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STATUTORY ENVIRONMENTAL ASSESSMENT APPROPRIATE ASSESSMENT SCREENING DETERMINATION FOR VERMILLION INSPECTION/MAINTENANCE OF PIPELINE AND SUBSEA STRUCTURES 2021

STATUTORY ENVIRONMENTAL ASSESSMENT VERMILLION INSPECTION/MAINTENANCE OF PIPELINE AND SUBSEA STRUCTURES 2021

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CONTENTS

EXECUTIVE SUMMARY	I
1. INTRODUCTION	1
1.1 Documents Reviewed	1
1.2 Project Background	1
2. TERMS OF REFERENCE	2
2.1 Legislative context	2
2.2 Relevant guidance	2
2.3 Consultation	2
3. REVIEW OF APPLICANT AA SCREENING REPORT	4
3.1 Determining whether a Project should be subject to an Appropriate Assessment	4
3.2 Description of the Project	4
3.3 Identification of relevant European sites and species	7
3.4 Screening of Likely Significant Effects on Natura sites and adverse effects on Annex IV species.	25
3.5 Screening Determination	27
4. STAGE 2 APPROPRIATE ASSESSMENT	29
4.1 Natura Impact Statements	29
4.2 Summary of Additional Information Required to complete Appropriate Assessment	32

EXECUTIVE SUMMARY

Ramboll UK Limited (herein referred to as Ramboll) was commissioned by the Department of the Environment, Climate and Communications (herein referred to as DECC) to provide assistance with regards to the statutory assessment of an application by Vermillion Exploration & Production Ireland Ltd (referred to herein as the applicant) for an Appropriate Assessment screening determination.

The applicant has submitted an application for consent to carry out an inspection of an offshore pipeline and subsea structures and associated repair / maintenance in the Corrib Gas Field using geophysical and visual survey techniques of the bulk of subsea marine infrastructure between Corrib Field and the landfall at Glengad. The proposed work scope comprises two main components:

- Offshore pipeline and subsea structure inspection and associated repair/maintenance work from the construction/ROV vessel *Edda Sun*. This vessel will be responsible for the survey and maintenance works covering the area of the Corrib offshore field assets as well as seabed infrastructure as far inshore as Broadhaven Bay. Some limited maintenance works will be undertaken where necessary to ensure pipeline integrity and stability on the seabed. This may include localised areas of seabed sediment dredging (using a mini-dredge tool) as well as the placement of rock filter bags onto the pipeline; and
- Nearshore pipeline inspection using the survey vessel *Leah-C*. This vessel is responsible for the survey covering the area primarily within Broadhaven Bay as far as the inshore limit of safe navigation.

The competent authority (DECC) is required to consider the potential effects of such activities on the integrity of Natura 2000 sites, with respect to Article 6(3) of Council Directive 92/43/EEC which is transposed into Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended (the Birds and Natural Habitats Regulations).

This report provides a review of the Natura Impact Statement and a review of information supplied by the applicant in regard to the assessment of impacts on Annex IV species contained within the EIA Screening and Environmental Risk Assessment for Annex IV species. Both the Natura Impact Statement and the EIA Screening and Environmental Risk Assessment for Annex IV species were prepared by RSK on behalf of the applicant and submitted with their application

Public consultation on the application has been undertaken by DECC. No submissions were received from the public.

Ramboll confirms that sufficient information is provided by the applicant to support the conclusion that likely significant effects on European Sites cannot be excluded, having had regard to the potential connectivity of the project with European sites, relevant conservation objectives and the potential for in combination effects with other plans or projects. An Appropriate Assessment is therefore required. Additional information is requested to be included in the Nature Impact Statement (NIS) submitted by the applicant as detailed in section 4.2 of this report.

Outcome of Screening Report Assessment	Overall Screening Opinion / AA Required?
No Likely Significant Effects on Natura Sites identified, or project is directly connected with or necessary to the nature conservation management of the Natura site.	No likely significant effects on European Sites have been identified, having had regard to the potential connectivity with sites, relevant conservation objectives and the potential for in combination effects and will not cause significant disturbance to Annex IV species described. Appropriate Assessment is not required.

STATUTORY ENVIRONMENTAL ASSESSMENT

Likely or Potential Likely Significant Effects on Natura Sites identified, and project is not directly connected with or necessary to the nature conservation management of the Natura site.	Appropriate Assessment is required because it cannot be excluded on the basis of the information provided by the applicant that the project will have, either individually or in combination with other plans or projects, a likely significant effect on European sites.
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1. INTRODUCTION

Ramboll UK Limited (herein referred to as Ramboll) was commissioned by the Department of the Environment, Climate and Communications (herein referred to as DECC) to provide assistance as competent experts for the statutory assessment of an application by Vermillion Exploration & Production Ireland Ltd for an Appropriate Assessment screening determination. The authors hold undergraduate and postgraduate qualifications in environmental science (or related disciplines), professional qualifications including chartered status with the Society for the Environment and full membership of the Institute of Environmental Management and Assessment (MIEMA) and have long standing experience as expert practitioners within the fields of offshore development, environmental impact assessment and the appraisal of applications in the context of the Birds and Natural Habitat regulations.

