SCREENING FOR APPROPRIATE ASSESSMENT

FS007358 Statkraft North Irish Sea Array (NISA) Site Investigations for Export Cable Route

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1 INTRODUCTION

1.1 Project Overview

North Irish Sea Array Windfarm Limited (NISA), a wholly owned subsidiary of Statkraft Ireland (Ltd), (Statkraft) has submitted a foreshore licence application to carry out site investigation works (hereinafter referred to as “the proposed works”) off the coasts of Co. Dublin and Co. Meath.

Statkraft is currently investigating the feasibility of developing the NISA offshore windfarm located off the coasts of Co. Dublin, Co. Meath and Co. Louth. The site investigations are necessary to establish the optimum design and location of the export cable(s) between the array site and the landfall, as well as to determine an appropriate landfall location. Three potential cable route and landfall options will be investigated in order to select a preferred option. The site investigation activities will include geophysical, geotechnical, ecological and archaeological surveys.

The NISA project was granted “relevant status” under a transitional protocol published in the Marine Planning and Development Management Bill in 2020, now the Maritime Area Planning Bill. The aim of this transitional protocol was to enable certain projects, which were sufficiently advanced under the Foreshore Act and/or had an agreed grid connection to move from the Foreshore Act into the new marine consent system under the Maritime Area Planning Bill. As a “relevant project”, NISA aims to apply for Maritime Area Consent (MAC) following enactment of the Bill. To feed into the MAC process and the subsequent planning application, NISA intends to undertake site investigations as soon as possible following grant of a foreshore licence.

Statkraft has previously submitted a foreshore licence application (FS007031) for site investigations on the array site, which is outside of the scope of the present document.

1.2 Application Documents

The following application documents were reviewed as part of this assessment:

- Investigative Foreshore Licence Application Form
- Foreshore Licence Map
- Natura Impact Statement
- Prescribed Bodies Submissions
- Consolidated Public Submissions
- Marine Advisor (Engineering) Submission
- Marine Advisor (Ecology) Submission
- Response to Prescribed Bodies
- Response to Public Submissions
- Schedule of Works
- EIA Pre-screening

1.3 Relevant Legislation

Under Article 6(3) of the EU Habitats Directive (92/43/EEC) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), project proponents are required to provide sufficient information to enable a designated public authority to undertake a Screening for Appropriate Assessment (AA) to determine whether or not the proposed works (either alone or in-combination with other projects) is likely to have significant effects on the conservation objectives of designated Natura 2000 (or European)

sites[1]. Where significant effects of the project cannot be screened out, the public authority can request the project proponent to submit a Natura Impact Statement (NIS) to inform the AA for the project.

The European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), outlines the requirements for Screening for AA under Regulation 42(1) and 42(2), as follows:

- 42. (1) A screening for Appropriate Assessment of a plan or project for which an application for consent is received, or which a public authority wishes to undertake or adopt, and which is not directly connected with or necessary to the management of the site as a European Site, shall be carried out by the public authority to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if that plan or project, individually or in combination with other plans or projects is likely to have a significant effect on the European site.
- 42. (2) A public authority shall carry out a screening for Appropriate Assessment under paragraph (1) before consent for a plan or project is given, or a decision to undertake or adopt a plan or project is taken.

As defined in the government's guidance:

"Screening for appropriate assessment is intended to be an initial examination which must be carried out by the planning authority or An Bord Pleanála as the competent authority. If significant effects cannot be excluded based on objective information, without extensive investigation or the application of mitigation, a project should be considered to have a likely significant effect and appropriate assessment should be carried out. This is a relatively light trigger and must be based on the precautionary principle."[2]

[1] In Ireland, designated European sites include Special Areas of Conservation (SACs), designated due to their significant ecological importance for species and habitats protected under Annexes I and II respectively of the Habitats Directive, and Special Protected Areas (SPAs), designated for the protection of bird species protected under Annex I of the EU Birds Directive (Council Directive 2009/409/EEC).

[2] Office of the Planning Regulator (2021) *Appropriate Assessment Screening for Development Management.*

2 TECHNICAL REVIEW METHODOLOGY

As described in **Section 1.3**, the relevant legislation requires that project proponents provide sufficient information to enable a designated public authority to undertake a Screening for Appropriate Assessment (AA) to determine whether or not the proposed works (either alone or in-combination with other projects) is likely to have significant effects on the conservation objectives of designated European site(s).

It is noted that the project proponent submitted a Stage One Screening for AA (included in the Natura Impact Statement) and a Natura Impact Statement (NIS) in respect of the proposed works. The information pertaining to Stage 2 Appropriate Assessment (Chapter 6 of the NIS) is outside of the scope of this Screening for AA and has not been considered in this technical review by RPS.

The documentation submitted by the applicant was reviewed to assess whether it includes the following:

- Robust scientific information and analysis including the reasoning and justifications for the conclusion.
- Compliance with the tests and standards of AA as presented in European and national guidance.
- The assessment is carried out on the entirety of information submitted as part of consent application.
- A robust scientific assessment on the likelihood of significant effects.

This technical review and Screening for AA has been undertaken with regard to the appropriate legislation, guidance, and departmental circulars.

3 SCREENING FOR APPROPRIATE ASSESSMENT

3.1 Management of European Sites

The proposed site investigation works are not directly connected with or necessary to the management of any European site.

3.2 Description of the proposed project and local site characteristics

Table 3-1 provides a summary description of the project, site characteristics and details of consultation with prescribed bodies. It is considered that adequate project detail has been provided by the applicant.

