020), (Jiménez-Arranz <i>et al.</i> , 2020)
Side Scan Sonar (SSS)	Typically towed at an altitude or 10-15m, sends and receives dual frequency acoustic pulses to detect objects (pipelines, shipwrecks etc) and enable classification of surficial marine geology (sediment type, outcrops, bedforms)	Typically 300 – 900 with high resolution models 600/1600	200 - 240	(2014), BOEM (2019), BEIS (2020), (Jiménez-Arranz <i>et al.</i> , 2020), Edgetech (2022)
Ultra-short baseline (USBL)	A USBL system has a hull mounted transducer with a transceiver attached to survey equipment. It uses low frequency acoustic sound to verify subsea positioning.	19-34	184-202	Jiménez-Arranz <i>et al.</i> , 2020

Based on these sensitivities, shad are not sensitive to the very high frequencies associated with MBES (albeit with some overlap at low frequency operation) and SSS surveys. It is likely however; they will hear the low frequency noise and sense particle vibration from the USBL systems. All proposed surveys will operate at frequencies outside of the range of young shad and, therefore, they will not be

impacted by them. It has been suggested that the ability of the Alosids, including shad, to detect ultrasound evolved to assist in avoiding predation by echo-locating predators, e.g., toothed whales (Popper *et al.*, 2004; Teague & Clough, 2011). As such, underwater sound may act as an acoustic deterrent for shad and suggests that shad exhibit avoidance behaviour in response to underwater noise. It is, therefore, expected that twaite shad may avoid the sound source.

Based on the hearing capabilities of shad and the survey sound sources, the shad hearing range has the potential to overlap with the MBES, however the mortality/injury threshold will only be exceeded within close proximity of the sound source. Popper *et al.* (2014) states the maximum distance for a lethal effect or physical injury on a fish with a swim bladder (such as twaite shad) at a SPL level of 207 dB re 1 μ Pa is 12 metres. For the MBES survey work, the vessel will be transiting slowly along survey lines and fish will also be in motion, therefore, the zone of injury will be transient, and it is unlikely that any fish will stay close to the sound source. Typical behavioural responses suggest that twaite shad will move away from the sound source (Popper *et al.*, 2004; Teague & Clough, 2011) and the slow vessel speed will facilitate this behavioural response. Additionally, underwater sound from the geophysical survey equipment is targeted in relatively narrow beams towards the seabed, therefore, fish are only at risk of injury if immediately within the zone of ensonification (area filled with sound) below the sound source.

Vessel density in the EWIC Inspection Survey Area is relatively moderate, however there is consistent fishing and cargo traffic movements in the EWIC Inspection Survey Area all year round. Therefore, it is likely that existing background noise levels from shipping along the coast will mask the disturbance effect to twaite shad from the survey vessel.

In relation to the impulsive, high frequency sounds that will be produced as part of the geophysical survey, it has been found that pacific herring (another member of the Clupidae family) display no behavioural response to high frequency sounds from sonar or echo sounders (, Zhao and Liu, 2015). As such, it is likely that twaite shad will show no visible behavioural response to these survey methods.

A USBL system will also be used to verify subsea positioning. This system has a hull mounted transducer with a transceiver attached to survey equipment and using low frequency acoustic sound. USBL systems generate sound in the frequency range 19 to 34 kHz, with source levels of 184 to 202dB re 1 μ Pa at 1m (Jiménez-Arranz *et al.*, 2020).

An assessment of the potential impacts on fish species from this technique has been provided below.

Generally, fish species with specialisations for sound pressure detection (e.g. a swim bladder) can hear higher frequencies (between 200Hz – 3kHz) than fishes lacking morphological adaptations, which can detect sound at lower frequencies between 100Hz to 1kHz (Carroll *et al.*, 2017).

The values for fish with swim bladders which are involved in hearing have been given in Table 5-8, as these are the most sensitive category of fish.

Table 5-8 Injury and Disturbance Thresholds for Impulsive Sound

Type of Animal	Mortality and potential mortal injury	Impairment	
		Recoverable injury	Temporary Threshold Shift (TSS)
Fish: swim bladder involved in hearing (primarily pressure detection)	>207 dB re 1 μ Pa (peak)	>207 dB re 1 μ Pa (peak)	186dB re 1 μ Pa2.s

Popper *et al.* (2014) Table 7.4.

The frequency range of the USBL overlaps with the hearing ranges of fish, and, therefore, may be audible to some fish species and cause disturbance. The peak SPL for boomers may also exceed the Popper *et al.* (2014) threshold for injury and mortality to fish given in Table 5-8. However, the fish would have to be within 83 m of the sound source. For injury to occur, the fish would have to be within 3.3 m of the sound source.