1.1 Documents Reviewed

The following documents have been reviewed to inform this report:

- Application to conduct an offshore survey form. Completed by Vermillion Exploration & Production Ireland Ltd.
- Corrib subsea infrastructure inspection, and maintenance surveys. EIA screening and environmental risk assessment for Annex IV species. Report prepared by RSK on behalf of Vermillion Exploration & Production Ireland Ltd. Project Number 660841. Dated 13 November 2020.
- Corrib subsea infrastructure inspection and maintenance surveys - 2021. Natura Impact Statement. Report prepared by RSK on behalf of Vermillion Exploration & Production Ireland Ltd. Project Number 660841. Dated 13 November 2020.
- Corrib Field Subsea inspection & maintenance works 2021. Method Statement. Revision 01.
- Notification of Application to Conduct Corrib Gas Field Offshore Works 2021. Submitted by Vermillion Exploration & Production Ireland Ltd.

This report provides an assessment of the Appropriate Assessment Screening Report and the EIA Screening and Environmental Risk Assessment for Annex IV species report submitted by the applicant, prepared and approved by Ramboll as competent experts having relevant qualifications and experience.

1.2 Project Background

The competent authority (DECC) is required to consider the potential effects of such activities on the integrity of Natura 2000 sites, with respect to Article 6(3) of Council Directive 92/43/EEC which is transposed in to Irish law by the European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended (the Birds and Natural Habitats Regulations). Additionally, as required by Article 12 of the Habitats Directive, the potential impact on the favourable conservation status of species listed in Annex IV of the Directive must also be assessed.

2. TERMS OF REFERENCE

2.1 Legislative context

This report has been prepared having regard to EC Directive 2009/147/EC¹ on the conservation of wild birds (commonly referred to as the Birds Directive) and EC Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (commonly referred to as the Habitats Directives), the European Communities (Birds and Natural Habitats) Regulations 2011-15 (the Birds and Natural Habitats Regulations) as amended and relevant jurisprudence of the EU and Irish courts.

The Appropriate Assessment Screening Report confirms that the Project has been screened having regard to the Birds and Habitats Directives and the Birds and Natural Habitats regulations and relevant jurisprudence of the EU and Irish courts.

2.2 Relevant guidance

This report has been prepared having regard to guidance on appropriate assessment for planning authorities, published by the Department for Environment, Heritage and Local Government (DEHLG) in 2009². In addition, the structure and content of this report is based upon the methodology published by the European Communities in 2002³ and Commission notice C (2018)⁴.

2.3 Consultation

2.3.1 Prescribed Bodies

Notification of the application was issued to the following organisations:

- National Parks and Wildlife Service;
- Irish Maritime Administration, Department of Transport,;
- Ship Source Pollution Prevention Unit, Irish Maritime Administration, Department of Transport,;
- Irish Coast Guard (& National Maritime Operations Centre), Department of Transport,
- Sea Fisheries Protection Authority;
- Sea Fisheries Policy Division, Department of Transport,;
- Department of Defence;
- Mission Support Facility, Irish Air Corps;
- Naval Headquarters;
- Marine Institute; and
- Commissioners of Irish Lights.

Two responses were received as follows:

- Response from the Maritime Safety Policy Division of the Department of Transport dated 18 November 2020; and

¹ Amending Directive 70/409/EEC

² DEHLG (2009) Appropriate Assessment of Plans & Projects - Guidance for Planning Authorities, Revision Notes added 2010, URL: <https://www.npws.ie/protected-sites/guidance-appropriate-assessment-planning-authorities> (accessed 15/03/2019)

³ European Communities (2002) Assessment of Plans and Projects significantly affecting Natura 2000 sites, Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EE, URL: http://ec.europa.eu/environment/nature/natura2000/management/guidance_en.htm (accessed 15/03/2019)

⁴ C (2018)4 7621 final "Managing Natura 2000 sites The provisions of Article 6 of the Habitats Directive 92/43/EEC. URL: http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/Provisions_Art_.nov_2018_endocx.pdf (accessed 17/05/2019)

STATUTORY ENVIRONMENTAL ASSESSMENT

- Response from the Aviation & Maritime Unit, Executive Branch of the Department of Defence dated 23 November 2020.

The following observations were made:

- Prospective licensees and their employees and contractors are reminded that they should be aware of ship-source pollution prevention provisions which are in place to protect human health and the marine environment and apply to all shipping activity. These provisions are obligatory independently of particular licence terms and conditions. Under the MARPOL Convention and EU law as applicable in national law, ships may not cause pollution either by discharge to water or emissions to air, when at sea or when at berth in port. Ships include Floating Production and Offloading vessels (FPSOs) also called a "unit" or a "system", and Floating Storage Units (FSUs). Ships berthed at terminals at sea are also obliged to conform to the law.
- Management of ship waste (mainly oil, hazardous and polluting substances, sewage, garbage and polluting emissions to air) and of all cargo residues must be ensured as required under international (IMO), EU and national law. Under existing provisions ships are obliged to discharge waste and cargo residues at port and ports are obliged to provide adequate facilities for their reception from ships.
- Once it has been confirmed, could you pass on the commencement and end date of the survey in addition to the name of the vessel carrying out the survey.

Appropriate regard has been given to the issues raised in these submissions.

2.3.2 Public Consultation

The application by the applicant was advertised by the DECC on their website following receipt of the application on 18 November 2020. Invitations for submissions were advertised by DECC to be received by close of business on 20 December 2020 to ensure consideration by the Minister. No responses were received from the public in response to this consultation.