Table 3-1 Description of the project/proposal and local site characteristics

Description of the project/proposal and local site characteristics:	
a. File Reference No:	FS007358
b. Brief description of the project or plan:	The site investigations will comprise the following elements: • Hydrographical and geophysical surveys, including: multibeam echosounder, side-scan sonar, magnetometer, sub-bottom profiling, higher energy sub-surface acoustic sources. • Geotechnical surveys, including: downhole sampling (total of six sampling boreholes to 40m at each landfall for cable landfall assessment, and possibility of sampling boreholes along export cable route). The final number and location of site investigation points may be informed by the geophysical survey results or existing information; Cone penetration tests (six tests at each landfall and 70 seabed points, spacing interval to be determined; seabed sampling including up to 70 vibrocore samples. • Ecological surveys, including: subtidal benthic survey (including drop down video/ROV inspection and up to 70 grab samples) and intertidal habitat walkover survey of the proposed landfall locations for biotope mapping, marine mammal acoustic monitoring using continuous porpoise detectors (CPODs, and possibly SoundTrap hydrophones) deployed on the seabed, the locations of which will be dependent on the outcomes of the archaeological survey. Also included in the proposed site investigation programme are bird, fisheries, underwater archaeological survey and marine mammal surveys, however, these do not require a foreshore licence and are therefore not considered within this Screening for AA Technical Review.
c. Brief description of site characteristics:	The foreshore licence application area (FLAA) is an irregular polygon with a total area of 106.2 km^2. It is located off the coasts of Co. Meath and Co. Dublin, the nearest towns being Skerries and Balbriggan. The FLAA extends out from the high-water mark to approximately 16km offshore to the array site, with depths between 0-43m. The entire site investigation area is located within 12nm of the coast and therefore within the limit of the foreshore. According to EMODnet (2019), the sediments underlying the application area comprise predominantly sand sediment, sandy mud and occasional rock, and are exposed to strong tidal streams. This indicates the potential presence of habitats listed in Annex I of the Habitats Directive, including biogenic and bedrock reefs. Data accessed through the Marine Institute's web portal 'Ireland's Marine Atlas' revealed that commercial dredge, pot and net fishing occurs within different parts of the FLAA as well as in the surrounding waters. Designated shellfish waters (Balbriggan Shellfish Waters) overlap with the FLAA. The FLAA overlaps with the nursery and spawning grounds of a number of commercial species of fish, including herring, whiting, mackerel, haddock and cod. In addition, the entire FLAA is included in the range of wild Atlantic salmon. Automatic Identification System (AIS) data from the Department of Transport, Tourism and Sport (DTTAS, 2018) shows that most traffic in the Irish Sea is north-south oriented. Traffic within the FLAA is of relatively low density, however there is heavier vessel traffic observed at nearby ports and harbours (Drogheda, Skerries and Malahide).

Description of the project/proposal and local site characteristics:	
	Existing subsea infrastructure within the FLAA includes the Geo-Eirgrid fibre optic submarine telecommunications cable system. Three confirmed shipwrecks (according to the INFOMAR database) are located within the FLAA. Rockabill SPA and Rockabill to Dalkey Island SAC overlap with the FLAA.
d. Relevant prescribed bodies consulted: e.g. DHLGH (NPWS), EPA, OPW	• Inland Fisheries Ireland • Marine Institute • Department of Housing, Local Government and Heritage (DHLGH) – Underwater Archaeology Unit (UAU) and National Parks and Wildlife Service (NPWS) • Department of Agriculture, Food and the Marine • Sea Fisheries Protection Authority • Marine Survey Office • Louth County Council
e. Consultation submissions – prescribed bodies	<u>Inland Fisheries Ireland</u> IFI raised a number of concerns regarding the "in combination effects" with the Braymore Point offshore wind farm, if works take place concurrently. In addition, the IFI raised concerns that the local fish population will be subjected to on-going noise disturbance and is likely to be impacted by the survey works, including disturbance to migratory fish species. The IFI stated the following recommendations: engaging with Braymore Point on the mitigation measures is "welcomed with every effort made to reduce the impact on the local fish population". Mitigation measures in regard to the timing of works and levels and duration of noise generation should be agreed with the foreshore division of DHLGH and form part of any foreshore licence and should cover use of soft-start and ramp-up procedures for sound generating surveys, bringing the duration of noise generating surveys to a minimum necessary and agree the timing of works so that it does not interfere with migration times or with any scientific studies currently taking place in the FLAA. The local IFI office should be informed five days before surveys commence. The IFI raised some further concerns regarding impacts on commercial and recreational fishing, however these are not considered relevant to this Screening for AA and are considered in full in RPS's Screening for EIA Technical Review. <u>Marine Institute</u> The Marine Institute recommended that the DHLGH should identify any similar geophysical surveys so that they do not coincide with the present proposed survey. The Marine Institute is satisfied that the proposed works will not significantly impact the marine environment and other legitimate users in the FLAA. The Marine Institute listed a number of conditions to be attached to any licence. These are discussed in detail in RPS's Screening for EIA Technical Review report. <u>Department of Housing, Government and Heritage – Underwater Archaeology Unit</u> The UAU's recommendations are discussed in full in RPS's Screening for EIA Technical Review report, however they are not considered relevant for the purposes of AA screening. <u>Department of Housing, Government and Heritage – National Parks and Wildlife Service</u> NPWS stated they agree with the applicant's conclusion that the proposed works are unlikely to pose a significant risk to nature conservation. In addition, the NPWS made a number of recommendations with regard to the mitigation measures set out in the NIS. These are considered out of the scope of this Screening for AA review but will be reviewed in the RPS' NIS Technical Review. <u>Sea Fisheries Protection Authority</u> SFPA raised a number of concerns relating to potential overlap with commercial fishing grounds, however these are not considered relevant for the purposes of AA screening and are discussed in full in RPS's Screening for EIA Technical Review.

