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## **List of Abbreviations**

API	American Petroleum Institute	
BHD	Backhoe Dredger	
CPOD	Cetacean Passive Acoustic Network	
DAHG	Department of Arts, Heritage and the Gaeltacht	
DCCAE	Department of Communications, Climate Action and Environment	
DHLGH	Department of Housing, Local Government and Heritage	
EC	European Commission	
EEZ	Exclusive Economic Zone	
EPS	European Protected Species	
EU	European Union	
IMO	International Maritime Organization	
ISO	International Organization for Standardization	
JNCC	Joint Nature Conservation Committee	
MARPOL	The International Convention for the Prevention of Pollution from Ships	
Minister	Minister for Housing, Local Government and Heritage	
MAP	Maritime Area Planning Act 2021	
MARA	Maritime Area Regulatory Authority	
MARPOL	The International Convention for the Prevention of Pollution from Ships	
MULA	Maritime Usage Licence Application	
NIS	Natura Impact Statement	
NM	Nautical Mile	
NPWS	National Parks and Wildlife Service	
PTS	Permanent Threshold Shift	
PV	Plough Vessel	
SPL	Sound Pressure Level	
TTS	Temporary Threshold Shift	
TSHD	Trailing Suction Hopper Dredger	
UK	United Kingdom	
VC	Vibrocore	
WGS	World Geodetic System	

# **Glossary of Terms**

Auditory Masking (ma-	Surrounding or additional sounds which impacts/reduces marine mam-
rine mammals)	mals' ability to detect or recognise other relevant sounds
	The region of a habitat associated with a particular ecological community
Biotope	(habitat together with its recurring associated community species, operat-
	ing together)



Deposition Event	The laying down of sediment that has been carried/transported by wind, water, the sea or ice.			
Dredging	The clearance of a harbour, river, or other, bed by the removal of mud, sand, sediment etc with dredging equipment			
Exclusive Economic	Marine area from the territorial seas boundary seaward to a distance of 200			
Zone	miles or otherwise as agreed under international statute.			
	The foreshore of Ireland is classed as the land and seabed between the high			
Foreshore	water of ordinary or medium tides (shown HWM on Ordnance Survey			
TOTESHOTE	maps) and the twelve-mile limit (12nm = 22.224km). The foreshore also co-			
	vers the tidal reaches of rivers.			
Foreshore Licence Area	Within this report: The area within the 12nm limit of the high-water mark of ordinary tides for which a Foreshore Licence Application is submitted to the Department of Housing, Local Government and Heritage for a licence			
	under Section 3 of the Foreshore Act to undertake site investigation activities.			
	Adopted in 1992, the Council Directive 92/43/EEC of 21 May 1992 on the			
	conservation of natural habitats and of wild fauna and flora aims to pro-			
	mote the maintenance of biodiversity, taking account of economic, social,			
Habitats Directive	cultural and regional requirements. It forms the cornerstone of Europe's			
riabitats birective	nature conservation policy with the Birds Directive and establishes the EU			
	wide Natura 2000 ecological network of protected areas, safeguarded			
	against potentially damaging developments.			
	Legislation reforming consenting within Ireland's marine area, including in-			
Maritime Area Planning	troducing both an offshore specific consenting regime and extending the			
Act 2021	powers of the State to enable the State to operate a consenting regime			
	across its entire EEZ and agreed continental shelf.			
Maritime Usage Licence	Within this report: The areas within the outer limit of the State's continen-			
Area	tal shelf and high-water mark for which a Maritime Usage Licence Applica-			
	tion is submitted to MARA for a licence under the Maritime Area Planning			
	Act 2021 to undertake offshore activities.			
	MARPOL is the main international convention aimed at the prevention of			
	pollution from ships caused by operational or accidental causes. It was			
MARPOL	adopted at the International Maritime Organization (IMO) in 1973. The Pro-			
	tocol of 1978 was adopted in response to a number of tanker accidents in			
	1976–1977.			
Minister	In this report, Minister means the Minister for Housing, Local Government			
Minister	and Heritage			
Pollution Event	A 'pollution incident' includes a leak, spill or escape of a substance, or cir-			
Pollution Event	cumstances in which this is likely to occur.			
Pacaiving Environment	The receiving environment is the environment upon which a proposed ac-			
Receiving Environment	tivity might have effects.			
Universal Transverse	The UTM (Universal Transverse Mercator) coordinate system divides the			
Mercator (UTM)	world into sixty north-south zones, each 6 degrees of longitude wide. UTM			



zones are numbered consecutively beginning with Zone 1 and progress eastward to Zone 19. UTM 29N (EPSG:32629) is used to map the project area.



## **EXECUTIVE SUMMARY**

This report aims to provide the necessary information to the competent authorities to assist in making an informed decision on the likely impact of the proposed project on the receiving environment of the surrounding area, which includes the Special Areas of Conservation, Special Protection Areas and their designated habitats and species.

**145 Natura 2000** sites for the Wicklow Harbour dredge area and **151 Natura 2000** sites for the Arklow disposal area have been identified as being in the Zone of Influence of the proposed activities and deemed relevant and screened in for consideration and further assessed for likely significant effects.

No significant effects are identified for the habitats or species which constitute a Qualifying Interest for any of the SACs or SPAs considered as a result of the proposed dredging and disposal works and no likely significant effects are foreseen on the conservation objectives of the SPAs and SACs examined.

It is therefore concluded that a Stage 2 Appropriate Assessment is not required.



## 1 INTRODUCTION

Wicklow County Council proposes to undertake maintenance dredging works and disposal. Maintenance dredging will be undertaken in Wicklow Harbour, which is subject to continued accretion of material. The dredged material will be deposited at a disposal site approximately 20 km southwest from Wicklow Harbour (Figure 1-1).

Wicklow County Council have commissioned Gavin and Doherty Geosolutions to prepare this report in support of applications for licences required to undertake the dredging and disposal at sea activities.

The dredge area comprises an irregular-shaped polygon which has an area of 0.056 km<sup>2</sup> within Wicklow Harbour and a rectangular-shaped disposal site approximately 20 km southwest of Wicklow harbour which has an area of 0.587 km<sup>2</sup> (Figure 1-1). Where the dredge area adjoins or abuts the land the High-Water Mark as defined on the OSI 25 Inch Mapping is the boundary of the licence area. The disposal area does not adjoin or abut the land.



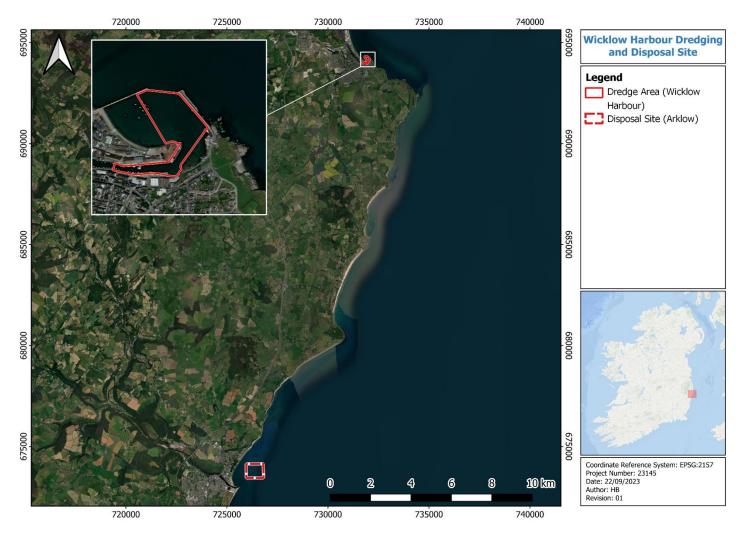


Figure 1-1 Wicklow Harbour Dredging Licence Area (Dredge Area - Red Outline; Dredge Disposal Area – red dashed line)



#### 1.1 AIM OF THIS REPORT

This report includes information in support of Stage 1 of the Appropriate Assessment (Screening for Appropriate Assessment) process as required under the Habitats Directive (92/43/EEC).

This report aims to provide the necessary information to the competent authorities to assist them in making an informed decision on the likely impact of this project on Special Areas of Conservation (SACs) and their designated Annex I habitats and Annex II species Qualifying Interests (QIs) and Special Protection Areas (SPAs) and their designated Special Conservation Interest (SCI) species.

#### 1.2 STRUCTURE OF THE REPORT

This report is structured into the following chapters to include information relating to the Appropriate Assessment (AA) process, proposed activities and potential impacts and the receiving environment, including relevant Natura 2000 sites and features. Specifically, the chapters of this report are as follows:

- Executive Summary
- Chapter 1 (this chapter): Introduction to the report and proposed activities
- Chapter 2: Habitats Directive (92/43/EEC) (outlines key aspects of the process)
- Chapter 3: Potential Environmental Impacts of proposed activities
- Chapter 4: Identification of relevant European Sites within Zone of Influence of works (using Source-Pathway-Receptor approach)
- Chapter 5: Assessment of Likely Significant Effects
- Chapter 6: (Stage 1) Screening Determination Statement
- Chapter 7: Screening Statement Outcome

#### 1.3 RECEIVING ENVIRONMENT

The receiving environment encompasses Wicklow Harbour and in Wicklow Town, the capital town of Co. Wicklow. Wicklow Harbour includes Wicklow Port, which is managed by the Wicklow County Council and is situated at the mouth of the Leitrim River. Wicklow Port is a fishing and cargo port with hard stand areas, warehouses and associated machinery.

The receiving environment of the disposal site encompasses Arklow Bay off the coastline of Arklow town, Co. Wicklow.

#### 1.3.1 EXISTING HYDROGRAPHIC DATA

The existing hydrographic data is available from the INFOMAR 2016 survey. The Geological Survey Ireland vessel R.V. Geo conducted a multibeam sonar survey in and around Wicklow Harbour. Bathymetry and backscatter data are available for the area (see Figure 1-2, Figure 1-4) and in and around Arklow Harbour (Figure 1-4, Figure 1-5).



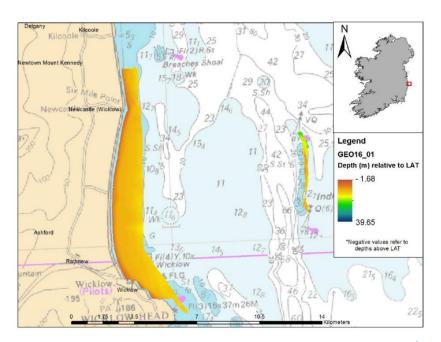


Figure 1-2 GEO16\_01 bathymetry data collected in and around Wicklow Harbour (reproduced from O'Toole et al, 2020)

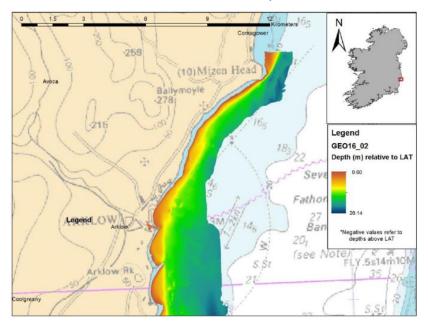


Figure 1-3 GEO16\_02 bathymetry data collected in and around Arklow (reproduced from O'Toole et al, 2020)



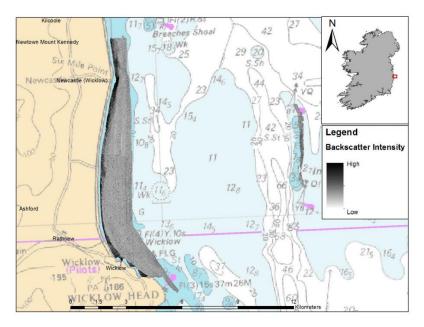


Figure 1-4 GEO16\_01 backscatter data collected in and around Wicklow Harbour (reproduced from O'Toole et al, 2020)

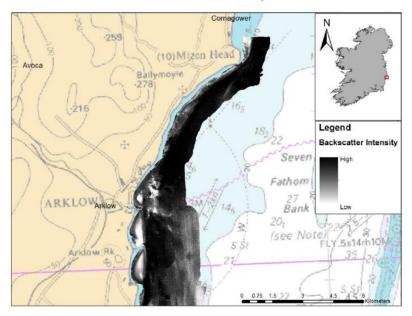


Figure 1-5 GEO16\_02 backscatter data collected in and around Arklow (reproduced from O'Toole et al, 2020)



#### 1.3.2 EXISTING SEDIMENT DATA

#### 1.3.2.1 WICKLOW HARBOUR DREDGE SITE

The available sediment sampling locations sampled in the Wicklow Harbour area are shown in Figure 1-6 below. The sampling was commissioned by Wicklow County Council and consisted of the collection of sediment samples for particle size and geochemical analysis in 2021 and 2022. The samples were collected by Hydrographic Surveys Ltd. using a 0.2 m³ Van Veen grab sampler on the MV Betty Frank, an insured and passenger-licenced vessel equipment with sediment sampling equipment. So-cotec laboratories conducted the sample analysis following guidance from the Marine Institute.

The results of the particle size analysis of the collected samples (Table 1-1) in the proposed Wicklow Harbour dredging area shows the sediment to be dredged and deposited would likely be composed mainly of **sand** and **mud**. Some coarser sediment was recorded in some areas along the inner edges of Dredge Area at S4 and S7.

Four stations were sampled within the dredge site in Wicklow Harbour by MERC Ltd on the 13th of March 2023 (MERC, 2023). At each station a 0.1m<sup>2</sup> Day grab was used and 3 replicate samples for faunal analysis and an additional sample for granulometry were collected.

A dropdown video survey of the benthic sampling stations and their environs was carried out on 13th April 2023. Drop-down video was deployed over the same areas where benthic grab samples were taken and in the surrounding area.

The sediments within the dredge site are consistent with estuarine sediments including muds and sands as would be expected due to the influence of the Leitrim River, which enters the harbour area from the northwest. Video imagery of this area indicated no surface hard substrata or epifauna at the stations sampled.

The sediments of stations 1, 2, 3 & 4 were comprised mainly of fine and very fine sands, the percentage of these fractions ranged from 50% at station 4 to 79% at station 2. Station 1 and 4 contained a significant proportion of silt/clays ( $<63\mu m$ ) at 24% and 33% respectively. This fraction was present at stations 2 & 3 but in much smaller amounts ( $\sim$ 5%). Coarser sands and gravels fraction were also present at these stations.

Faunal communities identified at these stations were typical of finer sediment, estuarine habitats and contained few taxa and individuals. Taxa common to all stations included the polychaetes Nephtys hombergii, Tharyx robustus and Spio martinensis. Animals from other phyla were less common but included the amphipod Ampelisca brevicornis, the bivalves Macomangulus tenuis and Abra alba and a few bryozoans. 479 individuals were recorded across 39 taxa.

No Annex I habitats or species of conservation importance were identified from available grab sampling or ROV imagery data.



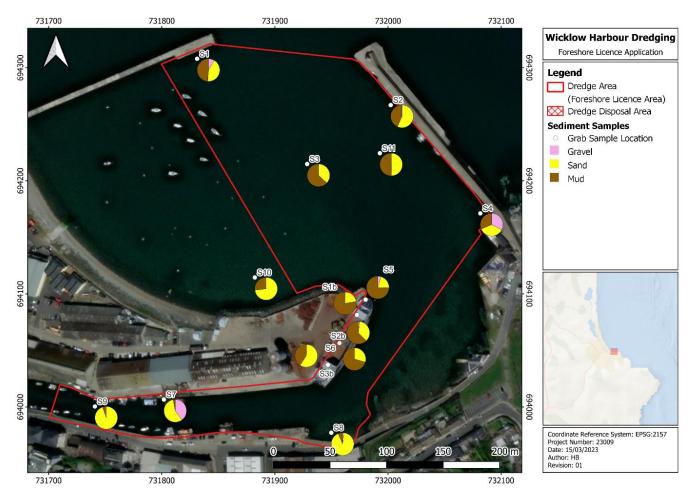


Figure 1-6 Wicklow Harbour Sediment Particle Size Analysis from the Dredge Area(sampled in 2021 and 2022) (showing Gravel: Pink, Sand: yellow, and Mud: Brown)



Table 1-1 Socotec Laboratories Particle Size Analysis (Hydrographic Surveys Ltd. sample collection 2021 and 2022)

Sample ID	Gravel %	Sand %	Mud %
S1	8.7	42.4	48.9
S2	0	56.6	43.4
S3	0	36.8	63.2
S4	32.5	36.3	31.2
S5	4.6	21	74.4
S6	0	29.3	70.7
S7	39.8	57.3	2.9
S8	1.9	91.7	6.4
S9	0	94.8	5.2
S10	0	72.9	27.1
S11	0	49.7	50.3
S1b	0.2	22.1	77.7
S2b	2	35.4	62.6
S3b	0.8	58.2	41

#### 1.3.2.2 ARKLOW DISPOSAL SITE

Information relating to the Arklow disposal site has been collated in GDG report "Arklow Disposal Site Review". Dumping at Sea Permit S0002-01 was granted by the EPA in April 2011 for dredging works at Arklow Harbour and subsequent disposal at sea of dredged material in a site located 0.4 km offshore from Arklow, which were undertaken in 2014.

A summary report by Ocean Ecology (2023) compared seabed monitoring at the Arklow disposal site between 2016 and 2022. Five sediment samples were collected across the dumping site for the analysis of sediment chemistry, particle size distribution and macroinvertebrates communities, as shown in Table 1-2.

Table 1-2 Textural group at each station sampled at the Arklow dumping site since 2016 (Table 3, Ocean Ecology 2023)

Station	2016	2017	2018	2020	2022
P1	Slightly Gravelly Sand	Sand	Slightly Gravelly Sand	Slightly Gravelly Sand	Slightly Gravelly Sand
P2	Slightly Gravelly Muddy Sand	Sand	Gravelly Muddy Sand	Sand	Slightly Gravelly Sand
Р3	Gravelly Muddy Sand	Gravelly Muddy Sand	Gravelly Sand	Sand	Slightly Gravelly Sand
P4	Muddy Sand	Gravelly Muddy Sand	Muddy Sand	-	Slightly Gravelly Sand
P5	Sandy Gravel	Sandy Gravel	Slightly Gravelly Sand	Sand	Slightly Gravelly Sand

Additionally the summarising report was prepared by GDG: Arklow Disposal Site Study (2023), where the microbenthic composition of the disposal site was discussed.



The summary of this report indicated that:

- Sand is the dominant sediment type at the disposal site, with some cobbles and boulders observed from the ROV survey conducted in October 2023
- The macrobenthic assemblage identified here in 2007 was made up of 51 individuals in 2007, over 100 individuals in 2016 and 2017, increased to nearly 600 individuals in 2018 and then dropped to less than 50 individuals in 2020 and 2022.
- Community composition differed over time with Annelida taxa dominating the assemblage in 2007, 2016 and 2020, Mollusca taxa taking over in 2017, and Miscellaneous taxa becoming dominant in 2018 and 2022. In contrast diversity was dominated by Annelida taxa during all monitoring years apart from 2022 when Miscellaneous taxa dominated.
- Analysis of ROV imagery collected in 2023 indicates the epifauna in the site is dominated by larger, mobile opportunists such as hermit crabs (Pagurus sp.) and bloody Henry starfish (Henrici sp.) with increased diversity of epifauna including polychaetes, bryozoans and hydroids observed where these sessile taxa could attach to coarser sediments.
- No Annex I habitats were identified or species of conservation importance were identified from available grab sampling or ROV imagery data.



### 2 Proposed Activities

#### 2.1 MAINTENANCE DREDGING

Wicklow County Council needs to regularly dredge the navigation channel, turning basin and berthing pockets in order to maintain the depths needed for the safe navigation of vessels to and from Wicklow Port. The desired navigational level to be maintained is 3.6 m below Chart Datum (CD) at Packet Quay, East Pier and Southern Quay. The level to be maintained at North Quay is 3.0 m below CD and 2.0 m below CD at Leitrim River.

WCC is therefore proposing an Eight Year Maintenance Dredging programme between 2025 and 2032. Sediment chemistry sampling and analysis, along with eco-toxicological testing, was undertaken in 2021 (following Marine Institute advice) to check the suitability of the dredged material to be deposited/disposed of at sea. Sampling with a Van Veen grab revealed silty sand, with fine sands in the harbour. The chemical analysis of the samples revealed the sediment is Class 1; where the contaminant concentrations are less than Level 1, uncontaminated and no biological effects are likely (Cronin et al., 2006; Marine Institute, 2019). The samples are therefore considered acceptable for disposal at sea.

A site located approximately 20km to the southwest of Wicklow Harbour and approximately located 0.4 km offshore from Arklow, has been identified for disposal at sea of the dredged material. The Dumping at Sea Permit S0002-01 was granted by the EPA in April 2011 for the use of this site for disposal of material dredged from Arklow Harbour. For this project, WCC proposes to use the same disposal location for the dredged material, which will be composed of mainly silt and sand, with small amounts of gravel present.

Sediment dispersion modelling undertaken by GDG predicts that gravel and sand fractions will settle out of suspension within the disposal site, remaining near the disposal site boundary throughout the disposal event and subsequent tidal cycles. Conversely, the silt fraction is predicted to disperse outside the disposal site.

Regarding changes in bed thickness, the model predicts less than 5.5 cm within the Arklow disposal area, less than 4.5 cm change for Buckroney-Brittas Dunes and Fen SAC, under 1.4 cm change for Kilpatrick Sandhills SAC, and less than 0.001 cm for the other nearby Natura 2000 sites.

#### 2.2 ACTIVITY SCHEDULE

The intention is to begin maintenance dredging and disposal activities as soon as is feasible following award of the necessary licence/permit. The exact mobilisation dates will not be known until the process of procuring a contractor is complete.

#### 2.3 Previous Dredging Campaigns

As indicated above, dredging campaigns at Wicklow Harbour have previously been conducted.

A full capital dredging campaign of Wicklow Harbour took place in 1998, where the Packet Pier was reconstructed with steel piling, which replaced the stone and concrete pier.



Limited dredging of Wicklow Harbour took place in 2005. This involved the removal of sediment build up alongside the Packet Pier using a tracked excavator which could be operated from the Packet Pier.

The most recent dredging took place in 2014 under Dumping at Sea (DaS) licence (Permit Number S0017-01) and Foreshore Licence (MS51/5/153). The dredging activities used an excavator on a barge with disposal by hopper barge. The disposal site, in this instance was off the coast of Wicklow Harbour which is different to this application. It had an area of 0.744 km² with water depths of 12-15 m.

#### 2.4 Dredging Methods

Wicklow County Council plan to dredge using equipment including a small Trailing Suction Hopper Dredger (see example in Figure 2-1), Back Hoe Dredger (Figure 2-2), Plough Dredging (Figure 2-3) and Water Injection Dredging (Figure 2-4).



Figure 2-1 Example of Trailing Suction Hopper Dredger (© Sosban BV, 2023)



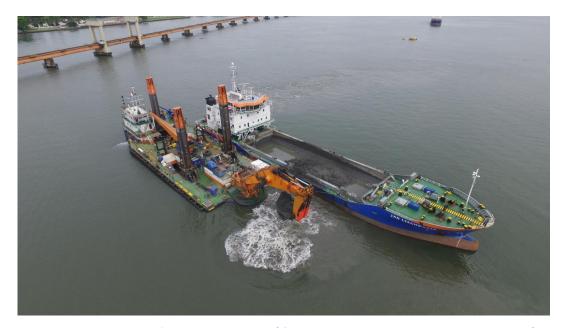


Figure 2-2 Example of Backhoe Dredger (© Anthony D Bates Partnership LLP, 2023)



Figure 2-3 Example of Dredge Plough (©Anthony D Bates Partnership LLP, 2023)





Figure 2-4 Example of Water Injection Dredging (©Anthony D Bates Partnership LLP, 2023)

#### **Trailing Suction Hopper Dredger (TSHD):**

This is used for the outer areas and includes the approach channel, packet quay, North Quay and the majority of the East Pier. This aids the trade of primary vessels to the harbour.

This type of dredger is self-propelled using pumps to gather material. The dredger has drag arms that are used to reach the seabed. Once at designated area the dredger uses the trailer and drag head to slowly collect the material. The material is collected and stored in the hopper where the heavier material settles, is transported, and released at a permitted dumping site/area for dumping. The material generally collected by the trailing hopper suction dredger includes sand, silt, clay and gravel but cannot be used for heavier material such as rock, unless specially adapted (IADC, 2023).

#### **Backhoe Dredger:**

The method is primarily used in the inner areas of the harbour and includes the Southern Quay, Leitrim River and North Quay. Additional minor areas in the remainder of the port may also use this method (i.e. where TSHD access is restricted).

Generally, these dredgers are stationary and have a single hydraulic bucket located at the end of an arm (McQueen et al., 2018). The Backhoe is mounted on a barge or specialised and rotatable pontoon which then moves the material back towards the backhoe dredger for the collection of material (McQueen et al., 2018; IADC, 2023).