3. REVIEW OF APPLICANT AA SCREENING REPORT

Table 3.1 provides a summary of the key project information.

Table 3.1: Project Information

Project Title:	2021 Offshore pipeline and subsea structure inspection and associated repair / maintenance using geophysical and visual survey techniques
Project Type:	Geophysical Survey / Repair / Maintenance
Applicant:	Vermillion Exploration & Production Ireland Ltd
Exploration Licence Reference:	Corrib Petroleum Lease
Date AA Screening Report Received:	18 November 2020

3.1 Determining whether a Project should be subject to an Appropriate Assessment

Under Paragraph 42(6) of the Habitats Regulations, the DECC (as the relevant competent authority) shall determine that an AA is required, where it cannot be excluded, on the basis of objective scientific information following screening, that the project, either individually or in combination with other plans and projects, would have a significant effect on a European Site.

Where it is determined that AA is required for the project, the applicant must submit a Natura Impact Statement (NIS).

3.2 Description of the Project

The AA screening process involves describing the individual elements of the project that are likely to give rise to impacts on the conservation objectives and/or qualifying features of a Natura site.

Table 3.2 provides a review of the applicant's description of the project.

Table 3.2: Description of Project AA Checklist

<p>Brief Project Description:</p> <p>The proposed work scope will comprise two main components:</p> <ul style="list-style-type: none"> Offshore pipeline and subsea structure inspection and associated repair / maintenance work from the construction / ROV vessel <i>Edda Sun</i>. This vessel will be responsible for the survey and maintenance works covering the area of the Corrib offshore field assets as well as seabed infrastructure as far inshore as Broadhaven Bay. Some limited maintenance works will be undertaken where necessary to ensure pipeline integrity and stability on the seabed. This may include localised areas of seabed sediment dredging (using a mini dredge tool) as well as the placement of rock filter bags onto the pipeline. Nearshore pipeline inspection using the survey vessel <i>Leah-C</i>. This vessel will be responsible for the survey covering the area primarily within Broadhaven Bay as far as the inshore limit of safe navigation. <p>The surveys of the pipeline, sections of umbilical, the BBGT treated surface water outfall pipeline and in-field subsea assets will investigate features such as free-spanning and scouring, and pipeline burial depth and integrity. The survey will be carried out using two vessels; the <i>Edda Sun</i> will survey the offshore sections, while the <i>Leah-C</i> will survey inshore in the vicinity of Broadhaven Bay. The survey will run between the Corrib Field along the overall extent of the route of the offshore pipeline and BBGT treated surface water discharge pipeline and the landfall at Glengad. In addition, sections of the offshore umbilical will also be inspected.</p> <p>The survey will utilise a range of acoustic survey techniques, namely multibeam echo sounder (MBES), sub-bottom profiler (SBP), and side-scan sonar (SSS). In addition, a visual survey using vessel deployed underwater video/stills imagery (inshore) and ROV (offshore) will also be undertaken. A range of other sensors may also be used as part of the survey including: Sound Velocity Probes (SVPs) (used to calibrate acoustic survey equipment; pipe tracker, imaging sonar and Obstacle</p>
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Avoidance Sonar; as well as navigation / positioning sensors including a subsea Ultra Short Baseline (USBL) beacon system, an altimeter, Inertial Navigation System (INS), Doppler Velocity Log (DVL), pathfinder laser profiler, Tracerco Discovery tool or ARTIMIS Halfwave tool and a STS 8" E Piranha Dredger. Details on the proposed equipment is provided below:

- MBES equipment will be hull mounted on the *Leah-C* for the inshore survey in the confined waters of Broadhaven Bay, while it is likely to be mounted to the ROV of the *Edda Sun* for the offshore survey. The preferred option for the MBES system onboard the *Leah-C* will operate between 350 kHz and 400 kHz. Alternative systems operate between 190 kHz to 420 kHz, with these typically operating between 350 kHz and 400 kHz. The bathymetric system onboard the ROV will operate at a frequency of 500 kHz.
- The SBP will only be used on the inshore component of the survey, deployed from the *Leah-C*. The preferred and alternative options of the SBP's operating frequency is between 3 kHz and 8 kHz.
- The SSS will only be used on the inshore component of the survey, deployed from the *Leah-C*. The preferred option of the SSS's operating frequency is between 300 kHz and 600 kHz. The alternatives will operate between 400 kHz and 900 kHz. The obstacle avoidance sonar operating on the ROV of the *Edda Sun* will have a frequency of 675 kHz.
- A SVP will be deployed occasionally throughout the surveys to provide salinity, conductivity, temperature and sound velocity depth information. These probes operate at an extremely high frequency of around 2.5 MHz at a very low level of intensity. This allows periodic calibration of the primary acoustic survey sensors. The SVP will operate at a frequency of 2.5 MHz.
- Both vessels are likely to have single beam depth echosounders (operating at around 50 kHz) and ultra-short baseline acoustic profiling systems (USBL) for maintaining position and communications with any deployed equipment. The USBL system on the ROV of the *Edda Sun* will operate at a frequency at between 19 kHz to 34 kHz.
- The offshore vessel will also utilise a doppler velocity log (DVL) for accurate positioning and speed determination. This operates at an extremely high frequency of 1,200 kHz at a very low level of intensity.
- The ROV deployed from *Edda Sun* will be integrated with a laser and imaging system with stills and video camera for pipeline integrity and seabed inspection work.
- The Tracerco Discovery tool or ARTIMIS Halfwave tool will be used for checking pipeline wall thickness and integrity deployed from the ROV of the *Edda Sun*.
- The STS 8" E Piranha Dredger will be mounted to a standard STS dredge deployment frame and will be used where pipeline spans have been identified using the equipment described above. The mini dredger will undertake limited reprofiling of the seabed in those areas required to ensure full pipeline stability. The mini dredge tool will be deployed from the ROV of the *Edda Sun*. In addition to some limited dredging of the seabed sediments in the pipeline span locations, it may also be necessary to place rock filter units onto the pipeline as well to provide additional stability and scour protection. These placements will be limited in number and will use appropriately sourced rock.