Description of the project/proposal and local site characteristics:	
	Marine Survey Office The Marine Survey Office's (MSO) recommendations pertain to navigational safety perspective and are not relevant to Screening for AA. The MSO's submission is discussed in full in RPS's Screening for EIA Technical Review report. Louth County Council Louth County Council stated they have no objection to the proposed works. The public consultation and engagement proposals should be implemented in a timely manner. Louth County Council noted that Clogherhead SAC was not referenced in the appropriate assessment as it is located outside the 15km radius. It is considered that impacts to Clogherhead SAC are unlikely, however, should investigative works be proposed in the future that are closer to the Louth coastline, the effects on this SAC should be considered in more detail. The current Screening for AA has been carried out based on the specific details provided in the foreshore licence application. Future site investigations in different locations would need to be considered in another foreshore licence application.
f. Consultation submission – public submissions	Six public submissions were made, which include four submissions from commercial fishers as well as one submission by the Irish Whale and Dolphin Group (IWDG) and one joint submission by the National Inshore Fishermen's Association (NIFA) and the National Inshore Fishermen's Organisation (NIFO). The submission from the IWDG is summarised below. The submissions from commercial fishers as well as from the NIFA/NIFO are not considered relevant for the purposes of AA screening. They are, however, addressed in full in RPS's Screening for EIA Technical Review report. IWDG submission The IDWG stated that the mitigation measures proposed are not appropriate and do not offer protection for Annex IV species, as they do not employ a shutdown under any circumstances. In addition, the proposed mitigation measures do not offer mitigation under poor visibility conditions. The IWDG suggests that a detailed mitigation plan be submitted to clarify how mitigation measures are to be implemented and operate. Operations of geophysical equipment must use an appropriate sound level during soft start/ramp up procedures in order to ensure the soft start is audible and in line with industry standards for seismic operations (report 579 IAGC/IOGP). A mitigation plan should be developed that also addresses current deficiencies in the NPWS guidelines, in particular with regard to the absence of guidelines for acoustic monitoring. As many of IWDG's comments relate to mitigation, these will be revisited in RPS' NIS Technical Review.

3.3 Identification of relevant European sites

The applicant stated in the NIS document (Chapter 3) that the proposed works are of a temporary nature and expected to have only localised effects. While the applicant acknowledged that there is no set recommended distance for which European sites are considered as being relevant, all European sites within 15km were examined as a starting point, as has become common practice in screening projects for AA in Ireland. While certain species of seabird can forage considerable distances from their colonies, given the limited size, scale and duration of the proposed site investigations, it is considered unlikely that there is a reasonable impact pathway to species from SPAs beyond 15km, and therefore it is considered that in this case, an appropriate level of precaution has been observed.

In addition, the applicant considered European sites further than 15km from the FLAA boundary which have Annex II qualifying features with the potential to be within the survey area, i.e. mobile aquatic species. The applicant listed four European sites within 100km of the FLAA boundaries in Section 5.2 of the applicant's AA Screening. No additional sites for migratory fish species were found within 50km of the FLAA boundary.

In this instance, given the nature and scale of the project, RPS considers that the level of precaution applied in identifying sites is appropriate.

All sites identified by the applicant using the search areas described above are provided in **Table 3-2** below. A weblink to a site's conservation objectives is provided for each site. The assessment of connectivity in

Table 3-2 has been carried out by RPS, and for a small number of sites, is more precautionary than the applicant's connectivity assessment.

Table 3-2: Identification of relevant European sites using Source-Pathway-Receptor model and compilation of information on Qualifying Interests (QI) and Special Conservation Interests (SCI) and conservation objectives

European Site (code)	List of Qualifying Interest / Special Conservation Interest	Seasonality (for birds only)	Distance and direction from proposed project (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
Rockabill SPA 004014	Purple sandpiper (*Calidris maritima*) Roseate tern (*Sterna dougallii*) Common tern (*Sterna hirundo*) Arctic tern (*Sterna paradisaea*) Rockabill SPA Conservation Objectives	Wintering Breeding Breeding Breeding	Within	Yes. Survey area overlaps with the SPA.	Yes
Rockabill to Dalkey Island SAC 003000	Reefs Harbour porpoise (*Phocoena phocoena*) Rockabill to Dalkey Island Conservation Objectives	N/A	Within	Yes. Survey area overlaps with the SAC.	Yes
Skerries Islands SPA 004122	Cormorant (*Phalacrocorax carbo*) Shag (*Phalacrocorax aristotelis*) Light-bellied brent goose (*Branta bernicla hrota*) Purple sandpiper (*Calidris maritima)* Turnstone (*Arenaria interpres*) Herring gull (*Larus argentatus*) Skerries Islands SPA Conservation Objectives	Wintering/ Breeding Breeding Wintering Wintering Wintering Breeding	1.4	Yes. Potential connectivity to the project as seabirds have the potential to forage or transit through the survey area. Potential also for disturbance to breeding birds.	Yes
River Nanny Estuary and Shore SPA 004158	Oystercatcher (*Haematopus ostralegus*) Ringed plover (*Charadrius hiaticula*) Golden plover (*Pluvialis apricaria*) Knot (*Calidris canutus)* Sanderling (*Calidris alba*) Herring gull (*Larus argentatus*) Wetlands River Nanny Estuary and Shore SPA Conservation Objectives	Wintering Wintering Wintering Wintering Wintering Wintering	1.8 W/NW	Yes. Potential connectivity to the project. Although waders from the site are unlikely to overlap with the project area, there is potential for herring gull to forage out to sea within the survey area.	Yes
Rogerstown Estuary SPA 004015	Greylag goose (*Anser anser*) Light bellied brent goose (*Branta bernicla hrota*) Shelduck (*Tadorna tadorna*) Shoveler (*Anas clypeata*) Oystercatcher (*Haematopus ostralegus)*	Wintering Wintering Wintering Wintering Wintering	3.3 S	No. No overlap between the survey area and the SPA. Wader, duck and geese species are unlikely to forage out to sea.	No