Fish are likely to leave the survey area during the survey activities horizontally or move to deeper water, away from the noise source (Løkkeborg and Soldal, 1993; Engas *et al.*, 1993, 1996). Therefore, it is unlikely that fish will experience significant impact other than temporary displacement from the immediate area surrounding the geophysical survey activity. Additionally, geophysical surveys progress relatively quickly, typically 1m/s (approximately 2 knots) and the maximum time that any point within an 83m radius of the survey vessel would experience noise levels above the thresholds is less than 5 minutes. The impact to fish will be temporary and transient. Therefore, there is unlikely to be a significant impact to fish the proposed surveys.

During the geophysical survey, the continued noise within 24-hour operations means it is likely that the most hearing sensitive fish species e.g. twaite shad will demonstrate temporary avoidance behaviour from early on and remain outside the ZOI for the duration of the operation. The potential ZOI is transient as it moves slowly in a constant direction along the principal survey line orientation.

Popper and Hastings. (2009) review paper suggests that some fish will move away from a loud sound source by swimming away. Slotte *et al.* (2004), undertook surveys of Atlantic herring and blue whiting during seismic surveys. It was observed that abundances of fish were higher outside than inside the seismic shooting area, suggesting that fish are exhibiting short-term avoidance behaviour from the survey noise.

Nedwell *et al.* (2012) reviewed herring sensitivity to sources of noise from non-pulse cable laying operations (i.e. cable lay and trenching) and proposed effect ranges. Clupeids are expected to show strong avoidance behaviour (i.e. reaction by virtually all individuals) within 8 m of the works, whilst significant avoidance (85% of individuals will react to noise) is expected within 66 m.

A number of studies which have estimated fish distribution in open sea fisheries have also suggested that fish leave survey areas during seismic survey activities horizontally or move to deeper water, away from the noise source (Løkkeborg and Soldal, 1993; Engas *et al.*, 1993, 1996).

Based on the above, it is predicted that fish will avoid the area once operations have started and are extremely unlikely to move towards the sound source. The works will not lead to any long-term displacements as they are transient and brief. Individuals are expected to return once the operation has passed through.

Screening Conclusion: No likely significant effects / AA is not required.

5.4 In-combination Effects

5.4.1 In-Combination Effects Irish Waters

Other projects and plans in the EWIC Inspection Survey Area have been identified (Table 3-2) to determine if they could interact with the proposed EWIC Inspection survey works to have an in-combination effect.

The proposed EWIC geophysical and environmental EWIC Inspection survey works within the EWIC Inspection Survey Area have the potential to interact with such projects within the EWIC Inspection Survey Area.

In terms of the EWIC Inspection Survey Area, other plans and projects that are within or overlap the EWIC Inspection Survey Area are:

- MaresConnect Interconnector Ltd Site Investigations (MUL240008)
- Microsoft Ireland Operations Ltd Site Investigations (LIC230018)
- North Irish Sea Array Offshore Wind Farm – Statkraft (ABP-319866-24)

In terms of the Foreshore Licence Application area and the wider cumulative effects spatial scope, the following plans and/or projects have been identified:

- MaresConnect Interconnector Ltd Foreshore Site Investigations (FS007635)
- Microsoft Ireland Operations Ltd Site Investigations (LIC230018)
- North Irish Sea Array Offshore Wind Farm – Statkraft (ABP-319866-24)
- The Leinster Project – Leinster Offshore Wind Ltd. (FS007162)
- Dublin Array – RWE Renewables Ireland Ltd. (ABP-321992-24)
- Codling Wind Park – Codling Wind Park Ltd. / ESB / Fred. Olsen Renewables (ABP-320768-24)
- Oriel Offshore Wind Farm – Oriel Windfarm Ltd. / Parkwind / ESB (ABP-319799-24)
- Iarnród Éireann – East Coast Railway Infrastructure Protection Project (MUL240023)
- Greater Dublin Drainage – Uisce Éireann (MUL250013)
- Wicklow Offshore Wind – Wicklow Offshore Wind Ltd. (FS007588)
- Wicklow Sea Wind – Wicklow Sea Wind Ltd. (FS007163)
- Arklow Bank Wind Park 2 – SSE Renewables / Sure Partners Ltd. (ABP-319864-24)

The MaresConnect Interconnector is of particular relevance because its survey areas overlap the EWIC survey corridor. The licence for the MaresConnect (MUL240008) geophysical and geotechnical site investigation surveys from the 12 nm limit to the EEZ was determined on 30 June 2025. The associated Foreshore Licence FS007635 authorises geophysical, geotechnical and environmental survey activities from MHW to the 12 nm limit, including landfall investigations at South Beach, Rush, and was determined on 23 August 2024. These permissions form part of the same Ireland–Wales interconnector project and provide the potential for spatial and temporal interaction with the proposed EWIC inspection survey works in the EWIC Inspection Survey Area.