A soft-start procedure for acoustic surveys will be implemented as per the NPWS "Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters" (2014) for both the inshore and offshore surveys.

The *Edda Sun* will also undertake limited maintenance activities where required along the route of the pipeline route in the offshore survey area. These works will involve the placement of rock filler units as well as some dredging of seabed sediments using a mini dredge tool deployed from the survey vessels ROV. These works are to ensure pipeline integrity and stability on the seabed by correcting areas of free-spanning.

The determination of "offshore" and "inshore" areas for the purpose of this report has assumed a boundary at a water depth of approximately 20 m below Chart Datum, however, the location of this boundary may be refined closer to the time of survey. The *Edda Sun* would therefore be responsible for the survey of the subsea infrastructure between the Corrib Field to Broadhaven Bay, while *Leah-C* would limit its survey operations to within the Bay itself in depths of 20 m or less and would cover the section of the routes close to the landfall.

It is anticipated that the overall programme will be approximately 20 days in duration (dependent on weather conditions) with operations taking place for both vessels from the summer to autumn months of 2021 (between May and September). It is likely that the offshore and inshore elements will overlap

STATUTORY ENVIRONMENTAL ASSESSMENT

during this time period. During data acquisition, the vessels will follow a pre-determined survey programme that may be subject to change depending on the prevailing current and wind conditions.	
Project Element	Have these features of the project been identified by the applicant? (If not, please provide details)
Spatial Extent (size, scale, area etc)	Yes – the applicant proposes to conduct a geophysical survey (MBES, sub-bottom profiler, SSS) along the pipeline running from Corrib Field (65 km offshore) to the limit of navigational safety in Broadhaven Bay.
Supporting Infrastructure	Not applicable – no supporting infrastructure is directly required for this project. The Corrib infrastructure is already in place.
Transportation Requirements	Yes – two survey vessels will be used, the <i>Edda Sun</i> in water depths >20 m and outside Broadhaven Bay, and the <i>Leah-C</i> in water depths up to 20 m in Broadhaven Bay.
Physical changes that will result from the project (e.g. from excavation, dredging)	Yes – physical changes are expected to be of limited spatial extent and only in locations where seabed requires using a mini-dredging tool during / after reprofiling to reduce free-spanning of the pipeline or where rock filter units are placed to prevent future scouring. Physical changes in terms of underwater noise emissions have been characterised.
Emissions and Waste	Yes – the main output from the surveying equipment and vessels is underwater noise emissions, which have been detailed for the preferred and alternative equipment; no waste is expected to be released into the marine environment and will be appropriately disposed of onshore; leakages / spillages are highly unlikely to occur.
Resource Requirements (e.g. water abstraction)	Yes – the resource requirements are standard for survey vessel operations and are considered to be minimal.
Duration of each phase e.g. <ul style="list-style-type: none"> Phase 1 Construction Phase 2 Operation Phase 3 Decommissioning 	Yes – the works will take place over a 20-day period (dependent on weather conditions) between May and September 2021.

The AA screening must consider the effects of the project in combination with other plans and other projects in making the screening assessment.

Table 3.3 provides a review of the in-combination assessment undertaken by the applicant.

Table 3.3: In-combination Assessment

Brief Description of identified plans / projects that might act in-combination (Operational, Consented and Proposed projects) with the proposed project:
<p>The applicant's AA screening report considers the following projects that might act in-combination with the proposed project:</p> <ul style="list-style-type: none"> Corrib Field P6 Flexible Flowline Installation 2021 (Vermillion) between the P6 wellhead and the Corrib central manifold within the offshore Corrib field. Involves a single vessel and utilises MBES, sound velocity probe, navigation / positioning sensors including subsea USBL, obstacle avoidance sonar, altimeter and doppler velocity log. The work will take place for approximately 6 days from May to September 2021; Corrib Field central manifold / P1 wellsite Channel B EDU and electrical jumper repair programme. Taking place over approximately 5 days from April to September 2021. Proposed