European Site (code)	List of Qualifying Interest / Special Conservation Interest	Seasonality (for birds only)	Distance and direction from proposed project (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
	Ringed plover (*Charadrius hiaticula*)	Wintering			
	Grey plover (*Pluvialis squatarola*)	Wintering			
	Knot (*Calidris canutus*)	Wintering			
	Dunlin (*Calidris alpina alpine*)	Wintering			
	Black-tailed godwit (*Limosa limosa)*	Wintering			
	Redshank (*Tringa totanus*)	Wintering			
	Wetlands				
	Rogerstown Estuary SPA Conservation Objectives				
Rogerstown Estuary SAC 00208	Estuaries	N/A	4.0 S	No. No overlap between the survey area and the SAC.	No
	Mudflats and sandflats not covered by seawater at low tide				
	Salicornia and other annuals colonising mud and sand				
	Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*)				
	Mediterranean salt meadows (*Juncetalia maritimi*)				
	Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes)				
	Fixed coastal dunes with herbaceous vegetation - grey dunes*priority habitat				
	Rogerstown Estuary SAC Conservation Objectives				
Lambay Island SPA 004069	Fulmar (*Fulmarus glacialis*)	Breeding	5.5 S	Yes. Potential connectivity to the project as seabirds have the potential to forage or transit through the survey area.	Yes
	Cormorant (*Phalacrocorax carbo*)	Wintering/ Breeding			
	Shag (*Phalacrocorax aristotelis*)	Breeding			
	Greylag goose (*Anser anser*)	Wintering			
	Lesser black-backed gull (*Larus fuscus*)	Breeding			
	Herring gull (*Larus argentatus*)	Breeding			
	Kittiwake (*Rissa tridactyla*)	Breeding			
	Guillemot (*Uria aalge*)	Breeding			
	Razorbill (*Alca torda*)	Breeding			
	Puffin (*Fratercula arctica*)	Breeding			
	Lambay Island SPA Conservation Objectives				
Lambay Island SAC 000204	Reefs	N/A	5.9 S	Yes. Potential connectivity to the project as harbour and grey seals are mobile species with potential to travel	Yes
	Vegetated sea cliffs of the Atlantic and Baltic coasts				
	Grey seal (*Halichoerus grypus*)				
	Harbour seal (*Phoca vitulina*)				

European Site (code)	List of Qualifying Interest / Special Conservation Interest	Seasonality (for birds only)	Distance and direction from proposed project (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
	Lambay Island SAC Conservation Objectives			to/forage within the survey area. No overlap with habitat QI at this site.	
Boyne Coast and Estuary SAC 001957	Estuaries Mudflats and sandflats not covered by seawater at low tide *Salicornia* and other annuals colonizing mud and sand Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*) Mediterranean salt meadows (*Juncetalia maritimi*) Embryonic shifting dunes Shifting dunes along the shoreline with *Ammophila arenaria* ('white dunes') Fixed coastal dunes with herbaceous vegetation – grey dunes* priority habitat. Boyne Coast and Estuary SAC Conservation Objectives	N/A	7.6 NW	No. No overlap between the survey area and the SAC.	No
Malahide Estuary SAC 000205	Mudflats and sandflats not covered by seawater at low tide *Salicornia* and other annuals colonising mud and sand Spartina swards (*Spartinion maritimae*) Atlantic salt meadows (*Glauco- Puccinellietalia maritimae*) Mediterranean salt meadows (*Juncetalia maritime)* Shifting dunes along the shoreline with *Ammophila arenaria* (white dunes) Fixed coastal dunes with herbaceous vegetation-grey dunes* priority habitat. Malahide Estuary SAC Conservation Objectives	N/A	8.6 S	No. No overlap between the survey area and the SAC.	No
Malahide Estuary SPA 004025	Great crested grebe (*Podiceps cristatus*) Light bellied brent goose (*Branta bernicla hrota)* Shelduck (*Tadorna tadorna*) Pintail (*Anas acuta*)	Wintering Wintering Wintering Wintering	9.3 S	Yes. No overlap between the survey area and the SPA. Wader, duck and geese species are unlikely to forage out to sea. Sea duck	Yes