Backhoe dredgers can be used for a variety of areas and are suitable for dredging materials such as sand, clay, stone/cobbles, and heavier/stronger material including fractured and unfractured rock (IADC, 2023).

#### Plough vessel:

A plough vessel generally uses, if available, a bulldozer type plough to relocate material, although a standard open box plough can suffice on occasion. Sediment movement is achieved by towing the plough behind a powered vessel, usually a small workboat or tug. If used correctly, the plough is suspended at a controlled height from an A-frame mounted over the stern of the towing vessel. Height, or depth of submergence, is controlled by a deck mounted hoist winch. The cutting blade at the leading edge of the plough slices the surface sediment and pushes the material to deeper/target areas. The plough is then raised above the general seabed level and the towing vessel returns to the area from which sediment is to be moved and repeats the cycle.

#### Water Injection Dredging (WID):

Water Injection Dredging (WID) is an environmentally friendly method of removing sediment build up and maintaining navigation channel depths for ports and rivers (VanOord, 2023). The WID method is used in areas where the sediment is composed of fine sand, silts and clay. Water is injected into the subsoils which allows the sediment to be moved by density currents.

#### **Disposal Activities:**

For disposal, dredgers usually have doors in the hull to empty the dredged material by splitting the doors in two halves and opening on hydraulic hinges, where the dredged material is discharged through bottom doors at the selected location (IADC, 2023).



# 3 HABITATS DIRECTIVE (92/43/EEC)

The purpose of this report is to inform the Appropriate Assessment process as required under the Habitats Directive (92/43/EEC). The Appropriate Assessment Screening contained in Section 4 of this report will determine whether the proposed dredging and disposal activities, both alone and in combination with other planned activities under the remit of this project and others, are likely to have a significant effect on any Natura 2000 or its qualifying interests. This document includes Stage 1 of the Appropriate Assessment process. For Stage 2 (Natura Impact Statement) please see the accompanying Wicklow Dredging Foreshore Licence Application NIS document.

This report has been prepared in accordance with the following guidance:

- 1 Appropriate Assessment of Plans and Projects in Ireland Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2010 revision)
- 2 Appropriate Assessment under Article 6 of the Habitats Directive; Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10
- 3 Guidance to Manage the Risk to Marine Mammals from Manmade Sound Sources in Irish Waters. Prepared by National Parks and Wildlife Service, DAHG (2014).
- 4 Guidelines for Good Practice: Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011)
- 5 Marine Natura Impact Statements in Irish Special Areas of Conservation: A working document. Prepared by National Parks and Wildlife Service, DAHG (2012).
- 6 Managing Natura 2000 Sites The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (European Commission 21 November 2018)
- 7 Office of the Planning Regulator Practice Note 01 PN01 (March 2021)

#### 3.1 LEGISLATIVE BACKGROUND

The Habitats Directive (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) was adopted in 1992, transposed into Irish Law in 1997 and subsequently amended and consolidated aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It provides a framework for the legal protection to ensure the conservation of a wide range of rare, threatened, or endemic animal and plant species throughout the European Union. The Birds Directive (Conservation of Wild Birds Directive (79/409/EEC) aims to protect all of the 500 wild bird species naturally occurring in the European Union. The Habitats Directive, along with the Birds Directive forms the cornerstone of Europe's nature conservation policy. Together they form a coherent network of protected areas (Special Areas of Conservation and Special Protection Areas), called Natura 2000, safeguarded against potentially damaging developments.

The requirement for "Appropriate Assessment" is set out in Articles 6(3) and 6(4) of the Habitats Directive (92/43/EEC). If a project is likely to have a significant effect on a Natura 2000 site, either alone



or in combination with other plans or projects, it must undergo an appropriate assessment (AA). According to Article 6(3) of the Habitats Directive:

"Any plan or project not directly connected with or necessary to the management of the site (Natura 2000 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 having ascertained that it will not adversely affect the integrity of the site concerned and if appropriate, after having obtained the opinion of the general public.

Article 6(4) states: "If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted. Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for environment or, further to an opinion from the Commission to other imperative reasons of overriding public interest."

#### 3.2 THE APPROPRIATE ASSESSMENT PROCESS

The European Commission's methodological guidance (EC, 2002) promotes a four-stage process to complete the AA and outlines the issues and tests at each stage (Figure 3-1). An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required. The four stages are summarised diagrammatically below, and the steps and procedures involved in completing each stage follows. Stages 1-2 deal with the main requirements for assessment under Article 6(3). Stage 3 may be part of Article 6(3) or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

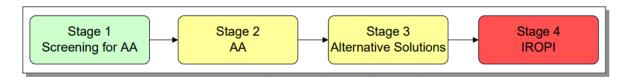


Figure 3-1: Stages in the AA process (Source: DEHLG, 2009)

#### Stage 1. Screening for Appropriate Assessment

Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):



- i. whether a plan or project is directly connected to or necessary for the management of the site, and
- ii. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). Screening should be undertaken without the inclusion of mitigation, unless potential impacts clearly can be avoided through the modification or redesign of the plan or project, in which case the screening process is repeated on the altered plan. The greatest level of evidence and justification will be needed in circumstances when the process ends at screening stage on grounds of no impact.

#### Stage 2. Appropriate Assessment

This stage considers whether the plan or project, alone or in combination with other projects or plans, will have adverse effects on the integrity of a Natura 2000 site, and includes any mitigation measures necessary to avoid, reduce or offset negative effects. The proponent of the plan or project will be required to submit a Natura Impact Statement, i.e. the report of a targeted professional scientific examination of the plan or project and the relevant Natura 2000 sites, to identify and characterise any possible implications for the site in view of the site's conservation objectives, taking account of in combination effects. This should provide information to enable the competent authority to carry out the appropriate assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must proceed to Stage 4, or the plan or project should be abandoned. The AA is carried out by the competent authority and is supported by the NIS.

#### **Stage 3. Alternative Solutions:**

This stage examines any alternative solutions or options that could enable the plan or project to proceed without adverse effects on the integrity of a Natura 2000 site. The process must return to Stage 2 as alternatives will require appropriate assessment in order to proceed. Demonstrating that all reasonable alternatives have been considered and assessed, and that the least damaging option has been selected, is necessary to progress to Stage 4.

#### Stage 4. Imperative Reasons of Overriding Public Interest (IROPI)/Derogation

Stage 4 is the main derogation process of Article 6 (4) which examines whether there are imperative reasons of overriding public interest (IROPI) for allowing a plan or project that will have adverse effects on the integrity of a Natura 2000 site to proceed in cases where it has been established that no less damaging alternative solution exists. The extra protection measures for Annex I priority habitats come into effect when making the IROPI case. Compensatory measures must be proposed and assessed. The Commission must be informed of the compensatory measures. Compensatory measures must be practical, implementable, likely to succeed, proportionate and enforceable, and they must be approved by the Minister for Housing, Planning and Local Government.



#### 3.3 METHODOLOGY

This report includes information to support Stage 1 Screening of the Appropriate Assessment process as detailed in section 3.2 and has been prepared in accordance with the guidance numbered 1 to 7 in the first paragraphs of section 3.

As the proposed works are not directly connected to or necessary for the management of a Natura 2000 site, this document focuses on assessing whether the works, alone or in combination with other plans and projects, are likely to have significant effects on any Natura 2000 site in view of its conservation objectives.

This report has been informed by a review of the publicly available datasets and the available literature that allowed for the characterisation of the receiving environment and supported the identification and assessment of potential impacts and their significance. The sources of the information used are cited throughout the report and listed in the References section.

The examination, analysis and evaluation of the relevant information that supported the Appropriate Assessment process conducted and documented in this report followed the precautionary principle throughout.

The report methodology followed the steps below, corresponding to the chapters which constitute the structure of the report.

- 1) Description of the proposed project (Chapter 2)
- 2) Description of the legislative background, of the Appropriate Assessment process and Methodology for the preparation of the report (this chapter)
- 3) Identification and description of the potential direct and indirect effects on the Natura 2000 sites (see Chapter 4)
- 4) Identification of the relevant Natura 2000 sites and their Qualifying Interests (QIs), and their Stage 1 AA Screening against the identified potential impacts (see Chapters 5, 6 and 7)

This report has been prepared by (BSc. Hons Geological Science, MSc. Geochemistry), checked and approved by (BSc. Hons Marine Science, MSc. Engineering in the Coastal Environment). (BSc. Hons Marine Science, MSc. Engineering in the Coastal Environmental consultant, undertaking various multi-disciplinary projects within consulting engineering. (BSc. Hons Marine Ecologist with coastal engineering expertise and extensive experience of offshore benthic survey and Marine Protected Area monitoring who has undertaken multiple environmental assessments under the Habitats Directive for GDG and as a statutory adviser to the UK government and its devolved administrations with the Joint Nature Conservation Committee.



# 4 POTENTIAL ENVIRONMENTAL IMPACTS OF PROPOSED ACTIVITIES

The potential direct and indirect environmental impacts identified for appraisal are set out in Table 4-1 and described below, given the maintenance dredging and dredge disposal activities proposed.

All impacts listed in Table 4-1 are considered relevant for both the maintenance dredging and disposal activities. Information about these impacts is provided in Sections 4.1 to 4.5.

Table 4-1 Potential direct and indirect environmental impacts of activities identified for appraisal

Impact	Direct/Indirect
Physical disturbance to marine benthic communities	Direct
Visual and noise disturbance to birds  Direct	
Disturbance from vibration and underwater noise	Direct
Injury due to collision with dredging vessels Direct	
Pollution event Direct and Indi	

#### 4.1 PHYSICAL DISTURBANCE TO MARINE BENTHIC COMMUNITIES

Physical disturbance to benthic communities caused through dredging may result in:

- Loss of habitat
- Removal of sub tidal benthic species and communities
- Increased suspension of solids in water column
- Habitat disturbance and smothering

Physical disturbance to intertidal/subtidal benthic communities caused through disposal of material may result in:

- · Habitat disturbance and smothering
- Increased suspension of solids in water column

Please note that given the maximum volume of material per year to be dredged and disposed (113,575 dry tonnes in the initial year, then a reduced amount in subsequent years) and the high degree of natural disturbance that subtidal sediments on this exposed and shallow coast are subject to, the



expected sediment loading over the receiving environment is not considered to be significant outside of the seabed in the immediate vicinity of the dredging and disposal operations.

#### 4.2 VISUAL AND NOISE DISTURBANCE TO BIRDS

The physical presence of the vessels undertaking the dredge and disposal activities may cause displacement and/or other behavioural responses in birds, including disturbance during the breeding season.

#### 4.3 UNDERWATER NOISE DISTURBANCE

The physical presence of the vessels undertaking the dredge and disposal activities and the activities themselves may introduce noise to the underwater environment.

#### 4.4 INJURY DUE TO COLLISION WITH SURVEY VESSELS

There is a risk of collision between marine mammals and vessels undertaking the dredge and disposal activities.

#### 4.5 POLLUTION EVENT

All seabirds and in particular diving birds are considered vulnerable to oil pollution which could come from the vessels undertaking the dredge and disposal activities, given the time seabirds spend resting on the water surface and diving through it in search of food.



## 5 IDENTIFICATION OF RELEVANT EUROPEAN SITES

This Chapter outlines the criteria used for defining the Zone of Influence<sup>1</sup> relevant to the potential impacts of the proposed activities, outlines how European Natura 2000 sites have been identified (i.e. using the Source-Pathway-Receptor model) and describes the sites which have been identified as having the potential to be affected by the proposed works.

The European Natura 2000 site information is based on the most up-to-date data available from the site synopses published by the National Parks and Wildlife Service (NPWS, <a href="www.npws.ie">www.npws.ie</a>), the Joint Nature Conservation Committee (JNCC, <a href="https://jncc.gov.uk/">https://jncc.gov.uk/</a>) and the European Commission (<a href="https://ec.europa.eu/environment/nature/natura2000/index">https://ec.europa.eu/environment/nature/natura2000/index</a> en.htm).

#### **5.1 ZONE OF INFLUENCE OF THE WORKS**

The following SACs and SPAs have been identified as potentially falling within the Zone of Influence of the proposed works:

- Any SAC in the vicinity of the Dredge Area and/or Dredge Disposal Area designated for Annex I habitats which have the potential to be affected by the proposed works (Figure 5-1).
- Any SAC designated for mobile Annex II species which have the potential to occur within the
  Dredge Area and/or Dredge Disposal Area and be affected by the works as summarised in
  Table 5-1 (Figure 5-1– Figure 5-3).

Table 5-1 Migratory species with a marine element for which SACs have been designated in Ireland and UK and species-specific Zone of Influence rationale applied

	Marine Spec	Comments	
1349	bottlenose dolphin	Tursiops truncatus	Management units for harbour porpoise and bottlenose dolphin have been used to
1351	harbour porpoise	Phocoena phocoena	determine relevant sites, depending on the Qualifying Interests
1364	grey seal	Halichoerus grypus	Foraging distances of 448 km for grey seals (from Carter et al, 2022),
1365	common (Harbour) seal	Phoca vitulina	Foraging distances of 273 km for harbour seals (from Carter et al, 2022),
	Marine/freshwate	r Species	
1095	sea lamprey	Petromyzon marinus	Precautionary 35 km foraging distance has been applied, based on JNCC, 2019
1099	river lamprey	Lampetra fluviatilis	Precautionary 35 km foraging distance has been applied, based on JNCC, 2019

<sup>&</sup>lt;sup>1</sup> The zone of influence (ZOI) of a project is the area over which ecological features may be affected by biophysical changes as a result of the proposed project and associated activities. This has the potential to extend far beyond the project site, for example where there are ecological or hydrological links beyond the site boundaries.

Wicklow Harbour Dredging & Disposal Site
Supporting Information for Screening of Appropriate Assessment
GDG | Wicklow Harbour Dredging and Arklow Disposal Site SISAA | 23145-REP-002-04



Marine Species			Comments
1096	brook lamprey	Lampetra planeri	Not considered further as brook lamprey are non-migratory freshwater species (1)
1103	Twaite shad	Alosa fallax fallax	Precautionary 35 km foraging distance has been applied, based on JNCC, 2019
1106	Atlantic salmon	Salmo salar	Salmon is an andromous fish which spawns in rivers and is only offered protection under Annex II of the EU Habitats directive when in freshwater. (2)
1355	Eurasian Otter	Lutra lutra	12 km alongshore for otter (from Reid et al, 2013) and 80 m seaward; "Typically, otters do not forage >80m from riverbanks or lake or coastal shores (Kruuk & Moorhouse, 1991)", from Reid et al, 2013

Brook lamprey (*Lampetra planeri*) - Special Areas of Conservation (jncc.gov.uk), which states "The brook lamprey *Lampetra planeri* is a primitive, jawless fish resembling an eel, and is the smallest of the lampreys found in the UK. It is a non-migratory freshwater species, occurring in streams and occasionally in lakes in north-west Europe."

- (2) Atlantic salmon (*Salmo salar*) Special Areas of Conservation (jncc.gov.uk), which states "It should be noted that salmon is an Annex II species only in freshwaters throughout the EU, and therefore marine and estuarine sites are excluded from selection",
  - Any SPA designated for birds, including SPAs with breeding seabirds listed as species of Special Conservation Interest, which have the potential to occur within the Dredge Area and/or Disposal Area and be affected by the proposed works (Figure 5-4 to Figure 5-7). Note indicative breeding season mean maximum foraging ranges from Woodward *et al.* (2019) have been used to determine relevant sites (Table 5-2), where mean maximum is the mean maximum range reported in each study averaged across studies. See Appendix I for how a description of how the mean maximum foraging ranges have been used to determine relevant sites and Woodward *et al.* 2019 for the criteria used for assigning confidence levels.

Table 5-2 Indicative breeding season foraging ranges and associated confidence levels (Woodward et al. 2019)

Indicative breeding season foraging ranges				
Species	Mean maximum (km ± SD)	Confidence Level		
Eider	21.5	Poor		
Red-throated diver	9	Low		
Fulmar	542.3 ± 657.9	Good		
Manx shearwater	1,346.8 ±,1,018.7	Moderate		



Indicative breeding season foraging ranges				
Species	Mean maximum (km ± SD)	Confidence Level		
European storm petrel	336	Poor		
Leach's storm petrel	n/a	Moderate		
Gannet	315.2 ± 194.2	Highest		
Cormorant	25.6 ± 8.3	Moderate		
Shag	13.2 ± 10.5	Highest		
Arctic skua	n/a	Poor		
Great skua	443.3 ± 487.9	Uncertain		
Black-headed gull	18.5	Uncertain		
Common gull	50	Poor		
Mediterranean gull	20	Uncertain		
Herring gull	58.8 ± 26.8	Good		
Lesser black-backed gull	127 ± 109	Highest		
Kittiwake	156.1 ± 144.5	Good		
Sandwich tern	34.3 ± 23.2	Moderate		
Roseate tern	12.6 ± 10.6	Moderate		
Common tern	18.0 ± 8.9	Good		
Arctic tern	25.7 ± 14.8	Good		
Little tern	5	Moderate		
Guillemot	73.2 ± 80.5	Highest		
Razorbill	88.7 ± 75.9	Good		
Puffin	137.1 ± 128.3	Good		



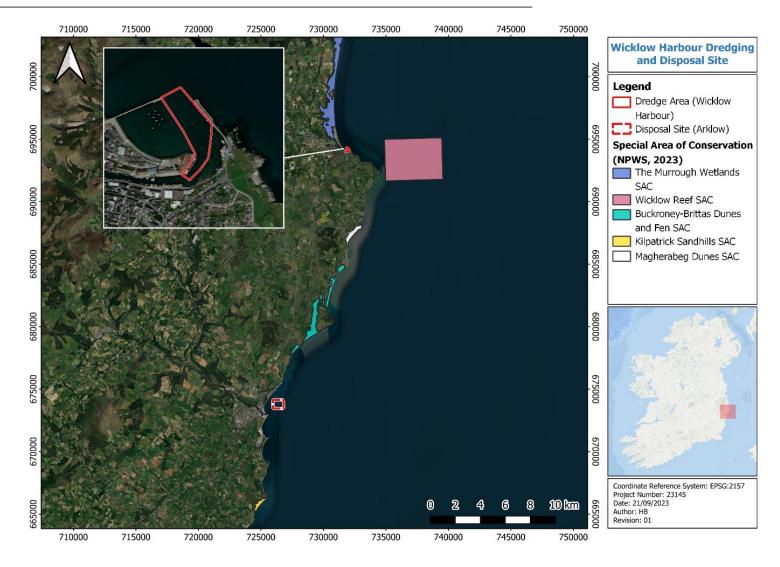


Figure 5-1 SACs designated for Annex I Habitats in the vicinity of the dredge and disposal areas Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched)



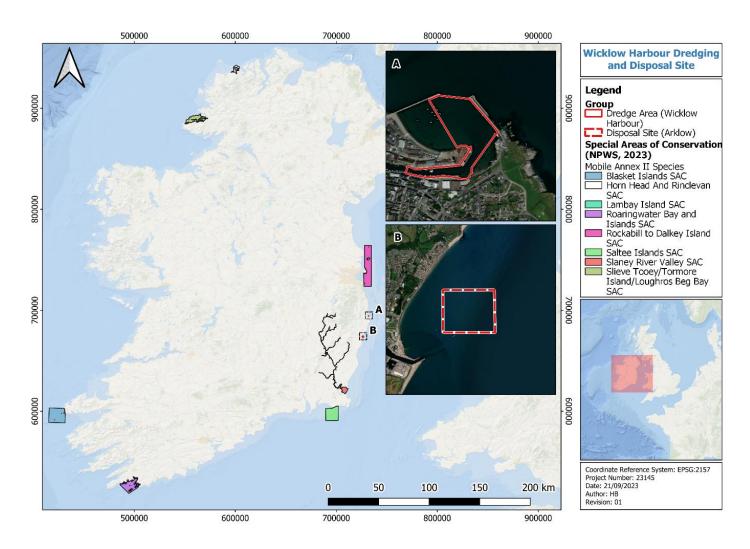


Figure 5-2 Ireland SACs designated for Annex II Mobile Species in the vicinity of the dredge and disposal areas (Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched)



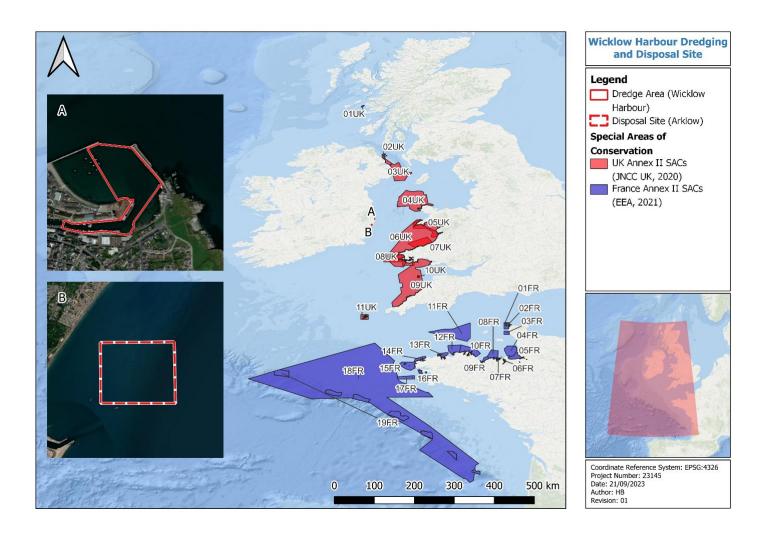


Figure 5-3 UK and France SACs designated for Annex II Mobile Species in the vicinity of the dredge and disposal areas (Dredge Area – Red Outline;

Dredge Disposal Area – Crosshatched) – Map key in table below



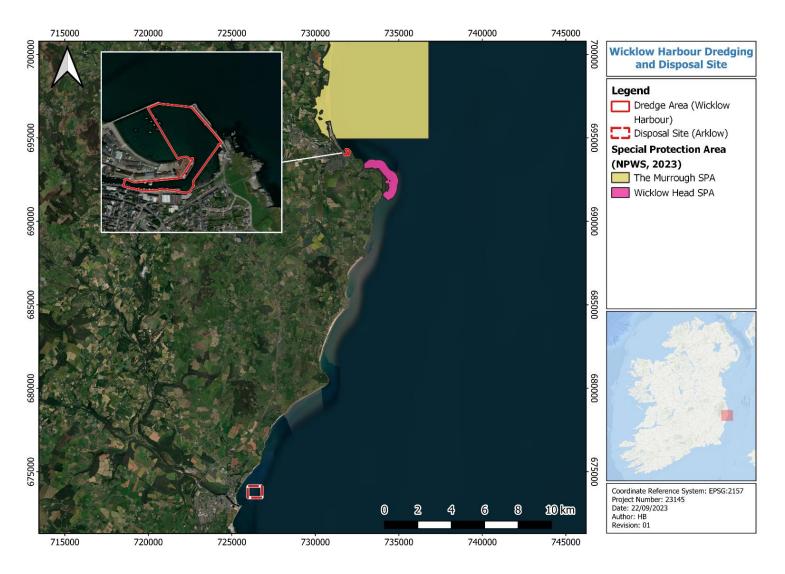


Figure 5-4 SPAs in the vicinity of the dredge and disposal areas (Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched)



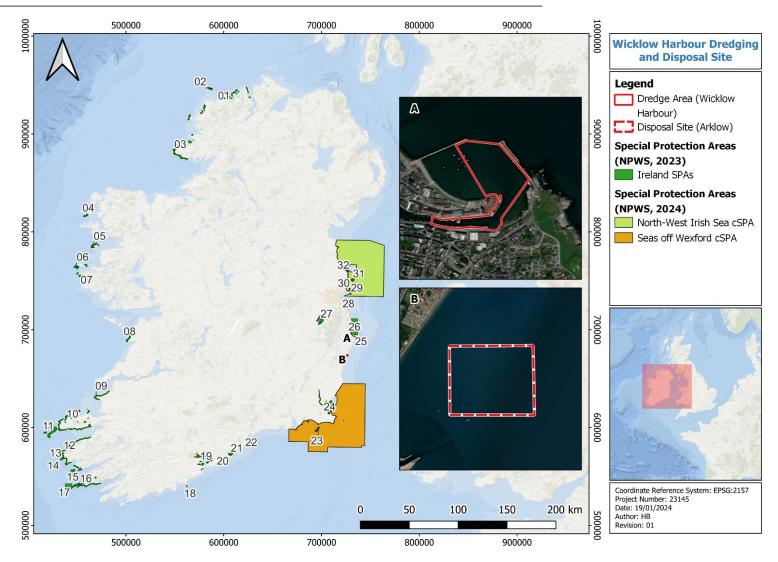


Figure 5-5 Ireland SPAs and the dredge and disposal areas (Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched) – Map key in table below.