STATUTORY ENVIRONMENTAL ASSESSMENT

<p>to take place immediately prior to the proposed pipeline inspection and maintenance survey programme and will use the same support vessel (<i>Edda Sun</i>). The Channel B works will be carried out using ROVs and any surveys required will be by underwater video. No acoustic survey sensors are proposed;</p> <ul style="list-style-type: none"> Geotechnical Investigation Irish Atlantic Margin 2021 (Woodside Energy Ireland). Involving collection of 22 shallow boreholes along the Irish Shelf and Porcupine Basin. The closest sample is approximately 30 km north of the export pipeline survey area. The geotechnical survey will involve on vessel and will utilise USBL acoustic equipment to assist with the positioning of the boreholes and identification of hazards. Work will take approximately 40 days and take place between July and early August 2021. 		
Project Element	Is the predicted magnitude / extent of identified likely in-combination effects considered by the applicant?	Summary
Spatial Extent (define boundaries for examination of in-combination effects)	Yes	The applicant has not explicitly stated the distance used for screening of other plans and projects. Though it states that the study area for the project and cumulative effects encompasses typical foraging and migratory ranges for qualifying features of European designated sites. Although the explicit distance should be detailed, the current study area is sufficient to screen in/out in-combination effects for the purposes of the review of the applicant's AA Screening Report.
Impact Identification (e.g. noise, chemical emissions etc.)	Yes	The applicant has identified underwater noise as a potential in-combination effect with the Woodside geotechnical investigation.
Pathway Identification (e.g. via water, air etc)	Yes	The pathway is via water, i.e. underwater sound.

3.3 Identification of relevant European sites and species

The applicant's AA screening report considers the designated European sites that may be impacted by the project, including consideration of direct, indirect and in combination effects. As projects that lie out with European sites may still have an impact upon their integrity, particularly in a marine environment where the environment is extremely dynamic and species may be highly mobile, identifying potential zones of influence surrounding the European sites is a key component.

Table 3.4 identifies the relevant European Sites and species that might be impacted by the project.

Table 3.4: Identification of Relevant European Sites/Species AA Screening Checklist

NB. Sites presented in Appendix A of the applicants AA Screening Report and within the Response to Request for Further Information Addendum have been cross referenced against current lists of Natura sites – no omissions of relevant sites have been determined. On this basis the list of sites presented by the applicant in have been considered below.

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
1. Broadhaven Bay SAC (IE0000472)	0.0 (overlap)	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
2. Glenamoy Bog Complex SAC (IE0000500)	0.0 (overlap)	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
3. West Connacht Coast SAC (IE0002998)	~1	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
4. Erris Head SAC (IE0001501)	2.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
5. Mullet / Blacksod Bay Complex SAC (IE0000470)	10.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
6. Mullet / Blacksod Bay Complex OSPAR MPA (O-IE-0002972)	10.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
7. Owenduff / Nephin Complex SAC (IE0000534)	16.5	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
8. Inishkea Islands SAC (IE0000507)	19.5	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements
9. Duvillaun Islands SAC (IE0000495)	26.5	Yes	No	Yes	Yes	Yes	Yes	Applicant has not listed common bottlenose dolphin <i>Tursiops truncatus</i> as a qualifying feature of this SAC; however West Connacht Coast SAC is closer to the survey area and has been used as a worst-case for the species. Therefore no further information is required from the applicant to

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								support a screening determination.
10. River Moy SAC (IE0002298)	30.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
11. Killala Bay / Moy Estuary SAC (IE0000458)	39.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
12. Newport River SAC (IE0002144)	40.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
13. Clew Bay Complex SAC (IE0001482)	42.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
14. Mweelrea / Sheefry / Erriff Complex SAC (IE0001932)	61.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
15. Cummeen Strand / Drumcliff Bay (Sligo Bay) SAC (IE0000627)	73.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
16. Cummeen Strand / Drumcliff Bay (Sligo Bay) OSPAR MAP (O-IE-0002973)	73.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
17. Inishbofin and Inishshark SAC (IE0000278)	74.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
18. The Twelve Bens / Garraun Complex SAC (IE0002031)	74.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
19. Ballysadare Bay SAC (IE0000622)	76.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
20. Maumturk Mountains SAC (IE0002008)	76.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
21. Slieve Tooley / Tormore Island / Loughros Beg Bay SAC (IE0000190)	82.5	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
22. Lough Corrib SAC (IE0000297)	86.0	Yes	No	No	No	No	No	Applicant has not listed brook lamprey <i>Lampetra planeri</i> as a qualifying

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								species. This species has been listed and assessed for other SACs, and therefore this site should also be included in that assessment. However, no further information is required from the applicant to support a screening determination.
23. Lough Gill Sac (IE0001976)	87.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
24. Connemara Bog Complex SAC (IE0002034)	89.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
25. Slyne Head Islands SAC (IE0000328)	94.0	Yes	No	Yes	Yes	Yes	Yes	Applicant has not listed common bottlenose dolphin <i>Tursiops truncatus</i> as a qualifying feature of this SAC; however West Connacht Coast SAC is closer to the survey area and has