European Site (code)	List of Qualifying Interest / Special Conservation Interest	Seasonality (for birds only)	Distance and direction from proposed project (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
	Goldeneye (*Bucephala clangula*)	Wintering		species (red-breasted merganser and goldeneye) do have the potential to forage out to sea.	
	Red-breasted merganser (*Mergus serrator*)	Wintering			
	Oystercatcher (*Haematopus ostralegus*)	Wintering			
	Golden plover (*Pluvialis apricaria)*	Wintering			
	Grey plover (*Pluvialis squatarola*)	Wintering			
	Knot (*Calidris canutus*)	Wintering			
	Dunlin (*Calidris alpina alpine*)	Wintering			
	Black-tailed godwit (*Limosa limosa*)	Wintering			
	Bar-tailed godwit (*Limosa lapponica*)	Wintering			
	Redshank (*Tringa totanus*)	Wintering			
	Wetlands				
	Malahide Estuary SPA Conservation Objectives				
Boyne Estuary SPA 004080	Shelduck (*Tadorna tadorna)*	Wintering	9.5 NW	No. No overlap between the survey area and the SPA. Wader, species are unlikely to forage out to sea. Little tern (*S. albifrons)* maximum foraging distance recorded is 5km.	No
	Oystercatcher (*Haematopus ostralegus)*	Wintering			
	Golden plover (*Pluvialis apricaria*)	Wintering			
	Grey plover (*Pluvialis squatarola*)	Wintering			
	Lapwing (*Vanellus vanellus*)	Wintering			
	Knot (*Calidris canutus*)	Wintering			
	Sanderling (*Calidris alba*)	Wintering			
	Black-tailed godwit (*Limosa limosa*)	Wintering			
	Redshank (*Tringa totanus*)	Wintering			
	Turnstone (*Arenaria interpres*)	Wintering			
	Little tern (*Sterna albifrons*)	Breeding			
	Wetlands				
	Boyne Estuary SPA Conservation Objectives				
Baldoyle Bay SAC 000199	Mudflats and sandflats not covered by seawater at low tide	N/A	14.6 S	No. No overlap between the survey area and the SAC.	No
	Salicornia and other annuals colonizing mud and sand				
	Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)				
	Mediterranean salt meadows (*Juncetalia maritimi*)				
	Baldoyle Bay SAC Conservation Objectives				
Baldoyle Bay SPA 004016	Light bellied brent goose (*Branta bernicla hrota)*	Wintering	14.6 S	No. No overlap between the survey area and the SPA. Wader, duck and geese species are	No
	Shelduck (*Tadorna tadorna*)	Wintering			
	Ringed plover (*Charadrius hiaticula*)	Wintering			
	Golden plover (*Pluvialis apricaria*)	Wintering			

European Site (code)	List of Qualifying Interest / Special Conservation Interest	Seasonality (for birds only)	Distance and direction from proposed project (km)	Connections (Source-Pathway-Receptor)	Considered further in screening Y/N
	Grey plover (*Pluvialis squatarola*) Bar-tailed godwit (*Limosa lapponica*) Wetlands Baldoyle Bay SPA Conservation Objectives	Wintering Wintering		unlikely to forage out to sea.	
River Boyne and River Blackwater SAC 002299	River lamprey (*Lampetra fluviatilis*) Salmon (*Salmo salar*) Otter (*Lutra lutra*) Alkaline fens Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno- Padion*, *Alnion incanae*, *Salicion albae*)* priority habitat: River Boyne and River Blackwater SAC Conservation Objectives	N/A	14.7 W	Yes. Potential connectivity to project due to the anadromous nature of salmon and river lamprey. These migratory fish species may occur within the survey area. Potential for otter to occur within landfall survey area.	Yes
Ireland's Eye SPA 004117	Cormorant (*Phalacrocorax carbo*) Herring gull (*Larus argentatus)* Kittiwake (*Rissa tridactyla)* Guillemot (*Uria aalge)* Razorbill (*Alca torda*) Ireland's Eye SPA Conservation Objectives	Breeding Breeding Breeding Breeding Breeding	14.8 S	Yes. Potential connectivity to the project as seabirds from the SPA have the potential to forage or transit through the survey area.	Yes
North Anglesey Marine / Gogledd Môn Forol SAC (UK0030398)	Harbour porpoise (*Phocoena phocoena)* North Anglesey Marine SAC Conservation Objectives	N/A	42.2 E	Yes. Harbour porpoise is a mobile species with potential to travel to/forage within the survey area.	Yes
Murlough SAC (UK0016612)	Harbour seal (*Phoca vitulina*) Murlough SAC Conservation Objectives	N/A	47.0 N	Yes. Harbour seal is a mobile species with potential to travel to/forage within the survey area.	Yes
North Channel SAC (UK0030399)	Harbour porpoise (*Phocoena phocoena)* North Channel SAC Conservation Objectives	N/A	63.2 NE	Yes. Harbour porpoise is a mobile species with potential to travel to/forage within the survey area.	Yes
Strangford Lough SAC (UK0030399)	Harbour seal (*Phoca vitulina*) Strangford Lough SAC Conservation Objectives	N/A	71.9 NE	Yes. Harbour seal is a mobile species with potential to travel to/forage within the survey area.	Yes

In summary, the following 13 European sites are taken forward for assessment of likely significant effects:

- Rockabill SPA
- Rockabill to Dalkey Island SAC
- Skerries Islands SPA
- River Nanny Estuary and Shore SPA
- Lambay Island SPA
- Lambay Island SAC
- Malahide Estuary SPA
- River Boyne and River Blackwater SAC
- Ireland's Eye SPA
- North Anglesey Marine / Gogledd Môn Forol SAC
- Murlough SAC
- North Channel SAC
- Strangford Lough SAC