Map Label	Site Code	Site Name
iviap Labei	Site Code	Horn Head to Fanad Head
01	004194	SPA
02	004073	Tory Island SPA
03	004150	West Donegal Coast SPA
04	004111	Duvillaun Islands SPA
05	004136	Clare Island SPA
06	004144	High Island, Inishshark and Davillaun SPA
07	004170	Cruagh Island SPA
08	004005	Cliffs of Moher SPA
09	004189	Kerry Head SPA
10	004153	Dingle Peninsula SPA
11	004008	Blasket Islands SPA
12	004154	Iveragh Peninsula SPA
13	004003	Puffin Island SPA
14	004007	Skelligs SPA
15	004175	Deenish Island and Scariff Island SPA
16	004155	Beara Peninsula SPA
17	004066	The Bull and The Cow Rocks SPA
18	004021	Old Head of Kinsale SPA
19	004030	Cork Harbour SPA
20	004022	Ballycotton Bay SPA
21	004023	Ballymacoda Bay SPA
22	004192	Helvick Head to Ballyquin SPA
23	004002	Saltee Islands SPA
24	004076	Wexford Harbour and Slobs SPA
25	004127	Wicklow Head SPA
26	004186	The Murrough SPA
27	004063	Poulaphouca Reservoir SPA
28	004172	Dalkey Islands SPA
29	004113	Howth Head Coast SPA
30	004117	Ireland's Eye SPA
31	004069	Lambay Island SPA
32	004122	Skerries Islands SPA



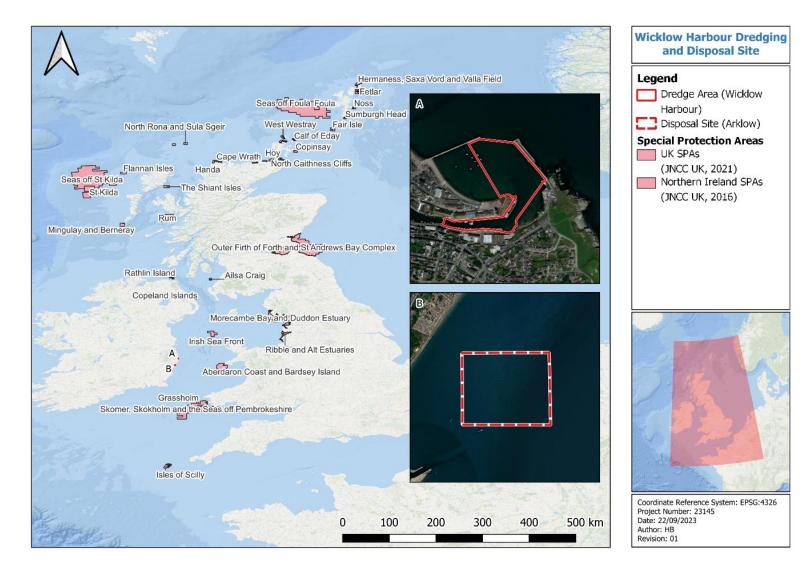


Figure 5-6 UK SPAs and the dredge and disposal areas (Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched)



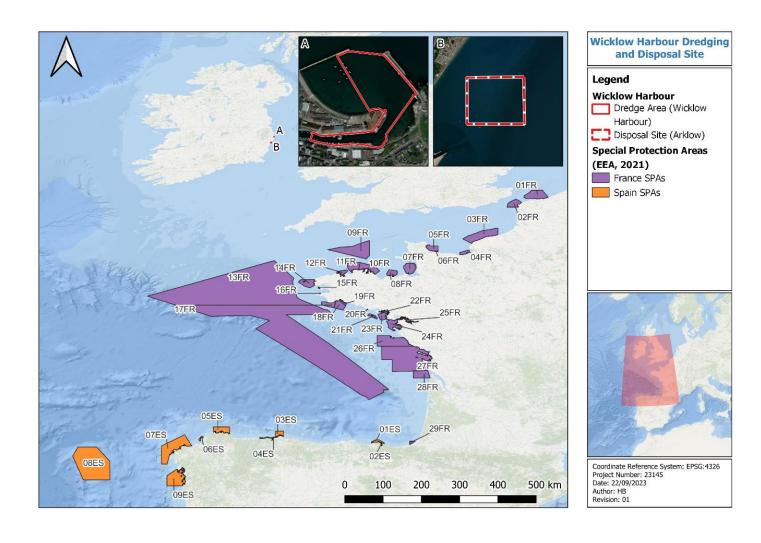


Figure 5-7 France and Spain SPAs and the dredge and disposal areas (Dredge Area – Red Outline; Dredge Disposal Area – Crosshatched) – Map key in table below



O1FR Bancs des Flandres O2FR Cap Gris-Nez O3FR Littoral seino-marin O4FR Littoral augeron O5FR Baie de Seine occidentale O6FR Falaise du Bessin Occidental O7FR Chausey O8FR Cap d'Erquy-Cap Fréhel O9FR Nord Bretagne DO 10FR Tregor Goëlo Cote de Granit Rose-Sept Iles 12FR Baie de Morlaix Mers Celtiques - Talus du golfe de Gascogne 14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
O3FR Littoral seino-marin O4FR Littoral augeron O5FR Baie de Seine occidentale  O6FR Chausey O8FR Cap d'Erquy-Cap Fréhel O9FR Nord Bretagne DO 10FR Tregor Goëlo Cote de Granit Rose-Sept Iles 12FR Baie de Morlaix Mers Celtiques - Talus du golfe de Gascogne 14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
O3FR  O4FR  Littoral seino-marin  O4FR  Littoral augeron  O5FR  Baie de Seine occidentale  Falaise du Bessin Occidentale  O7FR  Chausey  O8FR  Cap d'Erquy-Cap Fréhel  O9FR  Nord Bretagne DO  Tregor Goëlo  Cote de Granit Rose-Sept  Iles  12FR  Baie de Morlaix  Mers Celtiques - Talus du golfe de Gascogne  14FR  Ouessant-Molène  15FR  Camaret  16FR  Cap Sizun  17FR  Roches de Penmarc'h  18FR  Archipel de Glenan
O5FR Baie de Seine occidentale  O6FR Falaise du Bessin Occidental  O7FR Chausey  O8FR Cap d'Erquy-Cap Fréhel  O9FR Nord Bretagne DO  10FR Tregor Goëlo  Cote de Granit Rose-Sept  Iles  12FR Baie de Morlaix  Mers Celtiques - Talus du  golfe de Gascogne  14FR Ouessant-Molène  15FR Camaret  16FR Cap Sizun  17FR Roches de Penmarc'h  18FR Archipel de Glenan
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O7FR Chausey  O8FR Cap d'Erquy-Cap Fréhel  O9FR Nord Bretagne DO  10FR Tregor Goëlo  Cote de Granit Rose-Sept Iles  12FR Baie de Morlaix  Mers Celtiques - Talus du golfe de Gascogne  14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
O8FR Cap d'Erquy-Cap Fréhel O9FR Nord Bretagne DO 10FR Tregor Goëlo Cote de Granit Rose-Sept Iles 12FR Baie de Morlaix Mers Celtiques - Talus du golfe de Gascogne 14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
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10FR Tregor Goëlo Cote de Granit Rose-Sept Iles 12FR Baie de Morlaix Mers Celtiques - Talus du golfe de Gascogne 14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
11FR Cote de Granit Rose-Sept Iles  12FR Baie de Morlaix  Mers Celtiques - Talus du golfe de Gascogne  14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
11FR Cote de Granit Rose-Sept Iles  12FR Baie de Morlaix  Mers Celtiques - Talus du golfe de Gascogne  14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
12FR Baie de Morlaix  Mers Celtiques - Talus du golfe de Gascogne  14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
Mers Celtiques - Talus du golfe de Gascogne  14FR Ouessant-Molène 15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
golfe de Gascogne  14FR Ouessant-Molène  15FR Camaret  16FR Cap Sizun  17FR Roches de Penmarc'h  18FR Archipel de Glenan
golfe de Gascogne  14FR Ouessant-Molène  15FR Camaret  16FR Cap Sizun  17FR Roches de Penmarc'h  18FR Archipel de Glenan
15FR Camaret 16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
16FR Cap Sizun 17FR Roches de Penmarc'h 18FR Archipel de Glenan
17FR Roches de Penmarc'h 18FR Archipel de Glenan
18FR Archipel de Glenan
•
Dunce at aâtes de Tufui
19FR Dunes et côtes de Trévi-
gnon
20FR Baie de Quiberon
21FR Iles Houat-Hoedic
22FR Rivière de Pénerf
23FR Mor Braz
24FR Estuaire de la Loire - Baie
de Bourgneut
25FR Estuaire de la Loire
Secteur marin de l'île d'Yeu
jusqu'au continent
Pertuis charentais -
Rochebonne
28FR Panache de la Gironde
29FR Estuaire de la Bidassoa et
baie de Fontarabie
O1ES Espacio marino de la Ría de Mundaka-Cabo de Ogoño
O2FS Urdaibaiko itsasadarra / Ría
de Urdaibai
03ES Espacio marino de Cabo Peñas
04ES Cabo Busto-Luanco



05ES	Espacio marino de Punta de Candelaria-Ría de Or- tigueira-Estaca de Bares
06ES	Espacio marino de la Costa de Ferrolterra-Valdoviño
07ES	Espacio marino de la Costa da Morte
08ES	ZEPA Banco de Galicia
09ES	Espacio marino de las Rías Baixas de Galicia



- 5.2 IDENTIFICATION OF RELEVANT NATURA 2000 SITES USING SOURCE-PATHWAY-RECEPTOR MODEL AND COMPILATION OF INFORMATION QUALIFYING INTERESTS AND SPECIAL CONSERVATION INTERESTS AND THEIR CONSERVATION OBJECTIVES
- 5.2.1 THE SOURCE-PATHWAY-RECEPTOR MODEL HAS BEEN USED TO IDENTIFY THE EXISTENCE AND CHARACTERISTICS OF THE PATHWAYS THAT COULD LINK THE EUROPEAN SITES IN THE ZONE OF INFLUENCE OF THE PROPOSED ACTIVITIES, AND THEIR QUALIFYING INTERESTS (QIs) OR SPECIAL CONSERVATION INTERESTS (SCIs) TO THE PROPOSED ACTIVITIES (IDENTIFICATION DREDGING AREA AT WICKLOW HARBOUR.

Table 5-3), as outline in OPR Practice Note 01: PN01.

Full European site and feature background information has not been reproduced from the NPWS website as PN01 states "short paraphrasing and/or cross reference to NPWS is acceptable – it is not necessary to reproduce the full text on the QI/SC"; instead, the relevant information has been paraphrased with NPWS resources referenced as appropriate.

5.2.2 IN TOTAL, 145 NATURA 2000 FOR THE DREDGE AREA AND 151 NATURA 2000 FOR THE DISPOSAL AREA SITES WERE ASSESSED AND IDENTIFIED AS BEING IN THE ZONE OF INFLUENCE OF THE APPLICATION AREA AND DEEMED RELEVANT AND SCREENED IN FOR CONSIDERATION. SACS AND THEIR QIS AND SPAS AND THEIR SCIS WHICH HAVE BEEN INCLUDED FOR SCREENING ARE SUMMARISED IN DREDGING AREA AT WICKLOW HARBOUR.

Table 5-3 and Table 5-4.

Note that all dredging and disposal activities are located outside of SACs designated for Annex I QI habitats. Potential impacts to Annex I habitats would therefore be indirect in nature and related to the disposal of the dredged material at the Dredge Disposal area.

5.2.3 FOR UK AND FRENCH SACs, ONLY THE DESIGNATED MIGRATORY QIS IN THE ZONE OF INFLUENCE OF THE PROPOSED ACTIVITIES (AS DEFINED FOR THE RELEVANT SPECIES ABOVE) ARE CONSIDERED.

ANNEX I HABITATS OR OTHER ANNEX II SPECIES ARE THEREFORE NOT INCLUDED IN DREDGING AREA AT WICKLOW HARBOUR.

Table 5-3 and Table 5-4 or considered in further screening.



## 5.2.4 Dredging Area at Wicklow Harbour.

Table 5-3 Relevant Natura 2000 sites and Source-Pathway-Receptor Connections for Dredge Area

Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
The Mur- rough SPA	Herring Gull (Larus argentatus) [A184] Red-throated Diver (Gavia stellata) [A001] Little Tern (Sterna albifrons) [A195] Black-headed Gull (Chroicocephalus ridibundus) [A179] Wetland & waterbirds (IE004186) Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052]	0.18	The proposed Dredge Area are within the range of the Herring Gull, Red-throated Diver, Little Tern and Black-headed Gull SCIs.  A possible source pathway receptor connection has been identified for herring gull, Red-throated Diver, Little Tern and Black-headed Gull who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs.	Y (Herring Gull, Red- throated Diver, Little Tern and Black- headed Gull, Wetland & waterbirds N (Other SCIs)
Wicklow Head SPA (IE004127)	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188]	1.05	The proposed Dredge area are within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
The Mur- rough Wet- lands SAC (IE002249)	Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Alkaline fens [7230]	1.17	The Dredge Area is located outside of this Natura 2000 site therefore there is no source-pathway-receptor connection and there will be no direct impact to the designated Annex I habitats at The Murrough Wetlands SAC.  There is no source pathway receptor connection to the other designated Annex I habitats, which are landward of the shingle bank and beyond the modelled sediment dispersion area.	N (All Annex I Habitat Qls)
Wicklow Reef SAC (IE002274)	Reefs [1170]	2.81	The Dredge Area is located outside of this Natura 2000 site therefore there is no source-pathway-receptor connection and there will be no direct impact to the designated Annex I habitats at Wicklow Reef SAC  The Dredge Area is located outside of this Natura 2000 site. However, there is a possible source-pathway-receptor connection to the designated Annex I habitat QIs.  There is a possibility of an indirect impact on the Annex I Reef habitat feature of the Wicklow Reef SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on the Annex I reef habitat and its associated species.	Y (reefs)
Rockabill to Dalkey Is- land SAC (IE003000)	Phocoena pho- coena (Harbour Porpoise) [1351] Reefs [1170]	29.30	The proposed Dredge Area is within the range of the <b>Harbour porpoise</b> QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) N (Reefs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
			The Dredge Area are located outside of this Natura 2000 site and beyond the modelled sediment dispersion area, therefore there is no source pathway receptor connection to the designated Annex I habitat.	
Dalkey Is- lands SPA (IE004172)	Arctic Tern (Sterna paradisaea) [A194]  Common Tern (Sterna hirundo) [A193]  Roseate Tern (Sterna dougallii) [A192]	31.97	The proposed Dredge Area is within the range of the <b>Arctic Tern</b> and <b>Common Tern</b> SCIs.  A possible source pathway receptor connection has been identified for the Arctic Tern and Common Tern, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Arctic Tern) Y (Common Tern) N (Other SCIS)
Poulaphouca Reservoir SPA* inland (IE004063)	Lesser Black- backed Gull ( <i>Larus</i> fuscus) [A183] Greylag Goose ( <i>Anser anser</i> ) [A043]	33.40	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for the Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull) N (Other SCIS)
North-west Irish Sea SPA	Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204] Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Common Gull (Larus canus) [A182] Lesser Blackbacked Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184]	39.88 km	The proposed Dredge Area is within the range of the SCI species Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin, Manx Shearwater, Common Gull, Lesser Black-backed Gull, Great Black-backed Gull, Arctic Tern and Fulmar.  A possible source pathway receptor connection has been identified for the above-mentioned SCIs, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  The other SCIs listed for the North-west Irish Sea SPA are not considered further as their foraging range does not overlap with the proposed Dredging Area.	Y (Herring Gull, Kitti- wake, Guil- lemot, Ra- zorbill, Puf- fin, Manx Shearwater, Common Gull, Lesser Black- backed Gull, Great Black- backed Gull, Arctic Tern and Fulmar) N (Other SCIs)



Site Name (Site Code)	Qualifying Interests (QIs)/Special Conservation Interest (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Great Black-backed Gull (Larus marinus) [A187] Kittiwake (Rissa tridactyla) [A188] Arctic Tern (Sterna paradisaea) [A194] Red-throated Diver (Gavia stellata) [A001] Great Northern Diver (Gavia immer) [A003] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Common Scoter (Melanitta nigra) [A065] Little Gull (Larus minutus) [A177] Black-headed Gull (Chroicocephalus ridibundus) [A179] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Little Tern (Sterna albifrons) [A195]			



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Howth Head Coast SPA (IE004113)	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188]	42.03	The proposed Dredge Area is within the range of the Kittiwake SCI.  A possible source pathway receptor connection has been identified for kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)
Seas off Wexford SPA	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Gannet (Morus bassanus) [A016] Lesser Black-backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]  Red-throated Diver (Gavia stellata) [A001] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Common Scoter (Melanitta nigra) [A065] Mediterranean Gull (Larus melanocephalus) [A176]	52.44 km	The proposed Dredge Area is within the range of the SCI species Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin, Manx Shearwater, Lesser Black-backed Gull, Northern Gannet and Fulmar.  A possible source pathway receptor connection has been identified for the above-mentioned SCIs, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  The other SCIs listed for the North-west Irish Sea SPA are not considered further as their foraging range does not overlap with the proposed Dredging Area.	Y (Herring Gull, Kitti- wake, Guil- lemot, Ra- zorbill, Puf- fin, Manx Shearwater, Lesser Black- backed Gull, Northern Gannet and Fulmar) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Black-headed Gull (Chroicocephalus ridibundus) [A179] Sandwich Tern (Sterna sandvicen- sis) [A191] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Arctic Tern (Sterna paradisaea) [A194] Little Tern (Sterna albifrons) [A195]			
Ireland's Eye SPA (IE004117)	Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Fulmar (Fulmarus glacialis) [A009]	46.23	The proposed Dredge Area is within the range of the Herring Gull, Kittiwake, Guillemot, Razorbill and Fulmar SCIs.  A possible source pathway receptor connection has been identified for Herring Gull, Kittiwake, Guillemot, Razorbill and Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Herring Gull, Kitti- wake, Ra- zorbill and Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Lambay Island SPA (IE004069)	Fulmar (Fulmarus glacialis) [A009] Lesser Black- backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Greylag Goose (Anser anser) [A043]	55.26	The proposed Dredge area is within the range of the Fulmar, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Lesser Black- backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill s) N (Other SCIs)
Lambay Is- land SAC (IE000204)	Halichoerus grypus (Grey Seal) [1364] Phoca vitulina (Common Seal) [1365]	55.35	The proposed Dredge Area is within the range of the <b>Grey Seal and Common Seal</b> QI.  A possible source pathway receptor connection has been identified for grey seal and common seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal, Common Seal)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
North Angle- sey Marine / Gogledd Môn Forol SAC (UK0013114 )	Phocoena phocoena (Harbour Porpoise) [1351]  Note for UK and French SACs, only designated migratory QIs in the zone of influence of the proposed activities (as defined for relevant species above) are considered. Annex I Habitats or other Annex II Species are therefore not included in this table or considered for screening	63.15	The proposed Dredge Area is within the range of the <b>Harbour porpoise</b> QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
West Wales Marine / Gorllewin Cymru Forol SAC (UK0030397	Phocoena pho- coena (Harbour Porpoise) [1351]	73.52	The proposed Dredge Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the site investigation activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Skerries Islands SPA (IE004122)	Herring Gull (Larus argentatus) [A184]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Purple Sandpiper (Calidris maritima) [A148] Turnstone (Arenaria interpres) [A169]	74.29	The proposed Dredge Area is within the range of the Herring Gull SCI.  A possible source pathway receptor connection has been identified for the Herring Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs.	Y (Herring Gull) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA (UK9013121	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	76.47	The proposed Dredge is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Slaney River Valley SAC (IE000781)	Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twaite Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355] Phoca vitulina (Common Seal) [1365]	77.19	A source pathway receptor connection is not identified for salmon, as salmon is an anadromous fish which spawns in rivers and is only offered protection under Annex II of the EU Habitats Directive when in its freshwater habitats within designated SACs.  The proposed Dredge is within range of the Harbour Porpoise SCI. A source-pathway-receptor connection is not possible for otters as the Licence Area is outside of their range.  A source-pathway-receptor connection is possible for harbour seals as the Licence Area is within of their range.  A source-pathway-receptor connection is not possible for Sea Lamprey and River Lamprey as the Licence Area is outside of their range.	Y (Harbour Seal N (Salmon, Sea Lam- prey, River Lamprey and Twaite Shad QIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Wexford Harbour and Slobs SPA (IE004076)	Lesser Black-backed Gull (Larus fuscus) [A183]  Little Grebe (Tachy-baptus ruficollis) [A004] Great Crested Grebe (Podiceps cristatus) [A005] Cormorant (Pha-lacrocorax carbo) [A017] Grey Heron (Ardea cinerea) [A028] Bewick's Swan (Cygnus columbianus bewickii) [A037] Whooper Swan (Cygnus cygnus) [A038] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Mallard (Anas platyrhynchos) [A053] Pintail (Anas acuta) [A054] Scaup (Aythya marila) [A062] Goldeneye (Bucephala clangula) [A067] Red-breasted Merganser (Mergus serrator) [A069] Hen Harrier (Circus cyaneus) [A082] Coot (Fulica atra) [A125] Oystercatcher (Haematop (Las)) [A130]	78.07	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for the Lesser Black-backed Gull, who could move into activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs.	Y (Lesser Black- backed Gull) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Knot (Calidris canutus) [A143] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Little Tern (Sterna albifrons) [A195] Greenland Whitefronted Goose (Anser albifrons flavirostris) [A395]			
Lleyn Peninsula and the Sarnau / Pen Llyn a`r Sarnau SAC (UK13117)	Tursiops truncatus (Bottlenose Dol- phin) [1349] Halichoerus grypus (Grey Seal) [1364]	82.08	The proposed Dredge Area is within the range of the Bottlenose Dolphin and Grey Seal Qls.  A possible source pathway receptor connection has been identified for Bottlenose Dolphin and Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater and by injury due to collision with vessels or equipment.	Y (Bottle- nose Dol- phin and Grey Seal)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Irish Sea Front SPA (UK9020328 )	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	93.47	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Saltee Is- lands SAC (IE000707)	Halichoerus grypus (Grey Seal) [1364]	106.15	The proposed Dredge Area is within range of the <b>Grey Seal</b> (Halichoerus grypus).  A possible source-pathway-receptor connection has been identified for Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal)
Saltee Is- lands SPA (IE000707)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Lesser Black- backed Gull (Larus fuscus) [A183] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]  Herring Gull (Larus argentatus) [A184] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018]	110.12	The proposed Dredge Area is within the range of the Fulmar, Gannet, Lesser Black-backed Gull, Kittiwake, Guillemot, Puffin and Razorbill SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Gannet Lesser Black-backed Gull, Kittiwake, Guillemot, Puffin and Razorbill, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar, Lesser Black- backed Gull, Gannet, Kit- tiwake, Guil- lemot, Puf- fin and Ra- zorbill) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cardigan Bay/ Bae Ceredigion SAC (UK0012712	Tursiops truncatus (Bottlenose Dolphin) [1349] Halichoerus grypus (Grey Seal) [1364] Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099]	110.26	The proposed Dredge Area is within the range of the Bottlenose Dolphin, Grey Seal, Qls.  A possible source-pathway-receptor-connection has been identified for Bottlenose Dolphin and Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater and by injury due to collision with vessels or equipment.  There is no source-pathway-receptor-connection for Sea and River Lamprey, as the screening area is located outside the foraging range for the Qls at this Natura 2000 site.	Y (Bottle- nose Dol- phin, Grey Seal) N (Sea Lam- prey and River Lam- prey QIs)
Pembroke- shire Ma- rine/ Sir Benfro Forol SAC (UK0013116 )	Halichoerus grypus (Grey Seal) [1364] Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099] Alosa alosa (Allis shad) [1102] Alosa fallax fallax (Twaite Shad) [1103]	121.88	The proposed Dredge Area is within the range of the Grey seal QI.  A source-pathway-receptor connection is possible for this QIs who could move into the Licence Area and be impacted by disturbance from vibration/ underwater noise and by injury due to collision with survey vessels or equipment.  A source-pathway-receptor connection is not possible for Sea lamprey, River lamprey, Twaite shad, Allis shad and otter as the Licence Area is outside of their range.	Y (Grey Seal)  N (Sea Lamprey, River Lamprey, Allis Shad and Twaite Shad Qls)
North Chan- nel SAC (UK0030399 )	Phocoena pho- coena (Harbour Porpoise) [1351]	138.17	The proposed Dredge Area are within the range of the <b>Harbour Porpoise</b> QI.  A source-pathway-receptor connection is possible for harbour porpoises who could move into the Licence Area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with survey vessels or equipment.	Y (Harbour Porpoise)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Skomer, Skokholm and the Seas off Pem- brokeshire SPA (UK9014051	Manx shearwater (Puffinus puffinus) [A013] Lesser Black- backed Gull (Larus fuscus) [A183] Puffin (Fratercula arctica) [A204] European Storm Petrel (Hydrobates pelagicus) [A014]	142.11	The proposed Dredge Area is within the range of the Manx shearwater, Lesser Black-backed Gull, European Storm Petrel and Puffin SCIs.  A possible source pathway receptor connection has been identified for Manx shearwater, Lesser Black-backed Gull, European Storm Petrel and Puffin, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx shearwater, Lesser Black- backed Gull, European Storm Petrel and Puffin )
Grassholm SPA (UK9014041 )	Gannet ( <i>Morus</i> bassanus) [A016]	142.51	The proposed Dredge Area is within the range of the <b>Gannet</b> SCI.  A possible source pathway receptor connection has been identified for Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet)
Helvick Head to Ballyquin SPA (IE004192)	Kittiwake (Rissa tri-dactyla) [A188]  Cormorant (Pha-lacrocorax carbo) [A017] Peregrine (Falco peregrinus) [A103] Herring Gull (Larus argentatus) [A184] Chough (Pyr-rhocorax pyr-rhocorax) [A346]	176.56	The proposed Dredge Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Bristol Chan- nel Ap- proaches / Dynesfeydd Môr Hafren SAC (UK0030396	Phocoena phocoena (Harbour porpoise) [1351]	189.82	The proposed Dredge Area is within the range of the <b>Harbour porpoise</b> QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Copeland Is- lands SPA (UK9020291 )	Manx shearwater (Puffinus puffinus) [A013] Arctic Tern (Sterna paradisaea) [A194]	193.83	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater) N (Other SCIs)
Ballymacoda Bay SPA (IE004023)	Lesser Black-backed Gull (Larus fuscus) [A183]  Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Ringed Plover (Charadrius hiaticula) [A137] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Sanderling (Calidris alpina) [A144] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157]	203	The proposed Dredge is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull) N (Other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Turnstone (Arenaria interpres) [A169] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182]			
Ribble and Alt Estuaries SPA (UK9005103	Lesser Black- backed Gull ( <i>Larus</i> <i>fuscus</i> ) [A183]	204	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)
Ballycotton Bay SPA (IE004022)	Lesser Black-backed Gull (Larus fuscus) [A183]  Teal (Anas crecca) [A052] Ringed Plover (Charadrius hiaticula) [A137] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Turnstone (Arenaria interpres) [A169]	214	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Lesser Black- backed Gull) N (all other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Common Gull (La- rus canus) [A182]			
Morecambe Bay and Duddon Es- tuary SPA (UK9020326	Lesser Black- backed Gull ( <i>Larus</i> <i>fuscus</i> ) [A183]	216	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)
Lundy SAC (UK0013114 )	Halichoerus grypus (Grey Seal) [1364]	222	The proposed Dredge is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)
The Maidens SAC (UK0013114 )	Halichoerus grypus (Grey Seal) [1364]	222	The proposed Dredge area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cork Har- bour SPA (IE004030)	Lesser Black-backed Gull (Larus fuscus) [A183]  Little Grebe (Tachy-baptus ruficollis) [A004] Great Crested Grebe (Podiceps cristatus) [A005] Cormorant (Pha-lacrocorax carbo) [A017] Grey Heron (Ardea cinerea) [A028] Shelduck (Tadorna tadorna) [A048] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Pintail (Anas acuta) [A054] Shoveler (Anas clypeata) [A056] Red-breasted Merganser (Mergus serrator) [A069] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162]	237	The proposed Dredge Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Lesser Black- backed Gull) N (All other SCI)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (La- rus canus) [A182] Common Tern (Sterna hirundo) [A193]			
Ailsa Craig SPA (UK9003091	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188] Gannet ( <i>Morus bassanus</i> ) [A016]	257	The proposed Dredge Area is within the range of the <b>Kittiwake and Gannet</b> SCIs.  A possible source pathway receptor connection has been identified for Kittiwake and Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kittiwake and Gan- nets)
Old Head of Kinsale SPA (IE004021)	Kittiwake (Rissa tri- dactyla) [A188] Guillemot (Uria aalge) [A199]	258	The proposed Dredge Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)
Rathlin Is- land SPA (UK9020011	Kittiwake ( <i>Rissa tri-</i> dactyla) [A188]	272	The proposed Dredge Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Roaring- water Bay and Islands SAC (IE000101)	Phocoena pho- coena (Harbour Porpoise) [1351] Halichoerus grypus (Grey Seal) [1364]	323	The proposed Dredge Area is within the range of the Harbour porpoise and Grey Seal Qls.  A possible source pathway receptor connection has been identified for harbour porpoise and grey seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour porpoise, Grey Seal)
Isles of Scilly Complex SAC (UK0013694	Halichoerus grypus (Grey Seal) [1364]	334	The proposed Dredge Area is within the range of the <b>Grey Seal</b> QI.  A possible source pathway receptor connection has been identified for grey seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal)
Isles of Scilly SPA (UK9020288 )	European Storm Petrel ( <i>Hydrobates</i> <i>pelagicus</i> ) [A014]	335	The proposed Dredge Area is within the range of the European Storm Petrel.  A possible source pathway receptor connection has been identified for the European Storm Petrel, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (European Storm Pet- rel)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Horn Head to Fanad Head SPA (IE004194)	Fulmar (Fulmarus glacialis) [A009]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Barnacle Goose (Branta leucopsis) [A045] Peregrine (Falcoperegrinus) [A103] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alcatorda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346] Greenland Whitefronted Goose (Anser albifrons flavirostris) [A395]	371	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Fulmar)  N (all other SCIs)
Beara Penin- sula SPA (IE004155)	Fulmar (Fulmarus glacialis) [A009]  Chough (Pyr-rhocorax pyr-rhocorax) [A346]	374	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
The Bull and The Cow Rocks SPA (IE004066)	Gannet (Morus bassanus) [A016] Storm Petrel (Hy- drobates pelagicus) [A014] Puffin (Fratercula arctica) [A204]	386	The proposed Dredge Area is within the range of the <b>Gannet</b> SCI.  A possible source pathway receptor connection has been identified for Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Horn Head and Rin- clevan SAC (IE000147)	Halichoerus grypus (Grey Seal) [1364]	392	The proposed Dredge Area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals and harbour porpoise which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)
Deenish Is- land and Scariff Island SPA (IE004175)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Storm Petrel (Hydrobates pelagicus) [A014] Lesser Blackbacked Gull (Larus fuscus) [A183] Arctic Tern (Sterna paradisaea) [A194]	401	The proposed Dredge Area is within the range of the <b>Fulmar and Manx Shearwater</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Manx Shearwater)
Tory Island SPA (IE004073)	Fulmar (Fulmarus glacialis) [A009]  Corncrake (Crex crex) [A122] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]	402	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Iveragh Pen- insula SPA (IE004154)	Fulmar (Fulmarus glacialis) [A009]  Peregrine (Falco peregrinus) [A103] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Chough (Pyrrhocorax pyrrhocorax) [A346]	405	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Treshnish Isles SAC (UK0030289 )	Halichoerus grypus (Grey Seal) [1364]	412	The proposed Dredge Area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals and harbour porpoise which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)
Skelligs SPA (IE004007)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Gannet (Morus bassanus) [A016]  Storm Petrel (Hydrobates pelagicus) [A014] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Puffin (Fratercula arctica) [A204]	413	The proposed Dredge Area is within the range of the Fulmar, Manx Shearwater and Gannet SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Gannet, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar, Manx Shear- water and Gannet) N (Other SCIs)