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								been used as a worst-case for the species. Therefore, no further information is required from the applicant to support a screening determination.
26. Kilkieran Bay and Islands SAC (IE0002111)	100.0	Yes	No	Yes	Yes	Yes	Yes	Applicant has not listed Annex I reefs [1170] as a qualifying feature of this SAC; however there is no direct overlap between the site and the project area, and the site is sufficiently distanced from the SAC to eliminate secondary effects to this habitat type. Therefore, no further information is required from the applicant to support a screening determination.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
27. Kilkieran Bay and Islands OSPAR MPA (O-IE-0002979)	100.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
28. Lough Melvin SAC (IE0000428)	99.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
29. West of Ardara / Maas Road SAC (IE0000197)	101.0	Yes	No	Yes	Yes	Yes	Yes	Applicant has not listed European otter <i>Lutra lutra</i> as a qualifying species of this SAC. Although the species is unlikely to be affected, it has been included in other SACs and therefore should be listed. However no further information is required from the applicant to support a screening determination.
30. Donegal Bay (Murvagh) SAC (IE0000133)	111.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
31. Rutland Island and Sound SAC (IE0002283)	112.0	Yes	No	Yes	Yes	Yes	Yes	The applicant has not listed "Annual vegetation of drift lines" is a qualifying interest, however it is noted that due to the distance between the site and project, this does not alter the assessment made. The feature should be added to the list for inclusivity. However, no further information is required from the applicant to support a screening determination.
32. Lough Eske and Ardnamona Wood SAC (IE0000163)	118.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
33. Galway Bay Complex SAC (IE0000268)	130.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
34. Galway Bay Complex OSPAR MPA (O-IE-0002969)	130.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
35. Horn Head and Rinclevan SAC (IE0000147)	150.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
36. Lower River Shannon SAC (IE0002165)	166.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
37. Blacksod Bay / Broadhaven SPA (IE0004037)	0.0 (overlap)	Yes	No	No	No	No	No	The applicant has not listed red-throated diver <i>Gavia stellata</i> or Slavonian grebe <i>Podiceps auritus</i> as a qualifying feature. Red-throated diver is known to be sensitive to disturbance / displacement caused by vessel presence and therefore should be considered in the assessment. Red-throated diver is

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								included in the text of Section 4.3.2.1, however is not included in Table 4-1. The feature should be added to the table. However, no further information is required from the applicant to support a screening determination.
38. Termoncarragh Lough and Annagh Machair SPA (IE0004093)	9.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
39. Mullet Peninsula SPA (IE0004227)	9.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
40. Stags of Broadhaven SPA (IE0004072)	9.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
41. Illanmaster SPA (IE0004074)	11.5	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
42. Inishglora and Inishkeeragh SPA (IE0004084)	13.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
43. Inishkea Islands SPA (IE0004004)	19.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
44. Duvillaun Islands SPA (IE0004111)	22.0+	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
45. Clare Island SPA (IE0004136)	50.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
46. Bills Rocks SPA (IE0004177)	50.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
47. Ardboline Island and Horse Island SPA (IE0004135)	73.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
48. Inishmurray SPA (IE0004068)	76.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
49. West Donegal Coast SPA (IE0004150)	78.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
50. Cruagh Island SPA (IE0004170)	86.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
51. Inishduff SPA (IE0004115)	89.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
52. Connemara Bog Complex SPA (IE0004181)	89.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
53. Donegal Bay SPA (IE0004151)	98.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
54. Inner Galway Bay SPA (IE0004031)	123.0	Yes	No	Yes	Yes	Yes	Yes	The applicant has not listed black-throated diver <i>Gavia arctica</i> as a qualifying feature of this SAC. This feature should be listed, however due to the distance of the SAC from the project area, it

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								<p>is unlikely this species will be affected and therefore no further information is required from the applicant to support a screening determination.</p> <p>The applicant has listed shoveler <i>Anas clypeata</i> as a qualifying species, however NPWS does not; however this does not affect the assessment outcome.</p>
55. Inishmore SPA (IE0004152)	125.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
56. Cliffs of Moher SPA (IE0004005)	145.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
57. Tory Island SPA (IE0004073)	148.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
58. Horn Head to Fanad Head (IE0004194)	150.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
59. Mid-Clare Coast SPA (IE0004182)	160.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
60. River Shannon and River Fergus Estuaries SPA (IE0004077)	188.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
61. Loop Head SPA (IE0004119)	189.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
62. Kerry Head SPA (IE0004189)	201.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements. Note: the applicant has the site code as "004153", the correct code is "004189", as per NPWS.
63. Inishtrahull SPA (IE0004100)	208.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
64. Dingle Peninsula SPA (IE0004153)	220.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
65. Blasket Islands SPA (IE0004008)	243.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
66. Iveragh Peninsula SPA (IE0004154)	248.5	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
67. Puffin Island SPA (IE0004003)	273.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements. Note: the applicant has the site code as "00403", the correct code is "004003", as per NPWS.
68. Skelligs SPA (IE0004007)	281.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
69. Deenish Island and Scariff Island SPA (IE0004175)	283.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
70. Beara Peninsula SPA (IE0004155)	289.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
71. The Bull and the Cow Rocks SPA (IE0004066)	300.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
72. Irish Sea Front SPA (UK9020328)	308.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
73. Treshnish Isles SPA (UK9003041)	321.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.
74. Rum SPA (UK9001341)	358.0	Yes	No	Yes	Yes	Yes	Yes	The applicant has not listed common guillemot <i>Uria aalge</i> , or black-legged kittiwake <i>Rissa tridactyla</i> as a qualifying feature. Due to the distance from the project area it is unlikely these species would be affected; however they should still be listed for

STATUTORY ENVIRONMENTAL ASSESSMENT

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV species listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
								the site. The applicant has given the wrong Latin name for red-throated diver, which should be checked and corrected throughout the report. However, no further information is required from the applicant to support a screening determination.
75. Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA (UK9013121)	364.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements. Note: the applicant has the site code as "UK901321", the correct code is "UK9013121".
76. Skomer, Skokholm and the Seas off Pembrokeshire / Sgomer, Sgogwm a Moroedd Penfro SPA (UK9014051)	397.0	Yes	Yes	Yes	Yes	Yes	Yes	Applicant meets requirements.