3.4 Assessment of Likely Significant Effects

Table 3.3: Assessment of Likely Significant Effects

Assessment of Likely Significant Effects	
(a) Identify all potential direct and indirect impacts that may have an effect on the conservation objectives of a European site, taking into account the size and scale of the project under the following headings:	
Impacts	**Possible Significance of Impacts: (duration/magnitude etc.)**
Construction phase e.g. • Vegetation clearance • Demolition • Surface water runoff from soil excavation/infill/landscaping (including borrow pits) • Dust, noise, vibration • Lighting disturbance • Impact on groundwater/dewatering • Storage of excavated/construction materials • Access to site • Pests	Not applicable as no construction phase involved in the proposed site investigation surveys.
Operational phase e.g. • Direct emission to air and water • Surface water runoff containing contaminant or sediment • Lighting disturbance • Noise/vibration • Changes to water/groundwater due to drainage or abstraction • Presence of people, vehicles and activities • Physical presence of structures (e.g. collision risks) • Potential for accidents or incidents	Chapter 4 of the NIS document outlines the following potential operational impacts of the project, and these have been further assessed here: • <u>Habitat loss/physical disturbance to benthic communities</u> Geotechnical and ecological investigations (boreholes, vibrocores, benthic grab sampling, CPTs, intertidal sampling and mooring of CPODs) are intrusive and will physically disturb benthic communities (displacement, increased suspended sediments, disturbance to foraging and predator avoidance behaviours). Sampling locations will be at least 500m apart and only very small areas of the seabed will be disturbed and sampled during these activities. Although the sampling footprint is relatively small, there is the potential for damage to benthic communities within Rockabill to Dalkey Island SAC**. This impact is carried forward to part b of this table in order to assess likely changes to European sites.**

Assessment of Likely Significant Effects	
	• Changes to underwater noise and vibration levels Sound generated by geophysical and geotechnical equipment have the potential to disturb marine mammals and some fish species. Noise and vibration levels will depend on the type of equipment used and depth at which it operates. **This impact is carried forward to part b of this table in order to assess likely effects on protected marine mammals.** • Visual disturbance: It is envisaged the project will require a variety of different vessels for the geotechnical, geophysical, ecological and metocean stages of the survey. The physical presence of additional vessels has the potential to result in temporary visual disturbance to birds present in the FLAA, including displacement from feeding and resting areas. **This impact is carried forward to part b of this table in order to assess likely effects on protected bird species**. • Overwater noise: Survey activities at landfall areas (boreholes and cone penetration tests at each landfall - geotechnical drilling rig will be mobilised onboard a jackup barge) have the potential to result in disturbance to birds. **This impact is carried forward to part b of this table in order to assess likely effects on protected bird species.** • Risk of collision: The physical presence of additional survey vessels has the potential to increase the risk of collision with marine mammals, which are QI species occurring within and near the FLAA. **This impact is carried forward to part b of this table in order to assess likely effects on protected marine mammals.** • Potential for pollution incident**:** The temporary increase in vessel activity in the FLAA increases the risk of pollution incidents. The proposed site investigations will comply with international conventions and national legislation as appropriate, and thus a pollution incident is not considered a likely impact of this project. **This impact is not carried forward to part b of this table.**
In-combination/Other	A number of foreshore licence applications were submitted to the DHLGH, which were reviewed by the applicant and are listed in Chapter 3 of the NIS document. Several applications were found overlapping and in close proximity to the FLAA, including: • three applications which overlap spatially with the FLAA: Braymore Point offshore wind farm site investigations (FS006973), Celtix Connect fibre optic cable site investigations (FS006915) and Pipiper fibre optic cable site investigations (FS006762). A licence was granted for Braymore Point in 2020; a determination is still outstanding for the other two projects. • three applications for site investigation works for offshore wind farms in the vicinity of the FLAA (approximately 4.6km to 21.5km from the FLAA), for which there may be temporal overlap with the NISA proposed works: Oriel (FS006840 - licence granted in 2019), Cooley Point (FS006852 - licence granted in 2019) and Clogherhead (FS006787 - licence granted in 2018). • the NISA offshore wind farm array site application for site investigation works (FS007031) – submitted in January 2020, awaiting determination. In addition, since submission of the application documents for the proposed works, an additional submission was made which may overlap temporally with the proposed surveys: RWE Renewables: site investigations off counties Dublin and Wicklow (FS007188). The applicant assessed the in-combination effects arising from the proposed works in combination with the abovementioned projects within the AA Screening Chapter 5. The applicant concluded that no in-combination effects