Site Name (Site Code)	Qualifying Interests (QIs)/Special Conservation Interest (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]		The proposed Dredge is within the range of the <b>Fulmar and Manx Shearwater</b> SCIs.	Y (Fulmar
Puffin Island SPA (IE004003)	Storm Petrel (Hy- drobates pelagicus) [A014] Lesser Black- backed Gull (Larus fuscus) [A183] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]	415	A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	and Manx Shearwater) N (Other SCIs)
West Done- gal Coast SPA (IE004150)	Fulmar (Fulmarus glacialis) [A009]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Peregrine (Falcoperegrinus) [A103] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Razorbill (Alcatorda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346]	422	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar) N (Other SCIs)
Mers Celtiques - Talus du golfe de Gascogne SPA (FR5212016)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	432	The proposed Dredge Area is within the range of the Fulmar, Gannet, Great Skua and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Great Skua and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Gannet, Great Skua and Manx Shearwater)



Site Name (Site Code)	Qualifying Interests (QIs)/Special Conservation Interest (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Mers Celtiques - Talus du golfe de Gascogne SAC (FR5212016)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	432	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Blasket Islands SAC (IE002172)	Phocoena pho- coena (Harbour Porpoise) [1351] Halichoerus grypus (Grey Seal) [1364]	440	The proposed Dredge Area is within the range of the Harbour porpoise and Grey Seal Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise and Grey Seal)
Blasket Islands SPA (IE004008)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]  Storm Petrel (Hydrobates pelagicus) [A014] Shag (Phalacrocorax aristotelis) [A018] Lesser Blackbacked Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Arctic Tern (Sterna paradisaea) [A194] Razorbill (Alca torda) [A200] Puffin (Fratercula	441	The proposed Dredge is within the range of the <b>Fulmar and Manx Shearwater</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar and Manx Shearwater) N (all other SCIs)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	arctica) [A204] Chough (Pyr- rhocorax pyr- rhocorax) [A346]			
Dingle Pen- insula SPA (IE004153)	Fulmar (Fulmarus glacialis) [A009]  Peregrine (Falco peregrinus) [A103] Chough (Pyr-rhocorax pyr-rhocorax) [A346]	447	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Nord Bre- tagne DH SAC (FR2502022)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	447	The proposed Dredge is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Nord Bre- tagne DO SPA (FR2512005)	Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	454	The proposed Dredge Area is within the range of the Fulmar, Gannet, Great Skua and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Great Skua and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet, Great Skua and Manx Shearwater)
Mingulay and Berneray SPA (UK9001121	Fulmar (Fulmarus glacialis) [A009]	461	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Rum SPA (UK9001341 )	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	461	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Kerry Head SPA (IE004189)	Fulmar (Fulmarus glacialis) [A009]  Chough (Pyr-rhocorax pyr-rhocorax) [A346]	501	The proposed Dredge area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Abers - Côte des légendes SAC (FR5300017)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	502	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise and Bottlenose Dolphin, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Ouessant- Molène SAC (FR5310072)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	503	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Ouessant- Molène SPA (FR5310072)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	504	The proposed Dredge Area is within the range of the Fulmar, Gannet, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Manx Shearwater and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Gannet, Great Skua and Manx Shearwater
Cote de Granit Rose- Sept Iles SAC (FR5310011)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	512	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Mor- laix SAC (FR5310073)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	515	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cote de Granit Rose- Sept Iles SPA (FR5310011)	Fulmar (Fulmarus glacialis) [A009] Manx shearwater (Puffinus puffinus) [A013]	517	The proposed Dredge Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Manx Shearwater)
Baie de Mor- laix SPA (FR5310073)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	519	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater SCI)
Tregor Go- ëlo SAC (FR5310070)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	534	The proposed Dredge Area is within the range of the Harbour porpoise Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Tregor Go- ëlo SPA (FR5310070)	Great Skua (Catharacta skua) [A175]	541	The proposed Dredge Area is within the range of the <b>Great Skua</b> SCI.  A possible source pathway receptor connection has been identified for the Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Great Skua)
Côtes de Crozon SAC (FR5302006)	Phocoena pho- coena (Harbour Porpoise) [1351]	542	The proposed Dredge Area is within the range of the <b>Harbour porpoise</b> QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Camaret SPA (FR5312004)	Fulmar (Fulmarus glacialis) [A009]	544	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Chaussée de Sein SAC (FR5302007)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	553	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cliffs of Moher SPA (IE004005)	Fulmar (Fulmarus glacialis) [A009]  Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alcatorda) [A200] Puffin (Fratercula arctica) [A204] Chough (Pyrrhocorax pyrrhocorax) [A346]	562	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar) N (all other SCIs)
Cap Sizun SPA (FR5310055)	Fulmar (Fulmarus glacialis) [A009]	563	The proposed Dredge Area is within the range of the Fulmar SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Récifs du ta- lus du golfe de Gascogne SAC (FR5302016)	Phocoena pho- coena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dol- phin)	568	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Seas off St Kilda SPA (UK9020332 )	Fulmar ( <i>Fulmarus</i> glacialis) [A009]	569	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
The Shiant Isles SPA (UK9001041 )	Fulmar (Fulmarus glacialis) [A009]	579	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
St Kilda SPA (UK9001031 )	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	585	The proposed Dredge Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua)
Roches de Penmarc'h SPA (FR5312009)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]	593	The proposed Dredge Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, and Manx Shearwater )
Récifs et landes de la Hague SAC (FR2500084)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	599	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cap d'Erquy- Cap Fréhel SAC (FR5300011)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	603	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Baie de Saint-Brieuc - Est SAC (FR5300066)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	603	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Anse de Vauville SAC (FR2502019)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	603	The proposed Dredge is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Banc et ré- cifs de Sur- tainville SAC (FR2502018)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	605	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
High Island, Inishshark and Davil- Iaun SPA (IE004144)	Fulmar (Fulmarus glacialis) [A009]  Barnacle Goose (Branta leucopsis) [A045] Arctic Tern (Sterna paradisaea) [A194]	608	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar)  N (all other SCIs)
Cruagh Is- land SPA (IE004170)	Manx Shearwater (Puffinus puffinus) [A013]  Barnacle Goose (Branta leucopsis) [A045]	609	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Cap d'Erquy- Cap Fréhel SPA (FR5300011)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]	610	The proposed Dredge Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, and Manx Shearwater)
Flannan Isles SPA (UK9001021 )	Fulmar (Fulmarus glacialis) [A009]	628	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Chausey SAC (FR2510037)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	630	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Archipel de Glenan SPA (FR5310057)	Manx shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	630	The proposed Dredge Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for the Manx Shearwater and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Baie de Lancieux, Baie de l'Ar- guenon, Ar- chipel de Saint Malo et Dinard SAC (FR5300012)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	630	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Chausey SPA (FR2510037)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	636	The proposed Dredge is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Clare Island SPA (IE004136)	Fulmar (Fulmarus glacialis) [A009]  Shag (Pha-lacrocorax aristotelis) [A018] Common Gull (Larus canus) [A182] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alcatorda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346]	638	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar) N (all other SCIs)
Dunes et côtes de Tré- vignon SPA (FR5312010)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	640	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )
Estuaire de la Rance SAC (FR5300061)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	643	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie du Mont Saint Michel SAC (FR2510048)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	659	The proposed Dredge Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Handa SPA (UK9001241 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	665	The proposed Dredge Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Duvillaun Is- lands SPA (IE004111)	Fulmar (Fulmarus glacialis) [A009]  Storm Petrel (Hydrobates pelagicus) [A014] Barnacle Goose (Branta leucopsis) [A045]	668	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Baie de Seine occi- dentale SPA (FR2510047)	Fulmar (Fulmarus glacialis) [A009]	676	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar SCI who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cape Wrath SPA (UK9001231 )	Fulmar (Fulmarus glacialis) [A009]	691	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Falaise du Bessin Occi- dental SPA (FR2510099)	Fulmar (Fulmarus glacialis) [A009]	700	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar SCI who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Baie de Qui- beron SPA (FR5310093)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	703	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
lles Houat- Hoedic SPA (FR5312011)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	711	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
North Rona and Sula Sgeir SPA (UK9001011 )	Fulmar (Fulmarus glacialis) [A009]	722	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Mor Braz SPA (FR5212013)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	733	The proposed Dredge Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Rivière de Pénerf SPA (FR5310092)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	741	The proposed Dredge Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Littoral seino-marin SPA (FR2310045)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	743	The proposed Dredge Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua )
Littoral augeron SPA (FR2512001)	Manx shearwater (Puffinus puffinus) [A013]	746	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Vi- laine SPA (FR5310074)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	747	The proposed Dredge Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Estuaire de la Loire - Baie de Bourgneuf SPA (FR5212014)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	760	The proposed Dredge Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
North Caith- ness Cliffs SPA (UK9001181	Fulmar (Fulmarus glacialis) [A009]	763	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Secteur marin de l'île d'Yeu jusqu'au continent SPA (FR5212015)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	768	The proposed Dredge Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skuas)
Estuaire de la Loire SPA (FR5210103)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	787	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )
Hoy SPA (UK9002141 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	792	The proposed Dredge Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Pertuis cha- rentais - Rochebonne SPA (FR5412026)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	804	The proposed Dredge Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Rousay SPA (UK9002371 )	Fulmar (Fulmarus glacialis) [A009]	821	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Copinsay SPA (UK9002151	Fulmar (Fulmarus glacialis) [A009]	834	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
West Westray SPA (UK9002101 )	Fulmar (Fulmarus glacialis) [A009]	837	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Calf of Eday (UK9002431 )	Fulmar (Fulmarus glacialis) [A009]	845	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Cap Gris-Nez SPA (FR3110085)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	845	The proposed Dredge Area is within the range of the <b>Fulmar, Manx Shearwater</b> and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua )
Bancs des Flandres SPA (FR3112006)	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	896	The proposed Dredge Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Fair Isle SPA (UK9002091 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	917	The proposed Dredge Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Panache de la Gironde SPA (FR7212016)	Great Skua ( <i>Catharacta skua</i> ) [A175]	919	The proposed Dredge Area is within the range of the <b>Great Skua</b> SCI.  A possible source pathway receptor connection has been identified for the Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Great Skua)
Foula SPA (UK9002061 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	928	The proposed Dredge Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)



Site Name (Site Code)	Qualifying Interests (QIs)/Special Conservation Interest (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Seas off Foula SPA (UK9020331 )	Fulmar (Fulmarus glacialis) [A009]	940	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Sumburgh Head SPA (UK9002511 )	Fulmar (Fulmarus glacialis) [A009]	948	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Noss SPA (UK9002081 )	Fulmar (Fulmarus glacialis) [A009]	983	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Espacio marino de Punta de Candelaria- Ría de Or- tigueira-Es- taca de Bares SPA (ES0000495)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1016	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Espacio ma- rino de Cabo Peñas SPA (ES0000494)	Manx shearwater (Puffinus puffinus) [A013]	1025	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Hermaness, Saxa Vord and Valla Field SPA (UK9002011	Fulmar (Fulmarus glacialis) [A009]	1028	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Fetlar SPA (UK9002031 )	Fulmar (Fulmarus glacialis) [A009]	1031	The proposed Dredge Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cabo Busto- Luanco SPA (ES0000318)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1038	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio marino de la Costa de Ferrolterra- Valdoviño SPA (ES0000496)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1055	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio ma- rino de la Costa da Morte SPA (ES0000497)	Manx shearwater (Puffinus puffinus) [A013]	1058	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Outer Firth of Forth and St Andrews Bay Complex SPA (UK9020316	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	1080.54	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio marino de la Ría de Mundaka-Cabo de Ogoño SPA (ES0000490)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1087	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Urdaibaiko itsasadarra / Ría de Urdai- bai SPA (ES0000144)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1092	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )
Estuaire de la Bidassoa et baie de Fontarabie SPA (FR7212013)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1123	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Inter- ests (QIs)/Special Conservation Inter- est (SCIs)	Distance from Dredge Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
ZEPA Banco de Galicia SPA (ES0000498)	Manx shearwater (Puffinus puffinus) [A013]	1157	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio ma- rino de las Rías Baixas de Galicia SPA (ES0000499)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1192	The proposed Dredge Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