3.4 Screening of Likely Significant Effects on Natura sites and adverse effects on Annex IV species.

Table 3.5 provides a summary of the likely significant effects identified for the project alone and in combination with other projects considering, *inter alia*, the characteristics and specific environmental conditions of the sites concerned by the relevant project and the project location.

Table 3.5: Assessment of Likely Significant Effects AA Screening

Summary of LSE
<p>The applicant's AA Screening Report identified the following impact sources for further consideration in the determination of LSE:</p> <ul style="list-style-type: none"> • Physical presence of survey vessels and equipment; • Underwater noise from the operation of geophysical survey equipment and survey vessels and any noise/disturbance from the operation of the pipeline mini-dredger; • Localised disturbance to seabed sediments during operation of the pipeline mini-dredger; • Routine emissions and discharge during vessel and mini-dredge tool operations; • Accidental events; and • Cumulative effects. <p>The applicant has used a screening distance of 200 km, as this is expected to encompass foraging distances for resident and semi-resident species, and have also taken habitat connectivity into account. Sites within 25 km have been given particular consideration, and seabird foraging ranges (Woodward <i>et al.</i>, 2019) have been used for SPAs >200 km from the project area.</p> <p>Physical Presence of the Survey Vessels and Equipment</p> <p>The applicant has identified collision and disturbance as potential effects associated with vessel presence and has determined that these may impact the following receptors: marine mammals, and seabirds.</p> <p>Due to the short duration (20 days), small spatial scale (in comparison to the foraging range of receptors), and limited number of vessels (2) proposed for the project, the spatial scale and magnitude of effect are considered small. Disturbance effects on marine mammals will be limited to behavioural, and the population will recover (i.e., individuals can return to the region) immediately following the cessation of works. The likelihood of collision is also considered extremely low as the vessels will operate in accordance with codes of conduct and at low speed. Interaction (entanglement) is also unlikely to occur.</p> <p>The applicant has identified that seabirds (from both near and far-ranging SPAs) utilise the area and has considered them as a potential receptor for disturbance effects. Similarly, to marine mammals, seabirds have an extensive foraging habitat available, with high connectivity; and the survey will take place over a short duration and spatial extent. The applicant has given greater consideration to the sites / qualifying features closest to the survey works (within 25 km). Further assessment determined that these species may be temporarily disturbed and displaced from local foraging habitat. However, a wide extent of habitat remains available, with high levels of connectivity. The applicant concluded that the physical presence of the vessel and survey equipment will be unlikely to displace seabirds permanently.</p> <p>Underwater Noise from the Operation of Geophysical Survey Equipment and Survey Vessels</p> <p>The potential impact mechanism from underwater noise is acoustic disturbance/injury resulting from use of the survey equipment (MBES, positioning equipment, SSS, sub-bottom profiler, USBL, and mini-dredge tool). The relevant receptors to this impact are seabirds, marine mammals, fish, and prey species.</p> <p>The survey area overlaps with one SPA designated for seabirds; however a wide number of SACs and SPAs are within screening (marine mammal/seabird foraging) distance of the works. The auditory range of the marine mammal and fish species in the region has been compared with the sound emissions of the vessel and equipment. The equipment specifications and outputs have been described to a high level of detail and overlaps with the hearing ranges of sensitive species have been identified. The initial assessment could not conclude no likely significant effect, and therefore the applicant has conducted a Stage 2 Appropriate Assessment.</p>

Several SACs designated for migratory fish species were within screening distance, and thus have been assessed for likely significant effect. The species are migratory and have large ranges, and the fact that the species groups in question (salmonids and lampreys) are insensitive to sound. This, combined with the relatively small project area, means that the applicant has concluded there may be some small-scale disturbance associated with the mini-dredge tool, however there will be no likely significant effect.

The project area, particularly the offshore proportion, has a low density of diving seabirds, and therefore the applicant has determined that the proposed activities are unlikely to result in any significant effect on these species.

Routine Emissions and Discharges during Vessel and Mini-dredge Tool Operations and Localised Disturbance to Seabed Sediments during Operation of the Pipeline Mini-Dredger

Atmospheric emissions (primarily exhaust gases) and routine marine discharges (macerated food, grey water, bilge water, and ballast water) will be released from the vessel. This may result in localised decreases in air and water quality, however due to the rapid dispersion, the effect will be temporary and very short term.

Use of the mini-dredge tool will be limited to isolated locations along the pipeline, where reprofiling of the seabed may be required to reduce pipeline free spanning. Use of the tool will produce a suspended sediment plume, resulting in light smothering of benthic species and seabed change over a small spatial scale.

The applicant concluded that these effects will not be significant, and thus have been screened out of further assessment.

Accidental Events

The applicant notes the possibility of a fuel oil spillage, however, explains that in the rare event a spillage occurs, contaminants would rapidly disperse, and preventative measures used on board during surveying reduce the risk of occurrence.

The applicant concludes the potential for impact on European sites is considered to be low.