Assessment of Likely Significant Effects	
	are likely with the exception of effects on marine mammals as a result of a potential temporal overlap between Braymore Point geophysical surveys and the proposed geophysical surveys for NISA. At this stage in the assessment, however, detailed project information as well as the timing of works for the abovementioned projects is not known. In-combination effects may occur as a result of spatial and/or temporal overlap between a range of projects and project activities and the proposed works. It is therefore not possible to rule out in-combination effects at this stage in the assessment process.
(b) Describe any likely changes to the European site:	
Examples of the type of changes to give consideration to include: • Reduction or fragmentation of habitat area • Disturbance to QI species • Habitat or species fragmentation • Reduction or fragmentation in species density • Changes in key indicators of conservation status value (water or air quality etc.) • Changes to areas of sensitivity or threats to QI • Interference with the key relationships that define the structure or ecological function of the site	Table 5-1 in the applicant's AA Screening (Chapter 5) considers whether there are relevant source-pathway-receptor links between the proposed works and each European site and these links have also been assessed here in **Table 3-2** above. <u>Changes to habitats (habitat loss/physical disturbance)</u> Removal of sediment samples (boreholes, vibrocores and grab samples) have the potential to affect benthic communities through habitat loss and physical disturbance, as outlined in Part (a). Only SACs designated for Annex I habitats which are directly within the survey footprint have the potential to be affected as impacts at each sampling location will be localised and relatively small-scale. Sediment disturbed is likely to be quickly dispersed by prevailing tides. A large section of survey works along the southern cable route overlaps Rockabill to Dalkey Islands SAC, designated for the QI reefs. Removal of substrate and physical disturbance due to geotechnical and benthic sampling within Rockabill to Dalkey Island SAC may result in changes to the site through reduction of reef area and distribution, fragmentation of key communities and reduction in key species or community density The applicant notes that even though reefs only constitute 1% of the SAC, areas of the reef are located at the edge of the site investigation area and possibly within it. Likely significant effects to the reefs QI cannot be excluded, therefore Rockabill to Dalkey Islands SAC is screened in for Stage 2 Appropriate Assessment. <u>Changes to SPAs and birds (visual disturbance, over-water noise disturbance, prey availability)</u> The physical presence of survey vessels, and noise associated with the operation of survey equipment could result in disturbance to birds in the vicinity of the survey activities. Birds present on surface waters near the survey vessels could be temporarily displaced from their chosen feeding/resting location. The operation of survey equipment in the nearshore sections of the survey area and subsequent noise has the potential to disturb breeding birds. Intertidal walkover surveys have the potential to disturb wintering birds, however, the landfall locations do not overlap any wintering bird SPAs, therefore this element of disturbance is not considered further. For offshore survey elements, vessel activity in any one location will be of short duration, with vessels moving steadily along transect lines or remaining stationary at sample locations for short durations. Given existing baseline levels of vessel activity in the area from shipping and fishing, the presence of a small number of additional survey vessels is not considered significant. Displacement of foraging seabirds is likely to be temporary and there will be no barrier to movement to nearby foraging habitat. Therefore, it is concluded that there are no likely significant effects due to displacement of foraging seabirds (including sea ducks) from the proposed survey works. As a result, the following sites can be screened out: • River Nanny Estuary and Shore SPA (for foraging herring gull) • Malahide Estuary SPA

Assessment of Likely Significant Effects

Regarding disturbance to nesting/breeding birds, the applicant refers to the advice note on seabird displacement from offshore windfarm developments published by the UK's statutory nature conservation bodies (JNCC, 2017[3]). The applicant states that, according to this guidance, "the zone of influence for nesting birds is up to 2km". In fact, the JNCC advice note refers to the avoidance reactions (i.e. displacement) of seabirds to offshore windfarms and the surrounding area (or buffer), and does not refer to disturbance to breeding birds at the nest. It is therefore inappropriate to apply 2km as a threshold for disturbance to nesting seabirds in this context. However, given the nature of the surveys (temporary and limited in scale) and the existing background activity in the region, it is highly unlikely that over-water noise from the surveys will disturb nesting birds beyond this distance, and therefore it is concluded that significant effects due to disturbance to breeding/nesting birds is unlikely at the following SPAs:

- Lambay Island SPA (5.5km away)
- Ireland's Eye SPA (14.8km away)

The survey works overlap Rockabill SPA and occur within 1.4km of Skerries Islands SPA. It is considered that these sites should be investigated further for effects from over-water noise disturbance to breeding birds, and as such are screened in for Stage 2 Appropriate Assessment. Noise disturbance can lead to altered behaviour and impaired communication which may affect breeding success. It is noted that the applicant assessed these sites in more detail during their AA Screening and ultimately screened them out for noise disturbance, however, given the level of detail required to understand disturbance distances, it is considered more appropriate to assess them at Stage 2.

Of the SPAs identified as relevant by the applicant (which are in agreement with the list identified by RPS in **Table 3-2**), likely significant effects were only identified by the applicant for Rockabill SPA for effects on prey biomass availability of roseate tern. Given the relatively small scale of sediment samples to be removed (grab sample sizes are likely to vary between 0.025m^2 and 0.3m^2), considering roseate terns' ability to forage within 12.6km (mean max) of their colony[4], and particularly in the context of baseline fishing activity occurring in the area, it is highly unlikely that these site investigation surveys would significantly affect the availability of prey biomass for roseate tern. However, on a precautionary basis, this impact will be considered further during Stage 2 Appropriate Assessment.

<u>Changes to SACs designated for marine mammal species</u>

The proposed survey works overlap with designated habitat area for harbour porpoise (at Rockabill to Dalkey Island SAC), and the site may also be used by marine mammals designated as QIs at other SACs within 100km, as detailed in **Table 3-2**, namely:

- Harbour porpoise (*Phocoena phocoena*)
- Grey seal (*Halichoerus grypus*)
- Harbour seal (*Phoca vitulina*)

The likelihood of significant effects on these species is addressed below based on the impacts identified in part (a) of this table.

- Disturbance from underwater noise and vibration: Changes to underwater noise and vibration as a result of geophysical and

[3] JNCC (2017). Joint SNCB Interim Displacement Advice Note. Available at: https://hub.jncc.gov.uk/assets/9aecb87c-80c5-4cfb-9102-39f0228dcc9a Accessed on 06December 2021.