## 5.2.5 DISPOSAL AREA OFFSHORE FROM ARKLOW TOWN

## Table 5-4 Relevant Natura 2000 sites and Source-Pathway-Receptor Connections for Disposal Area

Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Buckroney- Brittas Dunes and Fen SAC (000729)	Annual vegetation of drift lines [1210]  Perennial vegetation of stony banks [1220]  Mediterranean salt meadows (Juncetalia maritimi) [1410]  Embryonic shifting dunes [2110]  Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]  Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]  Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]  Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170]  Humid dune slacks [2190]  Alkaline fens [7230]	3.93	The Disposal Area is located outside of this Natura 2000 site. However, there is a possible source pathway receptor connection to the Annual vegetation of drift lines and Perennial vegetation of stony banks habitats of the Buckroney Brittas Dunes and Fen SAC in relation to the disposal activities which are proposed to take place 3.93 km to the south of the SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on these habitats and their associated species.  There is no source pathway receptor connection to the other designated Annex I habitats, which are landward of the shingle bank	Y (Annual vegetation of drift lines and peren- nial vegeta- tion of stony banks Habi- tat QIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Kilpatrick Sandhills SAC (001742)	Annual vegetation of drift lines [1210]  Embryonic shifting dunes [2110]  Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]  Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]  Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]	6.83	The Disposal Area is located outside of this Natura 2000 site. However, there is a possible source pathway receptor connection to the Annual vegetation of drift lines of the Kilpatrick Sandhills SAC in relation to the disposal activities which are proposed to take place 6.83 km to the north of the SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on these habitats and their associated species.  There is no source pathway receptor connection to the other designated Annex I habitats.	Y (Annual vegetation of drift lines QIs)
Magherabeg Dunes SAC (001766)	Annual vegetation of drift lines [1210]  Embryonic shifting dunes [2110]  Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]  Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]  Petrifying springs with tufa formation (Cratoneurion) [7220]	14.08	The Disposal Area is located outside of this Natura 2000 site. However, there is a possible source pathway receptor connection to the Annual vegetation of drift lines of the Magherabeg Dunes SAC in relation to the disposal activities which are proposed to take place 14.08 km to the south of the SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on these habitats and their associated species.  There is no source pathway receptor connection to the other designated Annex I habitats.	Y (Annual vegetation of drift lines QIs)
Wicklow Head SPA (IE004127)	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188]	19.07	The proposed Disposal Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for kittiwake, who could move into the activity area and be impacted by	Y (Kitti- wake)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
			visual and noise (airborne and/or underwater) disturbance or pollution.	
Wicklow Reef SAC (IE002274)	Reefs [1170]	21.55	The Disposal Area is located outside of this Natura 2000 site. However, there is a possible source-pathway-receptor connection to the designated Annex I habitat QIs.  There is a possibility of an indirect impact on the Annex I Reef habitat feature of the Wicklow Reef SAC in relation to the disposal activities which are proposed to take place 21.55 km to the north of the SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on the Annex I reef habitat and its associated species.	Y (reefs)
The Mur- rough SPA	Herring Gull (Larus argentatus) [A184]  Wetland & waterbirds (IE004186)  Black-headed Gull (Chroicocephalus ridibundus) [A179] Red-throated Diver (Gavia stellata) [A001] Little Tern (Sterna albifrons) [A195] Greylag Goose (Anser anser) [A043] Light-bellied Brent Goose (Branta bernicla hrota) Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052]	22.82	The proposed Disposal Area is within the range of the Herring Gull SCI.  A possible source pathway receptor connection has been identified for herring gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs.  A possible source pathway receptor connection has been identified for the wetland and waterbirds habitat feature of The Murrough SPA. There is no source pathway receptor for wetland and waterbirds as they are 23 km away.	Y (Herring Gull) N (Other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
The Mur- rough Wet- lands SAC (IE002249)	Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220] Atlantic salt meadows (Glauco-Puccinellietalia maritimae) [1330] Mediterranean salt meadows (Juncetalia maritimi) [1410] Calcareous fens with Cladium mariscus and species of the Caricion davallianae [7210] Alkaline fens [7230]	25.85	The Disposal Area is located outside of this Natura 2000 site. However, there is a possible source pathway receptor connection to the Annual vegetation of drift lines and Perennial vegetation of stony banks habitats of the Murrough Wetlands SAC in relation to the disposal activities which are proposed to take place 2.45 km to the south of the SAC.  Sediment could be transported to the SAC following disposal activities, which could increase sediment loading on these habitats and their associated species.  There is no source pathway receptor connection to the other designated Annex I habitats, which are landward of the shingle bank and beyond the modelled sediment dispersion area.	Y (Annual vegetation of drift lines and peren- nial vegeta- tion of stony banks Habi- tat QIs)
Seas off Wexford SPA	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Gannet (Morus bassanus) [A016] Lesser Black-backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204] Arctic Tern (Sterna paradisaea) [A194]  Red-throated Diver (Gavia stellata) [A001]	52.44 km	The proposed Dredge Area is within the range of the SCI species Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin, Manx Shearwater, Lesser Black-backed Gull, Northern Gannet, Arctic Tern and Fulmar.  A possible source pathway receptor connection has been identified for the above-mentioned SCIs, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  The other SCIs listed for the Northwest Irish Sea SPA are not considered further as their foraging range does not overlap with the proposed Dredging Area.	Y (Herring Gull, Kitti- wake, Guil- lemot, Ra- zorbill, Puf- fin, Manx Shearwater, Lesser Black- backed Gull, Northern Gannet, Arc- tic Tern and Fulmar)  N (Other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Common Scoter (Melanitta nigra) [A065] Mediterranean Gull (Larus melanocephalus) [A176] Black-headed Gull (Chroicocephalus ridibundus) [A179] Sandwich Tern (Sterna sandvicensis) [A191] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Little Tern (Sterna albifrons) [A195]			
Pou- laphouca Reservoir SPA* inland (IE004063)	Lesser Black- backed Gull (Larus fuscus) [A183] Greylag Goose (An- ser anser) [A043]	41.69	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for the Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)
Rockabill to Dalkey Is- land SAC (IE003000)	Phocoena phocoena (Harbour Porpoise) [1351] Reefs [1170]	51.46	The proposed Disposal Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) N (Reefs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
			The Disposal Area is located outside of this Natura 2000 site and beyond the modelled sediment dispersion area, therefore there is no source pathway receptor connection to the designated Annex I habitat.	
Slaney River Valley SAC (IE000781)	Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099] Alosa fallax fallax (Twaite Shad) [1103] Salmo salar (Salmon) [1106] Lutra lutra (Otter) [1355] Phoca vitulina (Common Seal) [1365]	53.45	A source pathway receptor connection is not identified for salmon, as salmon is an anadromous fish which spawns in rivers and is only offered protection under Annex II of the EU Habitats Directive when in its freshwater habitats within designated SACs.  The proposed Disposal Area is within range of the Harbour seal SCI. A source-pathway-receptor connection is not possible for otters as the Licence Area is outside of their range.  A source-pathway-receptor connection is possible for harbour seals as the Licence Area is within of their range.  A source-pathway-receptor connection is not possible for Sea Lamprey and River Lamprey as the Licence Area is outside of their range.	Y (Harbour Seal N (Sea Lam- prey, River Lamprey and Twaite Shad QIs)
Dalkey Is- lands SPA (IE004172)	Arctic Tern (Sterna paradisaea) [A194]  Common Tern (Sterna hirundo) [A193]  Roseate Tern (Sterna dougallii) [A192]	54.49	The proposed Disposal Area is within the range of the <b>Common Tern</b> SCI.  A possible source pathway receptor connection has been identified for the Common Tern, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Common Tern) N (Arctic Tern)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Wexford Harbour and Slobs SPA (IE004076)	Lesser Black-backed Gull (Larus fuscus) [A183]  Little Grebe (Tachy-baptus ruficollis) [A004] Great Crested Grebe (Podiceps cristatus) [A005] Cormorant (Pha-lacrocorax carbo) [A017] Grey Heron (Ardea cinerea) [A028] Bewick's Swan (Cygnus columbianus bewickii) [A037] Whooper Swan (Cygnus cygnus) [A038] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Shelduck (Tadorna tadorna) [A048] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Mallard (Anas platyrhynchos) [A053] Pintail (Anas acuta) [A054] Scaup (Aythya marila) [A062] Goldeneye (Bucephala clangula) [A067] Red-breasted Merganser (Mergus serrator) [A069] Hen Harrier (Circus cyaneus) [A082] Coot (Fulica atra) [A125] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover	54.50	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for the Lesser Black-backed Gull, who could move into activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs.	Y (Lesser Black- backed Gull)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	(Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Knot (Calidris canutus) [A143] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Little Tern (Sterna albifrons) [A195] Greenland Whitefronted Goose (Anser albifrons flavirostris) [A395]			
North-west Irish Sea SPA	Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204] Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Lesser Black-backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Great Black-backed Gull (Larus marinus) [A187]	62.52 km	The proposed Dredge Area is within the range of the SCI species Herring Gull, Kittiwake, Guillemot, Razorbill, Puffin, Manx Shearwater, Lesser Black-backed Gull, Great Black-backed Gull, and Fulmar.  A possible source pathway receptor connection has been identified for the above-mentioned SCIs, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  The other SCIs listed for the Northwest Irish Sea SPA are not considered further as their foraging range	Y (Herring Gull, Kitti- wake, Guil- lemot, Ra- zorbill, Puf- fin, Manx Shearwater, Common Gull, Lesser Black- backed Gull, Great Black- backed Gull, Arctic Tern and Fulmar) N (Other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Kittiwake (Rissa tridactyla) [A188] Arctic Tern (Sterna paradisaea) [A194] Common Gull (Larus canus) [A182] Red-throated Diver (Gavia stellata) [A001] Great Northern Diver (Gavia immer) [A003] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Common Scoter (Melanitta nigra) [A065] Little Gull (Larus minutus) [A177] Black-headed Gull (Chroicocephalus ridibundus) [A179] Roseate Tern (Sterna dougallii) [A192] Common Tern (Sterna hirundo) [A193] Little Tern (Sterna albifrons) [A195]		does not overlap with the proposed Dredging Area.	
Howth Head Coast SPA (IE004113)	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188]	64.17	The proposed Disposal Area is within the range of the Kittiwake SCI.  A possible source pathway receptor connection has been identified for kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
West Wales Marine / Gorllewin Cymru Forol SAC (UK0030397	Phocoena pho- coena (Harbour Porpoise) [1351]	66.46	The proposed Disposal Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the site investigation activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Ireland's Eye SPA (IE004117)	Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Fulmar (Fulmarus glacialis) [A009]	68.59	The proposed Disposal Area is within the range of the Herring Gull, Kittiwake, Guillemot, Razorbill and Fulmar SCIs.  A possible source pathway receptor connection has been identified for Herring Gull, Kittiwake, Guillemot, Razorbill and Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Herring Gull, Kitti- wake, Ra- zorbill and Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Lambay Is- land SPA (IE004069)	Fulmar (Fulmarus glacialis) [A009] Lesser Black- backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Greylag Goose (Anser anser) [A043]	77.37	The proposed Disposal Area is within the range of the Fulmar, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Lesser Black-backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Lesser Black- backed Gull, Herring Gull, Kittiwake, Guillemot, Puffin and Razorbill s) N (Other SCIs)
Lambay Is- land SAC (IE000204)	Halichoerus grypus (Grey Seal) [1364] Phoca vitulina (Common Seal) [1365]	77.77	The proposed Disposal Area is within the range of the <b>Grey Seal and Common Seal</b> QI.  A possible source pathway receptor connection has been identified for grey seal and common seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal, Common Seal)
Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA (UK9013121	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	79.51	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Saltee Is- lands SAC (IE000707)	Halichoerus grypus (Grey Seal) [1364]	81.76	The proposed Disposal Area is within range of the <b>Grey Seal</b> (Halichoerus grypus).  A possible source-pathway-receptor connection has been identified for Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal)
North Angle- sey Marine / Gogledd Môn Forol SAC (UK0013114 )	Phocoena phocoena (Harbour Porpoise) [1351]  Note for UK and French SACs, only designated migratory QIs in the zone of influence of the proposed activities (as defined for relevant species above) are considered. Annex I Habitats or other Annex II Species are therefore not included in this table or considered for screening	81.81	The proposed Disposal Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Skerries Is- lands SPA (IE004122)	Herring Gull (Larus argentatus) [A184]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Light-bellied Brent Goose (Branta bernicla hrota) [A046] Purple Sandpiper (Calidris maritima) [A148] Turnstone (Arenaria interpres) [A169]	87.61	The proposed Disposal Area is outside the range of the SCIs at the Skerries Islands SPA.  There is no source-pathway-receptor connection to the SCIs.	N (SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Lleyn Penin- sula and the Sarnau / Pen Llyn a`r Sar- nau SAC (UK13117)	Tursiops truncatus (Bottlenose Dol- phin) [1349] Halichoerus grypus (Grey Seal) [1364]	86.74	The proposed Disposal Area is within the range of the Bottlenose Dolphin and Grey Seal Qls.  A possible source pathway receptor connection has been identified for Bottlenose Dolphin and Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater and by injury due to collision with vessels or equipment.	Y (Bottle- nose Dol- phin and Grey Seal)
Saltee Is- lands SPA (IE000707)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Lesser Black-backed Gull (Larus fuscus) [A183] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]  Herring Gull (Larus argentatus) [A184] Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018]	86.49	The proposed Disposal Area is within the range of the Fulmar, Gannet, Lesser Black-backed Gull, Kittiwake, Guillemot, Puffin and Razorbill SCIs. A possible source pathway receptor connection has been identified for Fulmar, Gannet Lesser Black-backed Gull, Kittiwake, Guillemot, Puffin and Razorbill, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar, Lesser Black- backed Gull, Gannet, Kit- tiwake, Guil- lemot, Puf- fin and Ra- zorbill)
Cardigan Bay/ Bae Ceredigion SAC (UK0012712	Tursiops truncatus (Bottlenose Dolphin) [1349] Halichoerus grypus (Grey Seal) [1364] Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099]	99.55	The proposed Disposal Area is within the range of the Bottlenose Dolphin, Grey Seal, Qls. A possible source-pathway-receptor-connection has been identified for Bottlenose Dolphin and Grey Seal, who could move into the activity area and be impacted by disturbance from vibration/underwater and by injury due to collision with vessels or equipment.  There is no source-pathway-receptor-connection for Sea and River Lamprey, as the screening area is	Y (Bottle- nose Dol- phin, Grey Seal) N (Sea Lam- prey and River Lam- prey QIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
			located outside the foraging range for the QIs at this Natura 2000 site.	
Pembroke- shire Ma- rine/ Sir Benfro Forol SAC (UK0013116 )	Halichoerus grypus (Grey Seal) [1364] Petromyzon marinus (Sea Lamprey) [1095] Lampetra fluviatilis (River Lamprey) [1099] Alosa alosa (Allis shad) [1102] Alosa fallax fallax (Twaite Shad) [1103]	103.91	The proposed Disposal Area is within the range of the Grey seal QI.  A source-pathway-receptor connection is possible for this QIs who could move into the Licence Area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with survey vessels or equipment.  A source-pathway-receptor connection is not possible for Sea lamprey, River lamprey, Twaite shad, Allis shad and otter as the Licence Area is outside of their range.	Y (Grey Seal)  N (Sea Lamprey, River Lamprey, Allis Shad and Twaite Shad Qls)
Irish Sea Front SPA (UK9020328 )	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	112.87	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Grassholm SPA (UK9014041 )	Gannet ( <i>Morus</i> bassanus) [A016]	123.94	The proposed Disposal Area is within the range of the <b>Gannet</b> SCI.  A possible source pathway receptor connection has been identified for Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet)
Skomer, Skokholm and the Seas off Pem- brokeshire SPA (UK9014051	Manx shearwater (Puffinus puffinus) [A013] Lesser Black- backed Gull (Larus fuscus) [A183] Puffin (Fratercula arctica) [A204] European Storm Petrel (Hydrobates pelagicus) [A014]	124.64	The proposed Disposal Area is within the range of the Manx shearwater, Lesser Black-backed Gull, European Storm Petrel and Puffin SCIs.  A possible source pathway receptor connection has been identified for Manx shearwater, Lesser Blackbacked Gull, European Storm Petrel and Puffin, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx shearwater, Lesser Black- backed Gull, European Storm Petrel and Puffin)
Helvick Head to Ballyquin SPA (IE004192)	Kittiwake (Rissa tridactyla) [A188]  Cormorant (Phalacrocorax carbo) [A017] Peregrine (Falcoperegrinus) [A103] Herring Gull (Larusargentatus) [A184] Chough (Pyrrhocorax pyrrhocorax) [A346]	152.63	The proposed Disposal Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
North Channel SAC (UK0030399	Phocoena pho- coena (Harbour Porpoise) [1351]	159.65	The proposed Disposal Area is within the range of the Harbour Porpoise QI.  A source-pathway-receptor connection is possible for harbour porpoises who could move into the Licence Area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with survey vessels or equipment.	Y (Harbour Porpoise)
Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC (UK0030396	Phocoena pho- coena (Harbour porpoise) [1351]	167.09	The proposed Disposal Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Ballymacoda Bay SPA (IE004023)	Lesser Black-backed Gull (Larus fuscus) [A183]  Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Ringed Plover (Charadrius hiaticula) [A137] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Sanderling (Calidris alba) [A144] Dunlin (Calidris alpina) [A149]	178.92	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Turnstone (Arenaria interpres) [A169] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182]			
Ballycotton Bay SPA (IE004022)	Lesser Black-backed Gull (Larus fuscus) [A183]  Teal (Anas crecca) [A052] Ringed Plover (Charadrius hiaticula) [A137] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola) [A141] Lapwing (Vanellus vanellus) [A142] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Turnstone (Arenaria interpres) [A169] Common Gull (Larus canus) [A182]	189.43	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Lesser Black- backed Gull) N (all other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Lundy SAC (UK0013114 )	Halichoerus grypus (Grey Seal) [1364]	201.65	The proposed Disposal Area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)
Cork Har- bour SPA (IE004030)	Lesser Black-backed Gull (Larus fuscus) [A183]  Little Grebe (Tachy-baptus ruficollis) [A004] Great Crested Grebe (Podiceps cristatus) [A005] Cormorant (Pha-lacrocorax carbo) [A017] Grey Heron (Ardea cinerea) [A028] Shelduck (Tadorna tadorna) [A048] Wigeon (Anas penelope) [A050] Teal (Anas crecca) [A052] Pintail (Anas acuta) [A054] Shoveler (Anas clypeata) [A056] Red-breasted Merganser (Mergus serrator) [A069] Oystercatcher (Haematopus ostralegus) [A130] Golden Plover (Pluvialis apricaria) [A140] Grey Plover (Pluvialis squatarola)	212.82	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Lesser Black- backed Gull ) N (All other SCI)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
	[A141] Lapwing (Vanellus vanellus) [A142] Dunlin (Calidris alpina) [A149] Black-tailed Godwit (Limosa limosa) [A156] Bar-tailed Godwit (Limosa lapponica) [A157] Curlew (Numenius arquata) [A160] Redshank (Tringa totanus) [A162] Black-headed Gull (Chroicocephalus ridibundus) [A179] Common Gull (Larus canus) [A182] Common Tern (Sterna hirundo) [A193]			
Copeland Islands SPA (UK9020291	Manx shearwater (Puffinus puffinus) [A013]  Arctic Tern (Sterna paradisaea) [A194]	215.20	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Ribble and Alt Estuaries SPA (UK9005103 )	Lesser Black- backed Gull ( <i>Larus</i> <i>fuscus</i> ) [A183]	219.25	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)
Morecambe Bay and Duddon Es- tuary SPA (UK9020326	Lesser Black- backed Gull ( <i>Larus</i> <i>fuscus</i> ) [A183]	232.69	The proposed Disposal Area is within the range of the Lesser Black-backed Gull SCI.  A possible source pathway receptor connection has been identified for Lesser Black-backed Gull, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Lesser Black- backed Gull)
Old Head of Kinsale SPA (IE004021)	Kittiwake (Rissa tri- dactyla) [A188] Guillemot (Uria aalge) [A199]	235.39	The proposed Disposal Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)
The Maidens SAC (UK0013114 )	Halichoerus grypus (Grey Seal) [1364]	241.55	The proposed Disposal areas is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Ailsa Craig SPA (UK9003091	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188] Gannet ( <i>Morus bassanus</i> ) [A016]	278.25	The proposed Disposal Area is within the range of the <b>Kittiwake</b> and <b>Gannet</b> SCIs.  A possible source pathway receptor connection has been identified for Kittiwake and Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kittiwake and Gan- nets)
Rathlin Is- land SPA (UK9020011	Kittiwake ( <i>Rissa tri-dactyla</i> ) [A188]	292.36	The proposed Disposal Area is within the range of the <b>Kittiwake</b> SCI.  A possible source pathway receptor connection has been identified for Kittiwake, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Kitti- wake)
Roaring- water Bay and Islands SAC (IE000101)	Phocoena pho- coena (Harbour Porpoise) [1351] Halichoerus grypus (Grey Seal) [1364]	295.06	The proposed Disposal Area is within the range of the Harbour porpoise and Grey Seal Qls.  A possible source pathway receptor connection has been identified for harbour porpoise and grey seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour porpoise, Grey Seal)
Isles of Scilly Complex SAC (UK0013694	Halichoerus grypus (Grey Seal) [1364]	311.20	The proposed Disposal Area is within the range of the <b>Grey Seal</b> QI.  A possible source pathway receptor connection has been identified for grey seal, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Grey Seal)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Isles of Scilly SPA (UK9020288 )	European Storm Petrel ( <i>Hydrobates</i> <i>pelagicus</i> ) [A014]	312.95	The proposed Disposal Area is within the range of the European Storm Petrel.  A possible source pathway receptor connection has been identified for the European Storm Petrel, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (European Storm Pet- rel)
Beara Penin- sula SPA (IE004155)	Fulmar (Fulmarus glacialis) [A009]  Chough (Pyr-rhocorax pyr-rhocorax) [A346]	347.40	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
The Bull and The Cow Rocks SPA (IE004066)	Gannet (Morus bassanus) [A016] Storm Petrel (Hy- drobates pelagicus) [A014] Puffin (Fratercula arctica) [A204]	358.06	The proposed Disposal Areas is within the range of the <b>Gannet</b> SCI.  A possible source pathway receptor connection has been identified for Gannet, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Horn Head to Fanad Head SPA (IE004194)	Fulmar (Fulmarus glacialis) [A009]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Barnacle Goose (Branta leucopsis) [A045] Peregrine (Falcoperegrinus) [A103] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alcatorda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346] Greenland Whitefronted Goose (Anser albifrons flavirostris) [A395]	390.36	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-receptor-pathway connection for the other SCIs.	Y (Fulmar)  N (all other SCIs)
Horn Head and Rin- clevan SAC (IE000147)	Halichoerus grypus (Grey Seal) [1364]	410.23	The proposed Disposal Area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals and harbour porpoise which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Deenish Island and Scariff Island SPA (IE004175)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Storm Petrel (Hydrobates pelagicus) [A014] Lesser Black-backed Gull (Larus fuscus) [A183] Arctic Tern (Sterna paradisaea) [A194]	374.17	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Manx Shearwater)
Iveragh Pen- insula SPA (IE004154)	Fulmar (Fulmarus glacialis) [A009]  Peregrine (Falco peregrinus) [A103] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Chough (Pyrrhocorax pyrrhocorax) [A346]	376.69	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Skelligs SPA (IE004007)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Gannet (Morus bassanus) [A016]  Storm Petrel (Hydrobates pelagicus) [A014] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Puffin (Fratercula arctica) [A204]	387.07	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Gannet SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Gannet, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar, Manx Shear- water and Gannet) N (Other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Puffin Island SPA (IE004003)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Storm Petrel (Hydrobates pelagicus) [A014] Lesser Black-backed Gull (Larus fuscus) [A183] Razorbill (Alcatorda) [A200] Puffin (Fratercula arctica) [A204]	388.44	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar and Manx Shearwater) N (Other SCIs)
Mers Celtiques - Talus du golfe de Gascogne SPA (FR5212016)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	410	The proposed Disposal Area is within the range of the Fulmar, Gannet, Great Skua and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Great Skua and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Gannet, Great Skua and Manx Shearwater)
Blasket Is- lands SAC (IE002172)	Phocoena pho- coena (Harbour Porpoise) [1351] Halichoerus grypus (Grey Seal) [1364]	410.55	The proposed Disposal Area is within the range of the Harbour porpoise and Grey Seal Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise and Grey Seal)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Blasket Is- lands SPA (IE004008)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]  Storm Petrel (Hydrobates pelagicus) [A014] Shag (Phalacrocorax aristotelis) [A018] Lesser Black-backed Gull (Larus fuscus) [A183] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Arctic Tern (Sterna paradisaea) [A194] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204] Chough (Pyrrhocorax pyrrhocorax) [A346]	414.12	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar and Manx Shearwater) N (all other SCIs)
Dingle Pen- insula SPA (IE004153)	Fulmar (Fulmarus glacialis) [A009]  Peregrine (Falco peregrinus) [A103] Chough (Pyr-rhocorax pyr-rhocorax) [A346]	418.83	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Tory Island SPA (IE004073)	Fulmar (Fulmarus glacialis) [A009]  Corncrake (Crex crex) [A122] Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]	422.90	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Treshnish Isles SAC (UK0030289	Halichoerus grypus (Grey Seal) [1364]	427.05	The proposed Disposal Area is within the range of the <b>Grey Seal</b> QI.  A source pathway receptor connection is possible for the grey seals and harbour porpoise which could move within the proposed activity area and be impacted by disturbances from vibration and underwater noise and by injury due to collision with survey vessels or sampling equipment.	Y (Grey Seal)
West Done- gal Coast SPA (IE004150)	Fulmar (Fulmarus glacialis) [A009]  Cormorant (Phalacrocorax carbo) [A017] Shag (Phalacrocorax aristotelis) [A018] Peregrine (Falcoperegrinus) [A103] Herring Gull (Larus argentatus) [A184] Kittiwake (Rissa tridactyla) [A188] Razorbill (Alcatorda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346]	438.85	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar) N (Other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Kerry Head SPA (IE004189)	Fulmar (Fulmarus glacialis) [A009]  Chough (Pyr-rhocorax pyr-rhocorax) [A346]	472.56	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Rum SPA (UK9001341 )	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	474.42	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Abers - Côte des légendes SAC (FR5300017)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	480.47	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise and Bottlenose Dolphin, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Mingulay and Berneray SPA (UK9001121	Fulmar (Fulmarus glacialis) [A009]	481.39	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Ouessant- Molène SAC (FR5310072)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	481.81	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Ouessant- Molène SPA (FR5310072)	Fulmar (Fulmarus glacialis) [A009] Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	482	The proposed Disposal Area is within the range of the Fulmar, Gannet, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Manx Shearwater and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Gannet, Great Skua and Manx Shearwater