Potential in-combination pathways associated with the overlapping EWIC and MaresConnect survey activities arise from temporary vessel presence, visual and above-water noise disturbance and underwater acoustic emissions from geophysical survey equipment. Localised seabed disturbance may also arise from the geotechnical elements of the MaresConnect surveys; however, as the proposed EWIC Inspection survey is not intending to carry out geotechnical surveys and, if required, non-contact visual EWIC Inspection, with the camera system maintained above the seabed, no pathway for potential impact can occur to the seabed.

While the exact schedule for activities is unknown, it is assumed there will be some spatial and temporal overlap; however, even if both surveys are carried out at the same time it will not be continuous throughout the site, limiting the potential for cumulative effect. However, the final EWIC programme for this survey should be reviewed against the current MaresConnect programme before mobilisation to confirm the extent of any overlap. Any future EWIC inspection surveys would be planned in the context of known marine activities, navigational requirements and relevant regulatory processes applicable at that time.

Due to the limited scope and short-term, transient nature of the EWIC survey works, the temporary and localised nature of both projects' activities and existing background levels of disturbance mean that no significant in-combination or cumulative effects on European Sites are likely.

5.4.2 In-Combination Effects UK Waters

There are three marine licences in place that could potentially have in-combination effects with the EWIC Inspection survey works taking place within EWIC Inspection Survey Area. These are the MaresConnect marine licence (CML2331), Stena Line Ports Ltd Holyhead Harbour Maintenance Dredging (DML1935) and the Morlais Tidal Stream Demonstration Project (ORML1938).

CML2331 is the UK marine licence for geophysical, geotechnical and environmental surveys associated with the MaresConnect project. This licence is particularly relevant because MaresConnect is an Ireland–Wales electricity interconnector and the Irish offshore site investigation licence (MUL240008), Foreshore Licence (FS007635) and UK marine licence (CML2331) relate to the same overall project. The MaresConnect programme should be confirmed before mobilisation of the EWIC inspection survey works to establish whether separate vessels or survey campaigns could result in temporal overlap.

The Stena Line Ports Ltd licence DML1935 authorises maintenance dredging at Holyhead Harbour until 31 December 2028 and is approximately 40 km from the EWIC Inspection Survey Area. The Morlais Tidal Stream Demonstration Project licence ORML1938 is approximately 42.7 km from the EWIC Inspection Survey Area. Given the separation from the proposed EWIC survey corridor, significant spatial interaction with these activities is therefore likely.

Screening Conclusion: No likely significant effects / AA is not required.

6. SCREENING DETERMINATION STATEMENT AND CONCLUSION

To determine whether the proposed EWIC Inspection surveys will have a Likely Significant Effect (LSE) on any European Sites, either individually or in-combination with other plans or projects, screening for AA was carried out.

The screening assessed 109 European Sites that were either within the direct zone of influence of the proposed EWIC Inspection surveys or contain mobile QIs / SCIs which could potentially travel into the EWIC Inspection Survey Area.

It was identified that the proposed EWIC Inspection surveys could induce the following pressures on QIs / SCIs which required assessment for LSE.

Pressures associated with the proposed EWIC Inspection surveys were identified and included:

- Visual disturbance and above water noise; and
- Underwater sound changes.

The assessment was undertaken for the EWIC Inspection Surveys proposed in Ireland's maritime area between the HWM to the outer boundary of Ireland's EEZ and took account of the potential for transboundary effects including the EWIC Inspection Surveys in UK waters. In addition, other projects and plans in the area were identified and assessed to determine if they could interact with the proposed EWIC Inspection surveys within the Irish EEZ to have an in-combination effect. It was determined that no significant in-combination or cumulative effects on European Sites are likely.

An initial screening identified 109 European sites within the defined search areas, as listed in Tables 4-1 to 4-4. Tables 4-1 to 4-4 identified that there are 28 pressure-receptor pathways existing for 23 of the sites; for the remaining 86 sites, there is no spatial or temporal overlap between the proposed EWIC Inspection surveys and QIs/SCIs of the site and therefore there can be no conceivable or likely significant effect.

Initial screening of the 109 European Sites identified 28 pressure-receptor pathways between the proposed EWIC Inspection surveys and the QIs / SCIs of 23 European Sites (Tables 4-1 to 4-4). Of these 23 sites, assessment for likely significant effects concluded that the proposed EWIC Inspection surveys will not have a significant effect on the conservation objectives of any European Sites, and an Appropriate Assessment will not be required.

In conclusion, Intertek Metoc considers that the proposed survey works, either alone or in combination with other plans or projects, are not likely to have significant effects on any European Site and we have no reasonable scientific doubt as to that conclusion.

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