[4] Woodward, I., Thaxter, C.B, Owen, E. and Cook, A.S.C.P. 2019. Desk-based revision of seabird foraging ranges used for HRA screening. British Trust for Ornithology, BTO Research Report No. 724.

Assessment of Likely Significant Effects

geotechnical noise emissions have the potential to injure or disturb these species. As such, and in the absence of mitigation measures, there is the possibility for significant effects on marine mammals as a result of underwater noise and disturbance from the proposed survey works.

- Risk of collision: The applicant identified a likely significant effect due to collision injury within the screening assessment and notes in Chapter 4 of the NIS document that as survey vessels tend to be stationary or travelling slowly that it is likely that marine mammals will be able to avoid collision. As a precautionary measure, and in the absence of mitigation measures, however, this risk cannot be excluded at this stage.
- Disturbance from overwater noise: overwater noise could disturb grey and harbour seals at breeding, moulting and resting sites. The nearest sites are located at Lambay Island SAC, approximately 5.5km from the proposed works. Given this distance, the nature of the surveys (temporary and limited in scale) and the existing background activity in the region, it is highly unlikely that over-water noise from the surveys will lead to significant disturbance effects on grey and harbour seal.

All relevant marine mammal SACs (identified in **Table 3-2**) are screened in for further consideration at Stage 2 Appropriate Assessment.

Changes to SAC designated for otter

With regards to likely significant effects on otter designated at the River Boyne and River Blackwater SAC, it is unlikely that individuals from this site will commute to the landfall survey area approximately 15km downstream and along the coast, given that suitable habitat is available within the Boyne Estuary. The applicant has screened otter in, therefore, as a precautionary measure, likely significant effects to otter at this SAC will be considered at Stage 2 Appropriate Assessment.

Changes to SAC designated for migratory fish species

River Boyne and River Blackwater SAC is located 14.7km from the boundaries of the proposed works and salmon and river lamprey, both anadromous species, are QI species in this SAC. The applicant noted in the screening assessment that salmon is not protected under Annex II when not in freshwater and states that no significant effects are anticipated to these species as they are not sensitive to sounds. There is a paucity of species-specific knowledge with regard to the effects of anthropogenic noise on fish, however it is known that fish, including salmon, are sensitive to particle motion which is integral to hearing in all fish[5]. Survey activities which emit underwater noise may result in changes to sound pressure and particle motion waves that propagate through water. Effects can include masking of biologically important sounds, hearing impairment, stress responses and behavioural changes[6]. In view of the observations of the IFI (see **Table 3-1**) and due to the complexity of assessing underwater noise impacts, as a precautionary measure, likely significant effects to migratory fish species at River Boyne and River Blackwater SAC will be considered in more detail during the Stage 2 Appropriate Assessment.

(c) Are 'mitigation' measures necessary to reach a conclusion that likely significant effects can be ruled out at screening?	
Yes / No	For European sites where likely significant effects have been ruled out at Stage 1 Screening (River Nanny Estuary and Shore SPA, Malahide Estuary

[5] Hawkins and Popper (2017) A sound approach to assessing the impact of underwater noise on marine fishes and invertebrates. *ICES Journal of Marine Science* 74 (3) p. 635-651.

[6] Popper and Hawkins (2019) An overview of fish bioacoustics and the impacts of anthropogenic sounds on fishes. *Journal of Fish Biology* 94 (5) p. 692-713

Assessment of Likely Significant Effects	
	SPA, Lambay Island SPA and Ireland's Eye SPA), no mitigation measures were replied upon to reach this conclusion. For all remaining sites, further assessment is required and mitigation measures may be required to rule out likely significant effects. An NIS has been prepared by the applicant.

3.5 Screening Determination

Screening Determination Statement		
The assessment of significance of effects: Describe how the proposed development (alone or in-combination) is/is **not likely** to have **significant** effects on European site(s) in view of its conservation objectives.		
On the basis of the information supplied by the applicant, and information publicly available on the NPWS website, and having regard to: • The nature and scale of the proposed project, and • The direct connections with regard to the Source-Pathway-receptor model, and • The potential for, and absence of detail allowing an assessment of in-combination effects, It is concluded that the proposed development, individually or in-combination with other plans or projects, is likely to have a significant effect on the following European sites, in view of the sites' conservation objectives: • Rockabill SPA • Rockabill to Dalkey Island SAC • Skerries Islands SPA • Lambay Island SAC • River Boyne and River Blackwater SAC • North Anglesey Marine / Gogledd Môn Forol SAC • Murlough SAC • North Channel SAC • Strangford Lough SAC An appropriate assessment is, therefore, required to determine if adverse effects on site integrity can be excluded in view of the conservation objectives of the above-listed sites. An NIS has been provided by the applicant and will be reviewed in the NIS Technical Review and AA Report.		
Conclusion:		
	Tick as appropriate:	**Recommendation:**
(i) It is clear that there is **no likelihood** of significant effects on a European site.		The proposal can be screened out: Appropriate assessment not required.
(ii) It is **uncertain** whether the proposal will have a significant effect on a European site.		☐ Request further information to complete screening ☐ Request NIS ☐ Refuse planning permission
(iii) **Significant effects** are likely.	☑	☑ Request NIS **(Note that an NIS has been provided)** ☐ Refuse planning permission