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Mor- laix SAC (FR5310073)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	492.67	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Baie de Mor- laix SPA (FR5310073)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	493	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater SCI)
Nord Bre- tagne DO SPA (FR2512005)	Gannet (Morus bassanus) [A016] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	495	The proposed Disposal Area is within the range of the Fulmar, Gannet, Great Skua and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar, Gannet, Great Skua and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Gannet, Great Skua and Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Nord Bre- tagne DH SAC (FR2502022)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	498.51	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cote de Granit Rose- Sept Iles SAC (FR5310011)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	511.25	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cote de Granit Rose- Sept Iles SPA (FR5310011)	Fulmar (Fulmarus glacialis) [A009] Manx shearwater (Puffinus puffinus) [A013]	511	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for the Fulmar and Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Tregor Go- ëlo SAC (FR5310070)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	511.43	The proposed Disposal Area is within the range of the Harbour porpoise Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Tregor Go- ëlo SPA (FR5310070)	Great Skua (Catharacta skua) [A175]	511	The proposed Disposal Area is within the range of the <b>Great Skua</b> SCI.  A possible source pathway receptor connection has been identified for the Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Great Skua)
Côtes de Crozon SAC (FR5302006)	Phocoena pho- coena (Harbour Porpoise) [1351]	519.53	The proposed Disposal Area is within the range of the Harbour porpoise QI.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise)
Camaret SPA (FR5312004)	Fulmar (Fulmarus glacialis) [A009]	521	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Mers Celtiques - Talus du golfe de Gascogne SAC (FR5212016)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	530.48	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Chaussée de Sein SAC (FR5302007)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	530.58	The proposed Disposal Areas are within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cliffs of Moher SPA (IE004005)	Fulmar (Fulmarus glacialis) [A009]  Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alcatorda) [A200] Puffin (Fratercula arctica) [A204] Chough (Pyrrhocorax pyrrhocorax) [A346]	535.83	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar)  N (all other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Récifs du ta- lus du golfe de Gascogne SAC (FR5302016)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	539.6	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cap Sizun SPA (FR5310055)	Fulmar (Fulmarus glacialis) [A009]	540	The proposed Disposal Area is within the range of the Fulmar SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
The Shiant Isles SPA (UK9001041	Fulmar (Fulmarus glacialis) [A009]	593.14	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
St Kilda SPA (UK9001031 )	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	603.88	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Seas off St Kilda SPA (UK9020332	Fulmar (Fulmarus glacialis) [A009]	608.23	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Roches de Penmarc'h SPA (FR5312009)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]	570	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, and Manx Shearwater)
Récifs et landes de la Hague SAC (FR2500084)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	577.03	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cruagh Is- land SPA (IE004170)	Manx Shearwater (Puffinus puffinus) [A013]  Barnacle Goose (Branta leucopsis) [A045]	578.06	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Anse de Vauville SAC (FR2502019)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	578.28	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Cap d'Erquy- Cap Fréhel SAC (FR5300011)	Phocoena pho- coena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dol- phin)	579.5	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Saint-Brieuc - Est SAC (FR5300066)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	580.46	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Banc et récifs de Surtainville SAC (FR2502018)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	582.42	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
High Island, Inishshark and Davil- laun SPA (IE004144)	Fulmar (Fulmarus glacialis) [A009]  Barnacle Goose (Branta leucopsis) [A045] Arctic Tern (Sterna paradisaea) [A194]	586.00	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the site investigation activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar)  N (all other SCIs)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cap d'Erquy- Cap Fréhel SPA (FR5300011)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013]	581	The proposed Disposal Area is within the range of the Fulmar and Manx Shearwater SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Manx Shearwater SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Manx Shearwater)
Baie de Vi- laine SPA (FR5310074)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	601	The proposed Disposal Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Archipel de Glenan SPA (FR5310057)	Manx shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	601	The proposed Disposal Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for the Manx Shearwater and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Lancieux, Baie de l'Ar- guenon, Ar- chipel de Saint Malo et Dinard SAC (FR5300012)	Phocoena pho- coena (Harbour Porpoise) [1351] Tursiops truncatus (Bottlenose Dol- phin)	602.95	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Chausey SAC (FR2510037)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	605.96	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Chausey SPA (FR2510037)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	606	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Duvillaun Is- lands SPA (IE004111)	Fulmar (Fulmarus glacialis) [A009]  Storm Petrel (Hydrobates pelagicus) [A014] Barnacle Goose (Branta leucopsis) [A045]	606.10	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Clare Island SPA (IE004136)	Fulmar (Fulmarus glacialis) [A009]  Shag (Pha-lacrocorax aristotelis) [A018] Common Gull (Larus canus) [A182] Kittiwake (Rissa tridactyla) [A188] Guillemot (Uria aalge) [A199] Razorbill (Alca torda) [A200] Chough (Pyrrhocorax pyrrhocorax) [A346]	610.35	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.  There is no source-pathway-receptor connection to the other SCIs	Y (Fulmar)  N (all other SCIs)
Dunes et côtes de Trévignon SPA (FR5312010)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	613	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Estuaire de la Rance SAC (FR5300061)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	620.03	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin Qls.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Baie du Mont Saint Michel SAC (FR2510048)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	629.51	The proposed Disposal Area is within the range of the Harbour porpoise and Bottlenose Dolphin QIs.  A possible source pathway receptor connection has been identified for harbour porpoise, who could move into the activity area and be impacted by disturbance from vibration/underwater noise and by injury due to collision with vessels or equipment.	Y (Harbour Porpoise) Y (Bottle- nose Dol- phin)
Flannan Isles SPA (UK9001021 )	Fulmar (Fulmarus glacialis) [A009]	637.45	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Baie de Seine occi- dentale SPA (FR2510047)	Fulmar (Fulmarus glacialis) [A009]	642	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar SCI who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Handa SPA (UK9001241 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	664.09	The proposed Disposal Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Falaise du Bessin Occi- dental SPA (FR2510099)	Fulmar (Fulmarus glacialis) [A009]	668	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar SCI who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Baie de Qui- beron SPA (FR5310093)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	675	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
lles Houat- Hoedic SPA (FR5312011)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	686	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Cape Wrath SPA (UK9001231	Fulmar ( <i>Fulmarus</i> glacialis) [A009]	690.30	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Mor Braz SPA (FR5212013)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	708	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Littoral seino-marin SPA (FR2310045)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	711	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua )
Littoral augeron SPA (FR2512001)	Manx shearwater (Puffinus puffinus) [A013]	715	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Rivière de Pénerf SPA (FR5310092)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	716	The proposed Disposal Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
North Rona and Sula Sgeir SPA (UK9001011 )	Fulmar (Fulmarus glacialis) [A009]	727.34	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Secteur marin de l'île d'Yeu jusqu'au continent SPA (FR5212015)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	746	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skuas)
North Caithness Cliffs SPA (UK9001181	Fulmar (Fulmarus glacialis) [A009]	760.9	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Estuaire de la Loire - Baie de Bourgneuf SPA (FR5212014)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	761	The proposed Disposal Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)
Estuaire de la Loire SPA (FR5210103)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	761	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Pertuis charentais - Rochebonne SPA (FR5412026)	Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	780	The proposed Disposal Area is within the range of the Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Hoy SPA (UK9002141 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	790.01	The proposed Disposal Area is within the range of the Fulmar and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Rousay SPA (UK9002371 )	Fulmar (Fulmarus glacialis) [A009]	820.27	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
West Westray SPA (UK9002101 )	Fulmar (Fulmarus glacialis) [A009]	830.39	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Copinsay SPA (UK9002151	Fulmar (Fulmarus glacialis) [A009]	838.00	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Calf of Eday (UK9002431 )	Fulmar (Fulmarus glacialis) [A009]	843.45	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Cap Gris-Nez SPA (FR3110085)	Fulmar (Fulmarus glacialis) [A009] Manx Shearwater (Puffinus puffinus) [A013] Great Skua (Catharacta skua) [A175]	814	The proposed Disposal Area is within the range of the Fulmar, Manx Shearwater and Great Skua SCIs.  A possible source pathway receptor connection has been identified for Fulmar, Manx Shearwater and Great Skua SCIs who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar, Manx Shear- water and Great Skua )
Bancs des Flandres SPA (FR3112006)	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	859	The proposed Disposal Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Panache de la Gironde SPA (FR7212016)	Great Skua (Catharacta skua) [A175]	896	The proposed Disposal Area is within the range of the <b>Great Skua</b> SCI.  A possible source pathway receptor connection has been identified for the Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Great Skua)
Fair Isle SPA (UK9002091	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	911.31	The proposed Disposal Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Foula SPA (UK9002061 )	Great Skua (Catharacta skua) [A175] Fulmar (Fulmarus glacialis) [A009]	927.56	The proposed Disposal Area is within the range of the <b>Fulmar and Great Skua</b> SCIs.  A possible source pathway receptor connection has been identified for Fulmar and Great Skua, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar and Great Skua)
Seas off Foula SPA (UK9020331	Fulmar (Fulmarus glacialis) [A009]	906.41	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Sumburgh Head SPA (UK9002511 )	Fulmar (Fulmarus glacialis) [A009]	947.86	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Noss SPA (UK9002081 )	Fulmar ( <i>Fulmarus</i> glacialis) [A009]	984.35	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Espacio marino de Punta de Candelaria- Ría de Or- tigueira-Es- taca de Bares SPA (ES0000495)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	993	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Espacio ma- rino de Cabo Peñas SPA (ES0000494)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1003	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Hermaness, Saxa Vord and Valla Field SPA (UK9002011	Fulmar (Fulmarus glacialis) [A009]	1027.62	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)
Fetlar SPA (UK9002031 )	Fulmar (Fulmarus glacialis) [A009]	1032.13	The proposed Disposal Area is within the range of the <b>Fulmar</b> SCI.  A possible source pathway receptor connection has been identified for Fulmar, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Fulmar)



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Cabo Busto- Luanco SPA (ES0000318)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1016	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio marino de la Costa de Ferrolterra- Valdoviño SPA (ES0000496)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1032	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio marino de la Costa da Morte SPA (ES0000497)	Manx shearwater (Puffinus puffinus) [A013]	1035	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Espacio marino de la Ría de Mundaka-Cabo de Ogoño SPA (ES0000490)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1067	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Estuaire de la Bidassoa et baie de Fontarabie SPA (FR7212013)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1067	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Urdaibaiko itsasadarra / Ría de Urdai- bai SPA (ES0000144)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1075	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater )



Site Name (Site Code)	Qualifying Interest (QIs)/Special Con- servation Interest (SCIs)	Distance from Dis- posal Area (km)	Source-Pathway-Receptor Connections	Considered for screen- ing Y/N
Outer Firth of Forth and St Andrews Bay Complex SPA (UK9020316 )	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	1076.61	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
ZEPA Banco de Galicia SPA (ES0000498)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1135	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)
Espacio ma- rino de las Rías Baixas de Galicia SPA (ES0000499)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	1166	The proposed Disposal Area is within the range of the Manx Shearwater SCI.  A possible source pathway receptor connection has been identified for the Manx Shearwater, who could move into the activity area and be impacted by visual and noise (airborne and/or underwater) disturbance or pollution.	Y (Manx Shearwater)



# 5.3 SUMMARY OF SPECIAL AREAS OF CONSERVATION, SPECIAL PROTECTION AREAS AND THEIR RELEVANT QUALIFYING INTERESTS CONSIDERED FOR SCREENING

Table 5-5 Summary of SACs and QIs considered for screening for Wicklow Harbour Dredge Site and Disposal Site

Site Name	Relevant Qualifying Interests	Potential Impacts(s) Considered
Wicklow Reef SAC (IE002274)	Reefs [1170]	Physical disturbance to marine benthic communities: Increased suspension of solids in water column, habitat disturbance and smothering (Indirect)
Buckroney-Brittas Dunes and Fen SAC (000729)	Annual vegetation of drift lines [1210] Perennial vegetation of stony banks [1220]	Physical disturbance to marine benthic communities: Increased suspension of solids in water column, habitat disturbance and smothering (Indirect) – Disposal Area only
Kilpatrick Sandhills SAC (001742)	Annual vegetation of drift lines [1210]	Physical disturbance to marine benthic communities: Increased suspension of solids in water column, habitat disturbance and smothering (Indirect) – Disposal Area only
Magherabeg Dunes SAC (001766)	Annual vegetation of drift lines [1210]	Physical disturbance to marine benthic communities: Increased suspension of solids in water column, habitat disturbance and smothering (Indirect) – Disposal Area only
Rockabill to Dalkey Island SAC (IE003000)	Phocoena phocoena (Harbour Porpoise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Lambay Island SAC (IE000204)	Halichoerus grypus (Grey Seal) [1364] and Phoca vitulina (Common Seal) [1365]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
	Phocoena phocoena (Harbour Por- poise) [1351]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
West Wales Marine / Gorllewin Cymru Forol SAC (UK0030397)	Phocoena phocoena (Harbour Por- poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Slaney River Valley SAC (IE000781]	Phoca vitulina (Common Seal) [1365]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event



Site Name	Relevant Qualifying Interests	Potential Impacts(s) Considered
Lleyn Peninsula and the Sarnau / Pen Llyn a`r Sarnau SAC (UK13117)	Tursiops truncatus (Bottlenose Dol- phin) [1349] Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Saltee Islands SAC (IE000707)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Cardigan Bay/ Bae Ceredigion SAC (UK0012712)	Tursiops truncatus (Bottlenose Dol- phin) <i>Halichoerus grypus</i> (Grey Seal)	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Pembrokeshire Marine/ Sir Benfro Forol SAC (UK0013116)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
North Channel SAC (UK0030399)	Phocoena phocoena (Harbour Por- poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Bristol Channel Approaches / Dynesfeydd Môr Hafren SAC (UK0030396)	Phocoena phocoena (Harbour Por- poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Lundy SAC (UK0013114)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
The Maidens SAC (UK0013114)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Roaringwater Bay and Islands SAC (IE000101)	Phocoena phocoena (Harbour Porpoise) [1351]  Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Isles of Scilly Complex SAC (UK0013694)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Horn Head And Rinclevan SAC (IE000147)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Treshnish Isles SAC (UK0030289)	Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Mers Celtiques - Talus du golfe de Gascogne SAC (FR5212016)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event



Site Name	Relevant Qualifying Interests	Potential Impacts(s) Considered
Blasket Islands SAC (IE002172)	Phocoena phocoena (Harbour Porpoise) [1351]  Halichoerus grypus (Grey Seal) [1364]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Nord Bretagne DH SAC (FR2502022)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Abers - Côte des légendes SAC (FR5300017)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Ouessant-Molène SAC (FR5310072)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Cote de Granit Rose-Sept Iles SAC (FR5310011)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Baie de Morlaix SAC (FR5310073)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Tregor Goëlo SAC (FR5310070)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Côtes de Crozon SAC (FR5302006)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Chaussée de Sein SAC (FR5302007)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Récifs du talus du golfe de Gas- cogne SAC (FR5302016)	Phocoena phocoena (Harbour Porpoise) [1351]  Tursiops truncatus (Bottlenose Dolphin)	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event



Site Name	Relevant Qualifying Interests	Potential Impacts(s) Considered
Récifs et landes de la Hague SAC (FR2500084)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Cap d'Erquy-Cap Fréhel SAC (FR5300011)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Baie de Saint-Brieuc - Est SAC (FR5300066)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Anse de Vauville SAC (FR2502019)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Banc et récifs de Surtainville SAC (FR2502018)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Chausey SAC (FR2510037)	poise) [1351]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Baie de Lancieux, Baie de l'Argue- non, Archipel de Saint Malo et Di- nard SAC (FR5300012)	Phocoena phocoena (Harbour Porpoise) [1351]	Underwater noise disturbance, Injury due to collision with survey vessels, Pollution event
Estuaire de la Rance SAC (FR5300061)	poise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event
Baie du Mont Saint Michel SAC (FR2510048)	Phocoena phocoena (Harbour Porpoise) [1351]	Underwater noise disturbance, In- jury due to collision with survey vessels, Pollution event



# Table 5-6 SPAs and SCIs considered for screening.

Site Name	Relevant Special Conservation Interests	Potential Impacts(s) Considered
	(*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	
The Murrough SPA * also designated for wetland & waterbirds (IE004186)	[A184]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Wicklow Head SPA (IE004127)	Kittiwake ( <i>Rissa tridactyla</i> ) [A188]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Dalkey Islands SPA (IE004172)	Common Tern ( <i>Sterna hirundo</i> )	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Poulaphouca Reservoir SPA* inland (IE004063)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Howth Head Coast SPA (IE004113)	Kittiwake ( <i>Rissa tridactyla</i> ) [A188]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Ireland's Eye SPA (IE004117)	[[Λ1Ω <i>I</i> ]]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Lambay Island SPA (IE004069)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
North-west Irish Sea SPA	Razorbill (Alca torda) [A200] Puffin (Fratercula arctica) [A204]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event



Skorrigg Islands SDA (IE004122)	Relevant Special Conservation Interests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)  Lesser Black-backed Gull (Larus fuscus) [A183]  Herring Gull (Larus argentatus)  [A184]  Great Black-backed Gull (Larus marinus) [A187]  Kittiwake (Rissa tridactyla) [A188]  Arctic Tern (Sterna paradisaea)  [A194]	Potential Impacts(s) Considered
Skerries Islands SPA (IE004122)	[A184]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Glannau Aberdaron ac Ynys Enlli/ Aberdaron Coast and Bardsey Island SPA (UK9013121)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Wexford Harbour and Slobs SPA (IE004076)	fuscus) [A183]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Irish Sea Front SPA (UK9020328)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Seas off Wexford SPA (IE004237)	140131	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Saltee Islands SPA (IE000707)	Gannet (Morus bassanus) [A016]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event



Relevant Special Conservation Interests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	Potential Impacts(s) Considered
Manx shearwater ( <i>Puffinus puffinus</i> ) [A013] Lesser Black-backed Gull (Larus fuscus) [A183] Puffin ( <i>Fratercula arctica</i> ) [A204] European Storm Petrel ( <i>Hydrobates pelagicus</i> ) [A014	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Gannet ( <i>Morus bassanus</i> ) [A016]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Kittiwake ( <i>Rissa tridactyla</i> ) [A188	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Manx shearwater (Puffinus puffinus) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
T = = =	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Lesser Black-backed Gull ( <i>Larus</i> fuscus) [A183]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Lesser Black-backed Gull ( <i>Larus</i> fuscus) [A183]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Lesser Black-backed Gull ( <i>Larus</i> fuscus) [A183]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Kittiwake ( <i>Rissa tridactyla</i> ) [A188] Gannet ( <i>Morus bassanus</i> ) [A016]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
	ests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)  Manx shearwater (Puffinus puffinus) [A013] Lesser Black-backed Gull (Larus fuscus) [A183] Puffin (Fratercula arctica) [A204] European Storm Petrel (Hydrobates pelagicus) [A014]  Gannet (Morus bassanus) [A016]  Kittiwake (Rissa tridactyla) [A188]  Manx shearwater (Puffinus puffinus) [A013]  Lesser Black-backed Gull (Larus fuscus) [A183]  Kittiwake (Rissa tridactyla) [A188]  Gannet (Morus bassanus) [A016]  Kittiwake (Rissa tridactyla) [A188]  Kittiwake (Rissa tridactyla) [A188]



Site Name  Rathlin Island SPA (UK9020011)	Relevant Special Conservation Interests (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	
,	Kittiwake ( <i>Rissa tridactyla</i> ) [A188	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Isles of Scilly SPA (UK9020288)	European Storm Petrel ( <i>Hydrobates</i> pelagicus) [A014]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Horn Head to Fanad Head SPA (IE004194)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Beara Peninsula SPA (IE004155)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
The Bull and The Cow Rocks SPA (IE004066)	Gannet ( <i>Morus bassanus</i> ) [A016]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Deenish Island and Scariff Island SPA (IE004175)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Tory Island SPA (IE004073)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Iveragh Peninsula SPA (IE004154)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Skelligs SPA (IE004007)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Gannet ( <i>Morus bassanus</i> ) [A016]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Puffin Island SPA (IE004003)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
West Donegal Coast SPA (IE004150)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Mers Celtiques - Talus du golfe de Gascogne SPA (FR5212016)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Gannet ( <i>Morus bassanus</i> ) [A016] Manx Shearwater ( <i>Puffinus puffinus</i> )	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event



Site Name	Relevant Special Conservation Interests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	Potential Impacts(s) Considered
	[A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	
Blasket Islands SPA (IE004008)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Dingle Peninsula SPA (IE004153)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Nord Bretagne DO SPA (FR2512005)	Gannet ( <i>Morus bassanus</i> ) [A016] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Mingulay and Berneray SPA (UK9001121)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Rum SPA (UK9001341)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Kerry Head SPA (IE004189)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Ouessant-Molène SPA (FR5310072)		Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Cote de Granit Rose-Sept Iles SPA (FR5310011)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Baie de Morlaix SPA (FR5310073)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Tregor Goëlo SPA (FR5310070)	Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Camaret SPA (FR5312004)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event



Site Name	Relevant Special Conservation Inter-	Potential Impacts(s) Considered
	ests (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	
Cliffs of Moher SPA (IE004005)	, and a graduation, graduation	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cap Sizun SPA (FR5310055)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Seas off St Kilda SPA (UK9020332)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
The Shiant Isles SPA (UK9001041)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
St Kilda SPA (UK9001031)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Roches de Penmarc'h SPA (FR5312009)	Manx Shearwater ( <i>Puffinus puffinus</i> )	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
High Island, Inishshark and Davillaun SPA (IE004144)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cruagh Island SPA (IE004170)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cap d'Erquy-Cap Fréhel SPA (FR5300011)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Flannan Isles SPA (UK9001021)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Archipel de Glenan SPA (FR5310057)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	birds, Underwater noise disturb-
Chausey SPA (FR2510037)	_	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event



Site Name	Relevant Special Conservation Interests	Potential Impacts(s) Considered
	(*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	
Clare Island SPA (IE004136)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Dunes et côtes de Trévignon SPA (FR5312010)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Handa SPA (UK9001241)	Great Skua ( <i>Catharacta skua</i> ) [A175] Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Duvillaun Islands SPA (IE004111)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Baie de Seine occidentale SPA (FR2510047)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cape Wrath SPA (UK9001231)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Falaise du Bessin Occidental SPA (FR2510099)	- annual ( annual de graciane) [ reces	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Baie de Quiberon SPA (FR5310093)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
lles Houat-Hoedic SPA (FR5312011)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
North Rona and Sula Sgeir SPA (UK9001011)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Mor Braz SPA (FR5212013)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturb- ance, Pollution event
Rivière de Pénerf SPA (FR5310092)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	birds, Underwater noise disturb-



Site Name	Relevant Special Conservation Interests (*Bold: SCIs relevant across both Dis-	Potential Impacts(s) Considered
	posal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	
Littoral seino-marin SPA (FR2310045)	Manx Shearwater ( <i>Puffinus puffinus</i> )	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Littoral augeron SPA (FR2512001)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Baie de Vilaine SPA (FR5310074)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	birds, Underwater noise disturb-
Estuaire de la Loire - Baie de Bourgneuf SPA (FR5212014)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	birds, Underwater noise disturb-
North Caithness Cliffs SPA (UK9001181)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Secteur marin de l'île d'Yeu jusqu'au continent SPA (FR5212015)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	ance, Pollution event
Estuaire de la Loire SPA (FR5210103)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Hoy SPA (UK9002141)	Great Skua ( <i>Catharacta skua</i> ) [A175] Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Pertuis charentais - Rochebonne SPA (FR5412026)	Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	birds, Underwater noise disturb-
Rousay SPA (UK9002371)	, , , , , , , ,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Copinsay SPA (UK9002151)	, , , , ,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
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Site Name	Relevant Special Conservation Interests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	Potential Impacts(s) Considered
West Westray SPA (UK9002101)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Calf of Eday (UK9002431)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cap Gris-Nez SPA (FR3110085)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009] Manx Shearwater ( <i>Puffinus puffinus</i> ) [A013] Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Bancs des Flandres SPA (FR3112006)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Fair Isle SPA (UK9002091)	, , , , , , , , , , , , , , , , , , , ,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Panache de la Gironde SPA (FR7212016)	Great Skua ( <i>Catharacta skua</i> ) [A175]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Foula SPA (UK9002061)	Great Skua ( <i>Catharacta skua</i> ) [A175] Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Seas off Foula SPA (UK9020331)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Sumburgh Head SPA (UK9002511)		Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Noss SPA (UK9002081)	, , , , , ,	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Espacio marino de Punta de Cande- laria-Ría de Ortigueira-Estaca de Bares SPA (ES0000495)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Espacio marino de Cabo Peñas SPA (ES0000494)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event



Site Name	Relevant Special Conservation Interests  (*Bold: SCIs relevant across both Disposal and Dredge Area, non-bold: SCIs relevant for Dredge Area only)	Potential Impacts(s) Considered
Hermaness, Saxa Vord and Valla Field SPA (UK9002011)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Fetlar SPA (UK9002031)	Fulmar ( <i>Fulmarus glacialis</i> ) [A009]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Cabo Busto-Luanco SPA (ES0000318)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Espacio marino de la Costa de Fer- rolterra-Valdoviño SPA (ES0000496)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
NPA (ESCICICIASIA)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Outer Firth of Forth and St Andrews Bay Complex SPA (UK9020316)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Espacio marino de la Ría de Mundaka-Cabo de Ogoño SPA (ES0000490)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Urdaibaiko itsasadarra / Ría de Ur- daibai SPA (ES0000144)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
Estuaire de la Bidassoa et baie de Fontarabie SPA (FR7212013)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
(FS0000498)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event
(Galicia SPA (ESOOO0499)	Manx shearwater ( <i>Puffinus puffinus</i> ) [A013]	Visual and noise disturbance to birds, Underwater noise disturbance, Pollution event



# ASSESSMENT OF LIKELY SIGNIFICANT EFFECTS TO NATURA 2000 SITES IN THE ZONE OF INFLUENCE OF PROPOSED ACTIVITIES

### 6.1 PHYSICAL DISTURBANCE TO MARINE BENTHIC COMMUNITIES

#### 6.1.1 WICKLOW REEF SAC

Wicklow Reef SAC has been considered for further assessment in relation to the potential indirect physical disturbance impacts on the Annex I reef habitat feature and associated biological communities (i.e. increased suspension of solids in water column and/or habitat disturbance and smothering) associated with the proposed disposal activities.

Wicklow Reef SAC is a current-swept subtidal reef community complex (NPWS, 2013). The site has depths ranging from of 6 m below CD, at the western edge, to 40 m below CD along the eastern edge. The substrate in the site includes cobbles, boulders, bedrock and pockets of gravelly sand and shell (NPWS, 2013). The total area of the Wicklow Reef SAC is estimated to be 15.33 km², with sheer and sloping rock in places. This site is subject to strong tidal streams with current speeds reaching up to 6 knots.

Survey data indicate the biological community is typical of shallow, current-swept subtidal reef habitats, with the following species previously recorded in the SAC:

- Spirobranchus triqueter (polychaete)
- *Urticina felina* (anemone)
- Tubularia indivisa (hydroid (sea fir))
- Ophiothrix fragilis (brittlestar)
- Sertularia argentea (hydroid)
- Clavelina lepadiformis (colonial sea squirt)

*Spirobranchus triqueter*<sup>2</sup> encrusts stones, rocks and shells, and the carapace of some species of decapods. They are predominantly sublittoral to depths of 70 m.

*Urticina felina*<sup>3</sup> is an anemone is typically found on the lower shore and sub-tidally, particularly on shores with strong wave action or subtidal areas with strong tidal streams. Small individuals may be found as high as the mid-tide line. They attach very firmly to rocks and boulders, typically in crevices and gullies, sometimes forming dense carpets.

The common brittlestar *Ophiothrix fragilis*<sup>4</sup> can be found from the lower shore to circalittoral offshore habitats on hard substrata including bedrock, boulders and on coarse sediment. Most abundant on tide-swept rock and on mixed coarse sediments.

<sup>&</sup>lt;sup>2</sup> https://www.marlin.ac.uk/species/detail/1794

<sup>&</sup>lt;sup>3</sup> https://www.marlin.ac.uk/species/detail/1392

<sup>&</sup>lt;sup>4</sup> https://www.marlin.ac.uk/species/detail/1198



The hydroid *Tubularia indivisia* is also tolerant of high turbidity areas and can be found on exposed bedrock and boulders.

Sertularia argentea<sup>5</sup> (hydroid), resembling a tree fern pattern, inhabits shallow pools on sand flats and mudflats, and sandy substrata usually on pebbles, shells rocks, or other hard objects. It is occasionally found on algal stems. It is commonly found in areas subject to strong water movement from either tidal streams or wave action, and is abundant in narrows and rapids with tidal streams of more than three knots.

Clavelina lepadiformis<sup>6</sup>, a colonial sea squirt, attaches itself to rocks, stones and seaweed in the sublittoral to a depth of about 50 m.

The Marine Life Information Network (MarLIN) provides evidence-based assessments and sensitivity assessments using the Marine Evidence based Sensitivity Assessment (MarESA) approach to assess the sensitivity of biotopes to pressures (MarLin, 2023a).

The tidal conditions, substrate, depth and biological communities found at Wicklow Reef SAC closely align with the "Urticina felina and sand-tolerant fauna on sand-scoured or covered circalittoral rock" biotope (JNCC, 2022). This biotope typically occurs on tide-swept circalittoral bedrock, rock adjacent to mobile sand/gravel in gullies, and cobbles on gravel and sand, characterised by scour-tolerant robust species.

According to MarESA (2023), the "Urticina felina and sand-tolerant fauna on sand-scoured or covered circalittoral rock" biotope is not sensitive to changes in suspended solids (water clarity) or light smothering (i.e. up to 5 cm) and siltation rate changes. The biotope has low sensitivity to heavy smothering (i.e. up to 30 cm) and siltation rate changes. For light smothering most benthic biota may be able to adapt, i.e. vertically migrate through the deposited sediment however for heavy smothering most species of marine biota are unable to adapt, e.g. sessile organisms are unable to make their way to the surface though a similar biota could, with time, re-establish (MarLIN, 2023). For this habitat, and the species associated with it, the high current and water flow levels will allow for the movement (and remobilisation) of sediments from the area. The presence of species such as Urticina felina and Spiobranchus triqueter are adapted to strong wave action, siltation and sediment scour which would indicate a resistance to light smothering and therefore an ability to tolerate intermittent deposition events. Species such as Spirobranchus triqueter are rapid colonisers and can recover quickly from disturbance. Urticina felina is also a robust species with the ability to repair body damage through regenerating tentacles quickly, within a few days.

Modelling of sediment dispersion expected following dredging of material at the Wicklow Harbour dredge site undertaken by GDG indicates there will be no deposition of material on the seabed of Wicklow Reef SAC. Modelling of sediment dispersion expected following disposal of dredge material at the Arklow disposal site undertaken by GDG indicates deposition of sediment on the seabed of Wicklow Reef SAC will be below 0.01 cm. Therefore, significant effects to the Annex I reef habitat QI of Wicklow Reef SAC from the proposed dredging and disposal activities are unlikely to have a significant impact on habitat QI.

<sup>&</sup>lt;sup>5</sup> https://www.marlin.ac.uk/species/detail/2346

<sup>&</sup>lt;sup>6</sup> https://www.marlin.ac.uk/species/detail/1483



#### 6.1.2 BUCKRONEY-BRITTAS DUNES AND FEN SAC

The Buckroney-Brittas Dunes and Fen SAC has been considered for further assessment in relation to the potential indirect physical disturbance impacts on the Natura 2000 sites' designated coastal habitats from increased suspension of solids in the water column and/or habitat disturbance and smothering associated with the proposed dredging and disposal activities.

Buckroney-Brittas Dunes and Fen is a complex of coastal habitats located about 10 km south of Wicklow town. It comprises two main sand dune systems, Brittas Bay and Buckroney Dunes, connected on the coast by the rocky headland of Mizen Head. The dunes have cut off the outflow of a small river at Mizen Head and a fen, Buckroney Fen, has developed. A further small sand dune system occurs south of Pennycomequick Bridge (NPWS, 2013).

The following Annex I coastal habitats are included in the list of qualifying species:

- Annual vegetation of drift lines [1210]
- Perennial vegetation of stony banks [1220]
- Mediterranean salt meadows (Juncetalia maritimi) [1410]
- Embryonic shifting dunes [2110]
- Shifting dunes along the shoreline with Ammophila arenaria (white dunes) [2120]
- Fixed coastal dunes with herbaceous vegetation (grey dunes) [2130]
- Atlantic decalcified fixed dunes (Calluno-Ulicetea) [2150]
- Dunes with Salix repens ssp. argentea (Salicion arenariae) [2170]
- Humid dune slacks [2190]
- Alkaline fens [7230]

The Annual vegetation of drift lines [1210] and Perennial vegetation of stony banks [1220] are considered further as the remaining habitats are located landward of the shingle ridge, so will not be impacted by increased suspension of solids in the water column and/or habitat disturbance and smothering associated with the proposed dredging and disposal activities.

Coastlines are dynamic features in constant cycle of erosion and accretion. The two main causes of erosion occur from natural process or cycles and those from human interference (NPWS, 2021a). Natural processes include environmental and climate forces and natural changes in sediment supply. In relation to human interference, this can come in the form of changes in the sediment budget/supply from direct removal of sediment or indirectly from altering or changing sediment movement. Sediment supply and distribution is important for coastal and dunes systems/communities where accumulation of organic matter and tidal litter is used for the trapping of sand for dune formation and development. Cycles of erosion and stabilisation are part of a system and allows for the establishment of pioneer species and vegetation to occur (NPWS, 2021a).

Annual vegetation of drift lines is found on beaches along the high tide mark, where tidal litter accumulates. It is dominated by a number of small annual species (NPWS, 2021a). Tidal litter contains the remains of marine algal and faunal material. The habitat is often represented as patchy, fragmented strands of vegetation that are short-lived and subject to frequent re-working of the sediment. The vegetation is limited to a small number of high specialised species that are capable of coping with salinity, wind exposure, an unstable substrate and lack of soil moisture. The species diversity and plant



distributions are controlled by a range of factors including mobility of the substrate, the intensity of grazing, nutrient gradients and disturbance from human activities (NPWS, 2021a).

Annual vegetation of drift lines was recorded with an area of 0.48 ha. The habitat is very difficult to measure in view of its dynamic nature which means that it can appear and disappear within a site from year to year. The habitat structure and functions were assessed as favourable for the natural range with the overall conservation status for the annual vegetation of drift lines in Ireland being described as unfavourable (Ryle et al., 2009).

Perennial vegetation of stony banks occurs along the coast where shingle (cobbles, pebbles, and gravel ≥2mm) has accumulated to form elevated ridges or banks above the high tide mark. The majority of the rocky material should be between 2 mm and 256 mm in diameter to be considered in this habitat category. On the upper beach, the pioneer community can be characterised by perennial species such as sea beet (Beta vulgaris subsp. maritima), sea-kale (Crambe maritima), rock samphire (Crithmum maritimum), cleavers (Galium aparine), yellow-horned poppy (Glaucium flavum), sea pea (Lathyrus japonicus), wild radish (Raphanus raphanistrum subsp. maritimus), curled dock (Rumex crispus), sea campion (Silene uniflora), perennial sow-thistle (Sonchus arvensis) and sea mayweed (Tripleurospermum maritimum). The majority of the area within this pioneer community is usually bare shingle. At the top of the beach, and moving inland, a wider range of vegetation types can be found at larger shingle sites including a lichen-rich community and coastal forms of grassland, heath and scrub (NPWS, 2021a).

The development and continued health of this habitat relies on the continuous supply of shingle sediment, and this is usually provided as a response to storm events. The most common vegetation community of the shingle habitat is a relatively stable grassland community. The ecological variation within this habitat depends on stability, the amount of fine material accumulating between the pebbles, climate conditions, and previous management of the site. The ridges and lows also influence vegetation patterns with characterisations communities and zonations between bare areas and vegetated shingle which is dominated by short-lived salt-tolerant perennials (NPWS, 2021a).

The natural range of the perennial vegetation of stony banks is considered to be favourable, defined by the current range of the habitat in Ireland (Ryle et al., 2009).

The substrate, depth and biological communities at the mapped locations of the Perennial vegetation of stony banks and Annual vegetation of drift lines habitat QIs of Buckroney-Brittas Dunes and Fen SAC closely align with the "Barren littoral shingle", "Polychaetes and Macomangulus tenuis in littoral fine sand" and "Halcampa chrysanthellum and Edwardsia timida on sublittoral clean stone gravel" biotopes (JNCC, 2023).

According to MarESA (2023), barren littoral shingle is shingle or gravel shores, typically with sediment particle size ranging from 4-256 mm, sometimes with some coarse sand mixed in. This biotope is normally only found on exposed open coasts in fully marine conditions. Such shores tend to support virtually no macrofauna in their very mobile and freely draining substratum. The few individuals that may be found are those washed into the habitat by the ebbing tide, including the occasional amphipod or small polychaete. 7

Polychaetes and Macomangulus tenuis in littoral fine sand biotope occurs on the mid and lower shore on moderately wave-exposed and sheltered coasts, with predominately fine sand which remains

<sup>&</sup>lt;sup>7</sup> https://www.marlin.ac.uk/habitats/detail/143



damp throughout the tidal cycle. The sediment is often rippled, and an anoxic layer may occasionally occur below a depth of 10 cm, though it is often patchy. The infaunal community is dominated by the bivalve *Macomangulus tenuis* together with a range of polychaetes<sup>8</sup>.

Halcampa chrysanthellum and Edwardsia timida on sublittoral clean stone gravel is periodically or seasonally disturbed sublittoral stone gravel with small pebbles characterised by the presence of the anemones Halcampa chrysanthellum and Edwardsia timida. Associated species are often typical of a hydroid/bryozoan turf with polychaetes such as Spirobranchus spp. This habitat may show considerable variation in community composition, and it is possible that it is a sub-biotope of other gravel biotopes<sup>9</sup>.

Table 6-1 Habitat and species pressure type, resistance, and sensitivity assessment (MarLIN, 2023)

	Pressure Type	Resistance	Resilience	Sensitivity	Notes
Barren littoral shingle <sup>10</sup>	Changes in suspended solids (water clarity)	High	High	Not sensi- tive	This biotope is characterized by the absence of species through sediment mobility (JNCC, 2015), rather than the presence of typical species: changes in suspended solids will therefore not alter the biotope.
	Smothering and siltation rate changes	High	High	Not sensi- tive	This biotope is characterized by the absence of species through sediment mobility (JNCC, 2015), rather than the presence of typical species: the addition of a single deposit of fine sediments which will be removed by wave action will therefore not alter the biotope.
Polychaetes and Macomangulus tenuis in littoral fine sand <sup>11</sup>	Changes in suspended solids (water clarity)	High	High	Not sensi- tive	The characterizing species live within the sand and are unlikely to be directly affected by an increased concentration of suspended matter in the water column.  However, the biotope is characterized by a low amount of organic matter and an increase in suspended solids may cause a change in this factor if this is coupled with changes in hydrodynamics that reduce particle

<sup>&</sup>lt;sup>8</sup> https://www.marlin.ac.uk/habitats/detail/1170

<sup>&</sup>lt;sup>9</sup> https://www.marlin.ac.uk/habitats/detail/80

<sup>&</sup>lt;sup>10</sup> https://www.marlin.ac.uk/habitats/detail/143

<sup>&</sup>lt;sup>11</sup> https://www.marlin.ac.uk/habitats/detail/1170



	Pressure -	Resistance	Resilience	Sensitivity	Notes
	Type				re-suspension. Increased suspended solids are unlikely to have a direct impact on infauna but increased organic matter may result in an increase in the abundance of opportunistic species such as <i>Capitella capitella</i> and oligochaetes.
	Smothering and siltation rate changes (light)	High	High	Not sensi- tive	None of the characterizing species are considered likely to be significantly impacted by deposition of up to 5 cm of fine material.
	Smothering and siltation rate changes (heavy)	Low	High	Low	Overall smothering by 30 cm of fine sediments may result in mortality of characterizing species. The introduction of fine sediment may also alter the sediment typical of the biotope causing a temporary shift in the abundance of species. However, the opportunistic species occurring in the biotope are likely to recover rapidly following sediment recovery.
Halcampa chry- santhellum and Edwardsia timida on sublittoral clean stone gravel <sup>12</sup>	suspended	High	High	Not sensi- tive	No directly relevant evidence was found to assess the effect of pressure. Resistance to this pressure is assessed as 'High' as an increase in turbidity may influence feeding and growth rates but is unlikely to result in mortality of adults. Resilience is assessed as 'High' by default and the biotope is assessed as 'Not Sensitive' to changes in turbidity at the benchmark level.

<sup>12</sup> https://www.marlin.ac.uk/habitats/detail/80



Pressure Type	Resistance	Resilience	Sensitivity	Notes
Smothering and siltation rate changes (light)	High	High	Not sensi- tive	It is likely that the burrowing anemones would be able to extend burrows to cope with deposition of 5 cm of sediment. In the event of burial, the anemones are capable of some vertical movement and would probably escape.
Smothering and siltation rate changes (heavy)	Medium	Medium	Medium	It is unlikely that the characterizing species would be able to extend their burrows in the event of burial by 30 cm in a single event, but it is assumed that the majority of anemones would probably escape by abandoning their burrows. Periodic seasonal increases in flow or wave action will probably remove the deposited sediment in a few tidal cycles but some mortality may occur in the meantime.

Modelling of sediment dispersion expected following dredging of material at the Wicklow Harbour dredge site undertaken by GDG indicates there will be no deposition of material on the seabed of the Buckroney-Brittas Dunes and Fens SAC. Modelling of sediment dispersion expected following disposal of dredge material at the Arklow disposal site undertaken by GDG indicates deposition of sediment on the seabed of Buckroney-Brittas Dunes and Fens SAC will be below 4.5 cm. This increase along the southern coastal strip of the Buckroney-Brittas Dunes and Fens SAC, predicted by the hydrodynamic modelling undertaken by GDG to result from the disposal activities, is therefore **unlikely** to have a significant impact on habitat QIs of the Buckroney-Brittas Dunes and Fens SAC.

## 6.1.3 KILPATRICK SANDHILLS SAC AND MAGHERABEG DUNES SAC

# 6.1.4 MAHERABEG DUNES SAC AND KILPATRICK SANDHILLS SAC BOTH HAVE ANNUAL VEGETATION DRIFT LINES AS QUALIFYING INTEREST FEATURES (DREDGING AREA AT WICKLOW HARBOUR.

Table 5-3). The assessment conducted for this habitat at Buckroney-Brittas Dunes and Fen SAC above can be applied to the Kilpatrick Sandhills SAC and Magherabeg Dunes SAC. , Modelling of sediment dispersion expected following dredging of material at the Wicklow Harbour dredge site undertaken by GDG indicates there will be no deposition of material on the seabed of these SACs and predicts deposition of under 1.4 cm at Kilpatrick Sandhills SAC and less than 0.001 cm at Magherabeg Dunes SAC as a result of the disposal activities. The dredging and disposal activities are therefore **unlikely** to have a significant impact on habitat QIs of these SACs.



#### 6.1.5 THE MURROUGH SAC AND THE MURROUGH SPA WETLANDS AND WATERBIRDS HABITAT

The Murrough SAC and SPA have been considered for further assessment in relation to the potential indirect physical disturbance impacts on the Natura 2000 sites' designated Annual vegetation of drift lines and Perennial vegetation of stony banks QI's and Wetland and waterbirds habitat from increased suspension of solids in the water column and/or habitat disturbance and smothering associated with the proposed dredging and disposal activities.

The Murrough Wetlands SAC is a complex coastal system comprising both freshwater and coastal wetlands, as well as terrestrial coastal habitats. It is selected for shingle beaches, saltmarshes, annual vegetation of drift lines, Cladium fen and alkaline fen. The Murrough SPA comprises a coastal wetland complex that stretches for 13 km from Kilcoole Station, east of Kilcoole Village in the north to Wicklow town in the south and extends inland for up to 1 km in places. The site includes an area of marine water to a distance of 200 m from the low water mark. A shingle ridge runs along the length of the site and carries the Dublin-Wexford railway line (NPWS, 2015).

Beside the shingle shore is a stony ridge supporting perennial vegetation. Drift line vegetation on the seaward side includes species such as Sea Rocket (*Cakile* maritima), Sea Sandwort (*Honkenya peploides*) and Yellow-horned Poppy (*Glaucium flavum*). At the southern end of the site, Broad Lough, a brackish, partly tidal lake, has a well-developed saltmarsh community (NPWS, 2015). Common Reed (*Phragmites australis*) is abundant along the western shore, along with some Sea Club-rush (*Scirpus maritimus*). Saltmarsh is also present in the northern end of the site in the vicinity of the Breaches. An area of fen occurs at Five Mile Point. Here, Black Bog-rush (*Schoenus nigricans*) is dominant. A wide range of freshwater and brackish marsh habitats occur within this site. These vary from reed-marsh dominated by reeds and rushes (*Juncus* spp.) to those of sedges (*Carex* spp.) with other areas supporting a mixture of sedges and Yellow Iris (*Iris pseudacorus*) also occurring. The marshes merge into wet grassland in many areas and where grazing pressure is low, a herb-rich sward occurs. Sedges are abundant in the wetter areas (NPWS, 2015). Note the salt meadows habitats are located landward of the shingle ridge, so will not be impacted by increased suspension of solids in the water column and/or habitat disturbance and smothering associated with the proposed dredging and disposal activities.

The sensitivity assessment of The Murrough SAC and SPA habitats was conducted, using the habitat information where available from the MarLIN network (MarLIN, 2023). The relevant habitat exposed to the coast aligns with the "Barren littoral shingle", "Polychaetes and Macomangulus tenuis in littoral fine sand" and "Halcampa chrysanthellum and Edwardsia timida on sublittoral clean stone gravel" biotopes (JNCC, 2023).

According to MarESA (2023), barren littoral shingle is shingle or gravel shores, typically with sediment particle size ranging from 4-256 mm, sometimes with some coarse sand mixed in. This biotope is normally only found on exposed open coasts in fully marine conditions. Such shores tend to support virtually no macrofauna in their very mobile and freely draining substratum. The few individuals that may be found are those washed into the habitat by the ebbing tide, including the occasional amphipod or small polychaete. <sup>13</sup>

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<sup>13</sup> https://www.marlin.ac.uk/habitats/detail/143



Polychaetes and *Macomangulus tenuis* in littoral fine sand biotope occurs on the mid and lower shore on moderately wave-exposed and sheltered coasts, with predominately fine sand which remains damp throughout the tidal cycle. The sediment is often rippled, and an anoxic layer may occasionally occur below a depth of 10 cm, though it is often patchy. The infaunal community is dominated by the bivalve *Macomangulus tenuis* together with a range of polychaetes<sup>14</sup>.

Halcampa chrysanthellum and Edwardsia timida on sublittoral clean stone gravel is periodically or seasonally disturbed sublittoral stone gravel with small pebbles characterised by the presence of the anemones Halcampa chrysanthellum and Edwardsia timida. Associated species area often typical of a hydroid/bryozoan turf with polychaetes such as Spirobranchus spp. This habitat may show considerable variation in community composition and it is possible that it is a sub-biotope of other gravel biotopes<sup>15</sup>.

Table 6-2 Habitat and species pressure type, resistance, and sensitivity assessment (MarLIN, 2023)

	Pressure Type	Resistance	Resilience	Sensitivity	Notes
Barren littoral shin- gle <sup>16</sup>	Changes in suspended sol- ids (water clar- ity)	High	High	Not sensitive	This biotope is characterized by the absence of species through sediment mobility (JNCC, 2015), rather than the presence of typical species: changes in suspended solids will therefore not alter the biotope.
	Smothering and siltation rate changes	High	High	Not sensitive	This biotope is characterized by the absence of species through sediment mobility (JNCC, 2015), rather than the presence of typical species: the addition of a single deposit of fine sediments which will be removed by wave action will therefore not alter the biotope.
Polychaetes and Macomangulus tenuis in littoral fine sand <sup>17</sup>	Changes in suspended sol- ids (water clar- ity)	High	High	Not sensitive	The characterizing species live within the sand and are unlikely to be directly affected by an increased concentration of suspended matter in the water column.  However, the biotope is characterized by a low amount of organic matter and an increase in suspended solids may cause a change in this factor if this is coupled with changes in hydrodynamics that reduce particle re-suspension. Increased suspended solids are unlikely to have a direct impact on infauna but increased organic matter may result in an increase in the abundance of opportunistic species

<sup>&</sup>lt;sup>14</sup> https://www.marlin.ac.uk/habitats/detail/1170

<sup>&</sup>lt;sup>15</sup> https://www.marlin.ac.uk/habitats/detail/80

<sup>&</sup>lt;sup>16</sup> https://www.marlin.ac.uk/habitats/detail/143

<sup>&</sup>lt;sup>17</sup> https://www.marlin.ac.uk/habitats/detail/1170



	Pressure Type	Resistance	Resilience	Sensitivity	Notes
					such as <i>Capitella capitella</i> and oligochaetes.
	Smothering and siltation rate changes (light)	High	High		None of the characterizing species are considered likely to be significantly impacted by deposition of up to 5 cm of fine material.
	Smothering and siltation rate changes (heavy)	Low	High		Overall smothering by 30 cm of fine sediments may result in mortality of characterizing species. The introduction of fine sediment may also alter the sediment typical of the biotope causing a temporary shift in the abundance of species. However, the opportunistic species occurring in the biotope are likely to recover rapidly following sediment recovery.
Halcampa chrysan- thellum and Ed- wardsia timida on sublittoral clean stone gravel <sup>18</sup>	Changes in suspended sol- ids (water clar- ity)	High	High		No directly relevant evidence was found to assess the effect of pressure. Resistance to this pressure is assessed as 'High' as an increase in turbidity may influence feeding and growth rates but is unlikely to result in mortality of adults. Resilience is assessed as 'High' by default and the biotope is assessed as 'Not Sensitive' to changes in turbidity at the benchmark level.
	Smothering and siltation rate changes (light)	High	High	Not sensitive	It is likely that the burrowing anemones would be able to extend burrows to cope with deposition of 5 cm of sediment. In the event of burial, the anemones are capable of some vertical movement and would probably escape.
	Smothering and siltation rate changes (heavy)	Medium	Medium		It is unlikely that the characterizing species would be able to extend their burrows in the event of burial by 30 cm in a single event, but it is assumed that the majority of

<sup>&</sup>lt;sup>18</sup> https://www.marlin.ac.uk/habitats/detail/80



Pressure Type	Resistance	Resilience	Sensitivity	Notes
				anemones would probably escape
				by abandoning their burrows. Peri-
				odic seasonal increases in flow or
				wave action will probably remove
				the deposited sediment in a few
				tidal cycles but some mortality may
				occur in the meantime.

Modelling of sediment dispersion expected following dredging of material at the Wicklow Harbour dredge site undertaken by GDG indicates there will be deposition of 0.25 cm of material on the seabed of the Murrough SPA. Modelling of sediment dispersion expected following disposal of dredge material at the Arklow disposal site undertaken by GDG indicates deposition of sediment on the seabed of the Murrough SPA will be below 0.01 cm.

Based on the sensitivity assessment provided above, the habitats identified have high resistance, high resilience, and are not sensitive to changes in suspended solids and light smothering and siltation rate. As the predicted bed level change of sediment is light (i.e. less than 5 cm), the proposed dredge and disposal activities are **unlikely** to have significant impact.

Increases of 0.25 cm and 0.01 cm of fine sediment (silt) are therefore **unlikely** to have a significant impact on the Wetlands and Waterbirds habitat feature of the Murrough SPA.

## 6.2 VISUAL AND NOISE DISTURBANCE INCLUDING DISTURBANCE DURING BREEDING SEASON

The following seabird species which are sensitive to physical disturbance were identified as relevant considering the location of their breeding colonies and foraging distances of these species:

- Herring Gull *Larus argentatus*
- Little Tern (*Sterna albifrons*)
- Black-headed Gull (Chroicocephalus ridibundus)
- Red-throated Diver Gavia stellata
- Kittiwake Rissa tridactyla
- Lesser Black-backed Gull Larus fuscus
- Arctic Tern Sterna paradisaea
- Common Tern Sterna hirundo
- Guillemot Uria aalge
- Razorbill Alca torda
- Fulmar Fulmarus glacialis
- Puffin Fratercula arctica
- Manx Shearwater *Puffinus puffinus*
- Gannet Morus bassanus
- European Storm Petrel Hydrobates pelagicus
- Great Skua Stercorarius skua

Of these, northern gannet, fulmar, common guillemot, kittiwake, Manx shearwater and the gulls have a low to moderate sensitivity to disturbance by shipping traffic and extraction of non-living resources including dredging (Garthe & Hüppop, 2004; MMO, 2018, Fleissbach et al., 2019).



While rafting birds which are SCIs of SPAs within foraging range of the Application Area may move in response to vessels in transit, such effects are of low magnitude and short duration, and will represent negligible additional disturbance over other vessel movements, including existing fishing, cargo and tanker traffic.

The physical presence of the dredge and disposal Dumping at Sea vessels may result in temporary disturbance to individual birds present in the immediate vicinity of the Licence Application area. There is also the potential for disturbance due to the proposed dredge and disposal activities. Birds overwintering in the Murrough SPA may be temporarily disturbed by the activities as might birds during the breeding season while nesting. Disturbance which causes birds to temporarily take flight may leave chicks vulnerable to predation by predators, thereby affecting the successful fledging of chicks and reducing the reproduction rate.

However, over-wintering and breeding birds in the area are habituated to vessel movements, including existing fishing, cargo and tanker traffic. As there is existing shipping activity in the region, birds are already accustomed to physical disturbance from marine traffic, therefore the temporary introduction of one slow-moving additional vessel is not likely to cause significant disturbance.

Significant effects on designated bird species features of Natura 2000 sites due to physical and noise disturbance caused by the proposed activities are considered **unlikely**.

#### **6.3** UNDERWATER NOISE DISTURBANCE

According to Southall et al. (2007), shipping noise has a typical frequency of 0.05-0.3 kHz and a typical Sound Pressure Level 160-175 dB re  $1\mu$ Pa @ 1m.

Robinson et al (2011) measured Sound Pressure Levels ranging from 155-185 dB re  $1\mu$ Pa from dredging vessels, which is substantially quieter in terms of acoustic energy output than other anthropogenic noise sources such as seismic airguns and marine pile driving. Hydrophone measurements were made from noise emitted by six UK dredging vessels at frequencies ranging between 48 kHz and 200 kHz.

Robinson et al also found that the vessels extracting aggregate emit higher levels of noise at frequencies above 1 kHz than a typical merchant vessel. The authors concluded the major source of this higher frequency noise is the impact/abrasion of the aggregate material passing through the draghead, suction pipe and pump (possibly with some additional contribution due to cavitation noise). This means that the overall noise output level is partially dependent upon the aggregate being extracted, and results indicate that extracting gravel is noisier than extracting sand or mud. Water injection dredging is likely to emit less noise than mechanical dredging.

The area being dredged in Wicklow Harbour consists of mainly fine sandy silt, suggesting noise levels will be lower than if sand or gravel was passing through the draghead, suction pipe and pump.

#### **6.3.1** BIRDS

A range of diving bird species have been tested to establish an underwater hearing range. The results show that their underwater hearing range is approximately 500Hz to 4kHz, with similar results obtained in air and underwater (Crowell 2014, Crowell et al. 2015, Hansen et al. 2017). McCauley (1994)



inferred from vocalisation ranges that the threshold of perception for low frequency seismic noise in some species (e.g. penguins, considered as a possible proxy for auk species) would be high, hence individuals might be adversely affected only in close proximity to the source.

A list of bird species which are known to engage in pursuit diving or benthic feeding in marine, coastal and estuarine waters at least during part of the year and are potentially vulnerable to underwater noise effects is provided below (Bird SCIs considered for screening are highlighted **in bold**):

- Great northern diver *Gavia immer*
- Red-throated diver Gavia stellata
- Black-throated diver Gavia arctica
- Little grebe Tachybaptus ruficollis
- Great crested grebe Podiceps cristatus
- Slavonian grebe *Podiceps auratus*
- Manx shearwater *Puffinus puffinus*
- Gannet Morus bassanus
- Cormorant Phalacrocorax carbo carbo
- Shag Phalacrocorax aristotelis
- Guillemot *Uria aalge*
- Razorbill Alca torda
- Puffin Fratercula arctica
- Pochard Aythya ferina
- Tufted duck Aythya fuligula
- Scaup Aythya marila
- Eider Somateria mollissima
- Long-tailed duck Clangula hyemalis
- Common scoter Melanitta nigra
- Velvet scoter Melanitta fusca
- Goldeneye Bucephala clangula
- Red-breasted merganser *Mergus serrator*
- Goosander Mergus merganser

The diving bird species listed in Table 6-3 are known to engage in pursuit diving or benthic feeding in marine, coastal and estuarine waters at least during part of the year and as such may be vulnerable to underwater noise.

Table 6-3 Migratory and/or Annex I diving bird species considered potentially vulnerable to underwater noise

Migratory and/or Annex I diving bird species considered potentially vulnerable to underwater noise effects			
Divers and grebes	Seabirds	Diving ducks	
Great northern diver Gavia immer	Manx shearwater Puffinus puffinus	Pochard Aythya ferina	
Red-throated diver Gavia stellata	Gannet Morus bassanus	Tufted duck Aythya fuligula	
Black-throated diver Gavia arctica	Cormorant <i>Phalacrocorax carbo</i> carbo	Scaup Aythya marila	
Little grebe Tachybaptus ruficollis	Shag Phalacrocorax aristotelis	Eider Somateria mollissima	



Migratory and/or Annex I diving bir	gratory and/or Annex I diving bird species considered potentially vulnerable to underwater noise effects		
Divers and grebes	Seabirds	Diving ducks	
Great crested grebe <i>Podiceps cristatus</i>	Guillemot <i>Uria aalge</i>	Long-tailed duck Clangula hyemalis	
Slavonian grebe <i>Podiceps auritus</i>	Razorbill <i>Alca torda</i>	Common scoter <i>Melanitta nigra</i>	
	Puffin Fratercula arctica	Velvet scoter Melanitta fusca	
		Goldeneye Bucephala clangula	
		Red-breasted merganser <i>Mergus ser-rator</i>	
		Goosander Mergus merganser	

Very low frequency high amplitude underwater noise may result in acute trauma to diving seabirds, with several studies reporting mortality of diving birds in close proximity (i.e. tens of metres) to underwater explosions (Yelverton et al. 1973, Cooper 1982, Stemp 1985, Danil & St Leger 2011), however mortality of seabirds has not been reported during extensive seismic survey operations in the North Sea (using, for example, Sparkers which emit 200-230 dB re  $1\mu$ Pa @ 1m) which emit higher amplitude noise than the proposed activities.

While seabird responses to approaching vessels are highly variable (e.g. Fleissbach et al. 2019), flushing disturbance would be expected to temporarily displace diving seabirds from close proximity to vessels and any dredge and disposal equipment, thereby limiting their exposure to the highest sound pressures generated. Similarly, any behavioural disturbance of seabirds due to these activities is most likely to be temporary displacement associated with the physical presence of the vessel, comparable to that experienced by routine shipping traffic as opposed to injury due to underwater noise.

As such, underwater noise disturbance as a result of the proposed activities is not considered likely. Significant effects on designated bird species features of Natura 2000 sites due to underwater noise emitted by the proposed activities are considered **unlikely** 

#### **6.3.2** MARINE MAMMALS

Exposure to noise can induce a range of effects on marine mammals: physical effects may include a temporary reduction in hearing sensitivity (Temporary Threshold Shift-TTS) which is reversible over time; or following intense noise exposure, Permanent Threshold Shift (PTS). Other effects include masking of biologically important noises by anthropogenic noise (perceptual effects); behavioural changes such as displacement from feeding, resting, or breeding grounds; and stress (Southall *et al.*, 2007, Southall *et al.*, 2019).

Note updated exposure criteria are proposed by the US National Marine Fisheries Service (NMFS, 2016; NMFS, 2018) and Southall *et al.* (2019) criteria. The hearing groups used by these authors are more differentiated than those set out in Southall *et al.* (2007). Specifically, the distinction between High Frequency, Very High Frequency cetacean groups (as opposed to between mid- and high- frequency) reflects the regions of best hearing sensitivities within these groups, often including frequencies approaching or exceeding 100 kHz and a potential distinction between very low (VLF) and LF



cetacean among mysticetes and a potential segregation of mid-frequency (MF) and HF cetaceans in addition to the distinction of HF and VHF cetaceans are suggested.

This results in a re-labelling of Mid-Frequency (MF) cetaceans and High-Frequency (HF) cetaceans to High-Frequency cetaceans and Very-High Frequency cetaceans respectively. The relevant PTS values within the labelled groups are identical between NOAA (2018) and Southall *et al.* (2019) with no substantive change in that respect.

As the updated exposure criteria do not materially change the injury criteria thresholds and current national guidance (DAHG, (2014) refers to Southall *et al.* (2007), the Southall *et al.* (2007) criteria are used in this report (Table 6-4 and Table 6-6) with the Southall *et al.* (2019) criteria presented in Table 6-5 and Table 6-6 for reference.

Table 6-4 The following Sound Pressure Level (SPL) injury criteria have been proposed by Southall et al. (2007) for individual marine mammals exposed to discrete noise events.

Marina Maranal araun	Injury Criteria		
Marine Mammal group	TTS	PTS	
Low-Frequency Cetaceans (Baleen whales)	224dB re: 1μPa (peak)	230dB re: 1μPa (peak)	
Mid-Frequency Cetaceans (including Bottlenose dolphins)	224dB re: 1μPa (peak)	230dB re: 1μPa (peak)	
High Frequency Cetaceans (including harbour porpoise)	224dB re: 1μPa (peak)	230dB re: 1μPa (peak)	
Pinnipeds (in water)	212dB re: 1μPa (peak)	218 dB re: 1μPa (peak)	

Table 6-5 Sound Pressure Level (SPL) injury criteria proposed by Southall et al. (2019), for individual marine mammals exposed to discrete noise events

Marina Marraral arrays	Injury Criteria		
Marine Mammal group	TTS	PTS	
Low-Frequency Cetaceans (LF) (Baleen whales)	213dB re: 1μPa (peak)	219dB re: 1μPa (peak)	
Mid-Frequency Cetaceans (HF) (including Bottlenose dolphins)	224dB re: 1μPa (peak)	230dB re: 1μPa (peak)	
High Frequency Cetaceans (including harbour porpoise)	196dB re: 1μPa (peak)	202dB re: 1μPa (peak)	
Phocid carnivores in water (PCW)	212dB re: 1μPa (peak)	218 dB re: 1μPa (peak)	

Table 6-6 Underwater Auditory Band Width for Marine Mammal Species (Southall et al., 2007 and Southall et al., 2019)

		<b>Estimated Auditory</b>	<b>Estimated Auditory</b>
Frequency	Marine Mammal/Species	Band Width (kHz)	Band Width (kHz)
		Southall et al. (2007)	Southall et al. (2019)



Low Frequency Cetaceans	Baleen whales (Minke whale, Humpback whale)	0.007 – 22	0.007 – 35
Mid Frequency Cetaceans/* High Frequency cetaceans	Most toothed whales and dol- phins (including Common & Risso's Dolphin)	0.15 - 160	0.15 – 160
High Frequency Cetaceans/*very high frequency	Certain toothed whales and porpoises (including Harbour porpoise)	0.2 - 180	0.275 – 160
Low Frequency Pinnipeds in water	Grey seal & harbour seal	0.075 - 75	0.050 – 86

WODA (2013) provide technical guidance relating to underwater sound and dredging activities, which notes busy port settings have high levels of background noise. This, in addition to the noise produced from dredging activities, may result in masking effects, where surrounding additional sounds impact/interfere with marine mammals' ability to detect or recognise other sounds. The authors conclude long-term exposure to noise may lead to TTS, but PTS and injury are unlikely to occur (WODA, 2013).

The sounds from dredging activities are generally lower frequencies (i.e. below 1 kHz, with the main source of the continuous sound coming from the propellers and pumps (McQueen et al., 2018). The type of material being dredged impacts the sound frequencies emitted from the dredging and dumping activities. The lowest sound emitted from dredging activities is associated with the dredging and depositing of sand, from a bucket closing or a hopper depositing the material. The Sound Pressure Level (SPL) from this type of activity can range from approximately 100 to 190 dB (McQueen et al., 2018). The area being dredged in Wicklow Harbour consists of mainly fine sandy silt.

Note Sound Pressure Levels associated with the proposed activities are all **below** the injury criteria levels and the activities will not be undertaken long-term.

Significant effects on designated marine mammal species features of Natura 2000 sites due to underwater noise emitted by the proposed activities are considered **unlikely**.

#### 6.4 INJURY DUE TO COLLISION WITH SURVEY VESSELS

The key factors contributing to collision between marine mammals and vessels are the presence of both in the same area and vessel speed (see Schoeman et al. (2020) for review). Injuries to marine mammals from vessel strikes are species-dependent but generally are more severe at higher impact speeds (Wang et al., 2007). Vessels involved in the dredging and disposal works are likely to be stationary or travelling slowly, c. 2 knots during dredging and less than 10 knots travelling to the disposal location, thus allowing any animal in the area time to avoid collision.

Cetaceans and seals in the area are exposed to vessels of all sizes on a regular basis due to other activities in the area including fishing and shipping. As a result, they are likely to maintain a distance from the vessel for the relatively short time required for dredging and disposal activities before



returning to the area once the works have finished. The collision risk posed by the dredging and disposal activities is likely to be significantly lower that than posed by commercial shipping activity.

Significant effects on designated marine mammal species features of Natura 2000 sites due to injury due to collision with the survey vessels used by the proposed activities are considered **unlikely**.

#### 6.5 POLLUTION

Marine mammals, fish and seabirds (in particular diving birds, given the time they spend resting on the water surface and diving through it in search of food) are considered vulnerable to oil pollution.

The International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78), is an international marine environmental convention which aims to prevent both operational and accidental discharge into the marine from sea going vessels. Ireland ratified the various elements of the MARPOL Convention through the Sea Pollution Act 1991, the Sea Pollution (Amendment) Act 1999 and the Sea Pollution (Miscellaneous Provisions) Act 2006. MARPOL 73/78 was given further legal effect through Statutory Instruments introduced under these Acts. The Acts place a legal obligation upon operators of vessels to implement measures to prevent both operational and accidental discharges from ships of substances, which may damage the marine environment as well as human health.

While the proposed activities will result in a temporary increase in vessels using the area which increases the risk of accidents and resultant fuel and/or oil spills, an incidence of pollution whether from an accidental occurrence or operational activities is not considered likely considering the legal obligations to comply with MARPOL 73/78 with the increased risk of a pollution event occurring due to these activities considered minimal and not to be over and above existing background risk.

The vessel used during the dredge and disposal activities shall, as required by law, be MARPOL compliant and fully certified by the Maritime Safety Office. This is standard practice for these activities irrespective of the vessel operator and as it is required by law is built into the dredge and disposal design.

Therefore, it is considered unlikely that there would be any occurrence of a pollution event either accidental or otherwise that could directly or indirectly cause a significant effect to a Natura 2000 site.

Significant effects on designated features of Natura 2000 sites due to pollution as a result of the proposed activities are considered **unlikely**.

#### **6.6** SCREENING FOR IN-COMBINATION EFFECTS

The following developments were considered as having the potential to contribute to in-combination effects on the Natura 2000 sites identified:

- Codling Wind Park Ltd (FS007045)
- Wicklow Town Revetment Repairs (FS007004)
- Wicklow County Council (FS007013)



- Energia Wind Farm (South Irish Sea) (FS007048)
- Kilmichael Point (FS006788)
- Latitude 52 FLA (FS007232)
- Mac Lir FLA (FS007472)
- Shelmalere FLA (FS007261)

The location of the proposed dredge and dredge disposal area are shown in Figure 6-1 and Figure 6-2 below. Further details on the proposed project, the interaction with the activities proposed under the Licence Application and the potential for likely in-combination effects are outlined in Table 6-7 below.



Figure 6-1 Location of Wicklow Harbour Dredging and other developments



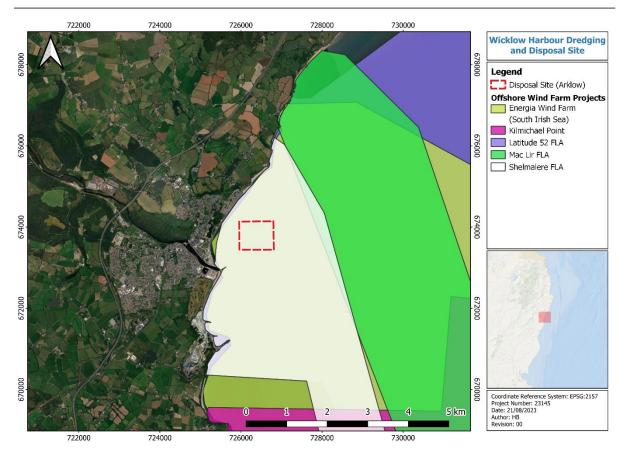


Figure 6-2 Location of Disposal Site and other developments

Table 6-7 Consideration of likelihood of in-combination effects

Project/Activy/Developm t name and application/ence referen number	en d lic	Licence status	Proposed activities	Spatial Overlap and Area (if applicable)	Potential in – combination effects	Conclusion
Codling Wi		Approved –	Geophysical,	No overlap with	There is a spatial	No likely in-
Park (FS007045)	Ltd	works underway	Geotechnical, Fish & Shellfish,	Dredge Area or disposal area.	overlap with this project and the	combination effects
,			surveys, Benthic		proposed	
			& Intertidal		dredge disposal	
			Surveys,		area, however	
			Archaeological		the two projects	
			surveys,		are not likely to	
			Metocean and		result in in-	
			Floating LiDAR,		combination	
			Marine Mammal		effects given the	
			Acoustic POD		nature of the	
			survey		activities	
					proposed under	



Project/Activit y/Developmen t name and application/lic ence reference number	Licence status	Proposed activities	Spatial Overlap and Area (if applicable)	Potential in – combination effects	Conclusion
				the two applications.	
Wicklow Town Revetment Repairs (FS007004)	Consultation	Maintenance and repair of an existing revetment  Re-profiling of existing revetment and placement of rock armour	No spatial over- lap	There is no spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities proposed under the two applications.	No likely incombination effects
Wicklow County Council (FS007013)	Consultation	Installation, use and maintenance of a floating pontoon, gangway and associated infrastructure.  4 weeks for installation for a permanent pontoon	No spatial over- lap	There is no spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities proposed under the two applications.	No likely incombination effects
Energia Wind Farm (South Irish Sea) (FS007048)	Determination	Geophysical, Geotechnical and Environmental Site	Spatial overlap (0.59km²) with disposal area.	There is spatial overlap with this project and the proposed dredge and	No likely in- combination effects



Project/Activit y/Developmen t name and application/lic ence reference number	Licence status	Proposed activities	Spatial Overlap and Area (if applicable)	Potential in – combination effects	Conclusion
		Investigation works		disposal area. The two projects are not likely to result in in- combination effects given the nature of the activities proposed under the two applications.	
Kilmichael Point (FS006788)	Determination	Geophysical, Geotechnical and Environmental Site Investigation works	No spatial over- lap	There is no spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities proposed under the two applications.	No likely in- combination effects
Latitude 52 FLA (FS007232)	Applied	Geophysical, Geotechnical and Environmental Site Investigation works	Spatial overlap (0.59km²) with disposal area.	There is spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities	No likely in- combination effects



Project/Activit y/Developmen t name and application/lic ence reference number	Licence status	Proposed activities	Spatial Overlap and Area (if applicable)	Potential in – combination effects	Conclusion
				proposed under the two applications.	
Mac Lir FLA (FS007472)	Applied	Benthic ecology surveys within a potential offshore export cable corridor area.	No spatial over- lap	There is no spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities proposed under the two applications.	No likely incombination effects
Shelmalere FLA (FS007261)	Consultation	Foreshore Licence for Site Investigations to inform the engineering and design of a potential offshore wind farm and associated export cable route	Spatial overlap (0.59km²) with disposal area.	There is spatial overlap with this project and the proposed dredge and disposal area. The two projects are not likely to result in incombination effects given the nature of the activities proposed under the two applications.	No likely incombination effects



# 7 SCREENING DETERMINATION STATEMENT

From the information available and outlined above, in undertaking a screening determination relating to the nature of the proposed works, where the effects on their receiving environment will be very localised, and where there is a lack of direct connections with regard to the Source-Pathway-Receptor model, it is therefore concluded that the proposed development, individually or in-combination with other projects or plans, is not likely to have a significant effect on any Special Area of Conservation or Special Protection Area, or their designated features or species of interest in view of the site's conservation objectives.

Therefore, assessment can stop at the screening stage and a Stage 2 Appropriate Assessment is not required.





# **8** SCREENING STATEMENT OUTCOME

No significant effects are identified for the habitats or species which constitute a Qualifying Interest for any of the SACs or SPAs considered as a result of the proposed dredging and disposal works. Therefore, no likely significant effects are foreseen on the conservation objectives of the SPAs and SACs examined.

Therefore, it is therefore concluded that a Stage 2 Appropriate Assessment is not required.



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## **APPENDIX I: BIRD ZONE OF INFLUENCE RATIONALE**

Data on foraging movements of a number of seabird species has increased over the years mainly due to technological data capture systems such as satellite and other tracking technologies (e.g. Langston et al. 2013, Wakefield et al. 2015, 2017, Thaxter et al. 2014, 2018, Cleasby et al. 2015, 2020, Bogdanova et al. 2017, Carter et al. 2016, EPA et al. 2016, Votier et al. 2017). Available information on foraging areas used by species from particular colonies is still limited. Woodward et al. (2019) have reported on representative breeding season foraging ranges for a range of species.

Table IV-1 provides indicative foraging ranges (mean maximum) travelled for a range of seabird species from a breeding colony to a foraging area, which have been used to identify relevant sites on the basis that related Special Conservation Interests (SCIs) could interact with the Licence Area during site investigation activities. The mean maximum foraging range values are used to address potential interaction with relevant SPAs; however bird density will not be continuous throughout this range. Other ways of representing foraging ranges (e.g. the mean, or percentage foraging area derived from kernel analyses) may therefore provide more useful information, where available.

Whilst applying mean maximum foraging radius would encompass the majority of a population's home-range area, the overall size of the predicted foraging areas around the colony would potentially make it too large to be a useful management tool, without further refinement using habitat, specie-specific foraging behaviour (i.e. deep diving or hovering/skimming low on water) and bathymetric data (Soanes et al. 2016). Similarly, the assumption that seabirds are uniformly distributed out to some threshold distance from their colonies, such as their putative maximum foraging range, is unrealistic. Seabird density declines with distance from the colony with density-dependent competition, coastal morphology and habitat preferences (Wakefield et al. 2017), for example oceanographic features at which seabirds preferentially forage including shelf-edge fronts, upwelling and tidal-mixing fronts, off-shore banks and internal waves, regions of stratification, and topographically complex coastal areas subject to strong tidal flow (Cox et al. 2018), resulting in highly non-uniform distributions. While Critchley et al. (2018) used a distance-weighted foraging radius approach to project distributions at sea for a wide range of seabird species during the breeding season, the authors recognised the limitations of not considering environmental variables that contribute to such non-uniform distributions noted above.

The selection of all sites outlined in Section 4 within the mean maximum foraging range of the Licence Area is a useful but simplistic approach to identifying relevant sites. The approach taken here has been to review the initial selection of sites on this basis and use expert judgement to exclude those for which an interaction would be unrealistic. For example, sites where Fulmar is identified as a Qualifying Interest on the far north and west of Ireland as Fulmar's are highly pelagic seabirds and are highly unlikely to move large distances over land which could bring them to within the Licence Area. The potential mean maximum foraging range for this species has therefore been applied across the marine area, including where birds could move around headlands.

To aid in the selection process in identifying the mean maximum foraging ranges for the relevant SPAs within the zone of influence of the Licence Area and the investigation activities measurements were taken across landward distance, seaward distance and some measured across headlands where there



were large areas of land that could be covered. This process was used to ensure all distance measurements and foraging ranges were considered in the assessment and screening process for the seabird ranges that were identified from Woodward et al., 2019).

Table 0-1 Indicative breeding season foraging ranges (Woodward et al, 2019)

Indicative breeding season foraging ranges				
Species	Mean maximum¹ (km ± SD)	Confidence Level <sup>2</sup>		
Eider	21.5	Poor		
Red-throated diver	9	Low		
Fulmar	542.3 ± 657.9	Good		
Manx shearwater	1,346.8 ±,1,018.7	Moderate		
European storm petrel	336	Poor		
Leach's storm petrel	n/a	Moderate		
Gannet	315.2 ± 194.2	Highest		
Cormorant	25.6 ± 8.3	Moderate		
Shag	13.2 ± 10.5	Highest		
Arctic skua	n/a	Poor		
Great skua	443.3 ± 487.9	Uncertain		
Black-headed gull	18.5	Uncertain		
Common gull	50	Poor		
Mediterranean gull	20	Uncertain		
Herring gull	58.8 ± 26.8	Good		
Lesser black-backed gull	127 ± 109	Highest		
Kittiwake	156.1 ± 144.5	Good		
Sandwich tern	34.3 ± 23.2	Moderate		
Roseate tern	12.6 ± 10.6	Moderate		
Common tern	18.0 ± 8.9	Good		
Arctic tern	25.7 ± 14.8	Good		
Little tern	5	Moderate		
Guillemot	73.2 ± 80.5	Highest		
Razorbill	88.7 ± 75.9	Good		
Puffin	137.1 ± 128.3	Good		

<sup>&</sup>lt;sup>1</sup>The maximum range reported in each study averaged across studies.

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<sup>&</sup>lt;sup>2</sup> Confidence levels were assigned as follows: highest (based on >5 direct studies, graphs and standard deviation suggest relatively low variability between sites and hence higher confidence); good (based on >5 direct studies; graphs and standard deviation show wider variability between sites, hence lower confidence); moderate (between 2-5 direct studies); low (indirect measures or only one direct tracking study); uncertain (survey-based estimates); poor (few survey estimates or speculative data available).



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