Cumulative Impacts

The applicant has identified that there are three known projects that will occur within a similar timescale to the proposed works and have the potential to act cumulatively with the effects from the project:

- Corrib Field P6 Flexible Flowline Installation 2021 (Vermilion);
- Corrib Field central manifold / P1 wellsite Channel B EDU and electrical jumper repair programme;
- Geotechnical Investigation, Irish Atlantic Margin 2021 (Woodside Energy Ireland).

The applicant has determined that there is potential for these other plans and projects to result in a cumulative effect on European sites. However, the likelihood of such an eventuality occurring however is considered to be very low in terms of the potential for impact on or affecting the integrity of any European sites and their qualifying interests.

Do you agree with the applicant's AA screening assessment? Why?

It is concluded that a Stage 2 AA is required as it is not possible to exclude on the basis of the information provided by the applicant that the project will have a likely significant effects (LSE) either individually or in combination with other plans or projects on European sites.

Additional information will be required to ensure that all pathways that need to be taken forward to Stage 2, are taken forward, and to make a robust assessment of the applicants NIS.

It is noted that the applicant's underwater noise assessment is comprehensive and considers all species likely to be in the area, including diving seabird species. Appropriate sources and references have been used throughout the assessment. We agree with the pathways that have been identified and agree with the applicant's conclusion of no LSE except for the pathway of underwater noise, based on the information provided in the screening report.

The following additional information is required to inform the Stage 2 review:

Qualifying features

Although the applicant has used a worst-case scenario for marine mammal and migratory fish features, it is noted that qualifying features of some SACs have been missed from the applicant's list

(as noted in Table 3.4). Whilst this is unlikely to alter the outcome of the assessment, it is important the consideration is made for all qualifying features of all SACs within screening distance.

Similarly, qualifying features of some SPAs have also been missed. Most notably, the applicant has not listed red-throated diver *Gavia stellata* as a feature of the Blacksod / Broadhaven SPA in Table 4-1. This species should be included in the assessment, as the SPA overlaps with the project area, and red-throated diver is known to be sensitive to vessel presence (disturbance / displacement effects). The applicant has not included the Blacksod and Broadhaven Bay Ramsar site. It is recognised that this site occupies the same area as the Blacksod / Broadhaven SPA, however it should still be considered.

Additional Sites

Use of Woodward *et al.* (2019) for screening in SPAs is welcomed. The applicant has noted that the mean maximum foraging distance of Manx shearwater *Puffinus puffinus* is 1,347 km, however, has not included SPAs within this screening distance (e.g., those in the English Channel, and on the French and Spanish coasts). It is unlikely that the proposed works will have significant effect on these sites, however they should be included in the assessment as they are within species-specific foraging range. We request that the applicant ensures that all sites within all species-specific foraging ranges are included.

Assessment

The applicant has identified that the Broadhaven Bay SAC overlaps with the survey area, and has listed benthic habitats, including Reefs [1170], as qualifying features. It is not clear whether the applicant has assessed potential effects, such as introduction of hard substrate (rock filter units) or alteration of seabed (sediment plume dispersion), on these habitats. The applicant states that no habitats are likely to be affected, however, it would be beneficial to include an assessment of the Broadhaven Bay SAC habitats.

3.5 Screening Determination

If significant effects are certain, likely or uncertain then the DECC must request the applicant provides a NIS in order for the DECC to undertake an AA as the competent authority. The applicant may also choose to recommence the screening process with a modified project that removes or avoids elements that posed risks of LSE.

Table 3.6 and 3.7 provide a summary of Ramboll's recommendation to enable DECC to make a screening determination.

Table 3.6: Summary of Applicant's Screening Report Review

Is the plan or project directly connected with or necessary to the nature conservation management of the Natura site?	No
Is the project or plan likely to have significant effects on the environment?	Yes
Is an AA required? (Yes / No / More Information Required?)	Yes – the applicant could not determine No Likely Significant Effect on marine mammals from underwater noise sources, therefore an AA is required.
What further information is required to inform AA Screening Opinion (if any)?	None. Information was provided by the applicant to be able to conclude that an Appropriate Assessment is required. However, additional information is requested to be included in the NIS submitted by the applicant as detailed below.

STATUTORY ENVIRONMENTAL ASSESSMENT

Table 3.7: Recommendation of Screening Determination

Outcome of Screening Report Assessment	Overall Screening Opinion / AA Required?
No Likely Significant Effects on Natura Sites identified, or project is directly connected with or necessary to the nature conservation management of the Natura site.	No likely significant effects on European Sites have been identified, having had regard to the potential connectivity with sites, relevant conservation objectives and the potential for in combination effects and will not cause significant disturbance to Annex IV species described. Appropriate Assessment is not required.
Likely or Potential Likely Significant Effects on Natura Sites identified, and project is not directly connected with or necessary to the nature conservation management of the Natura site.	Appropriate Assessment is required because it cannot be excluded on the basis of the information provided by the applicant that the project will have either individually or in combination with other plans or projects a likely significant effect on European sites.

4. STAGE 2 APPROPRIATE ASSESSMENT

4.1 Natura Impact Statements

A NIS⁵ is a scientifically robust examination of a proposed plan or project, which is used to characterise any possible implications of the project on the conservation objectives of any relevant European site(s). The primary purpose of the NIS is to provide the competent authority with the information required to complete an AA.

Following the receipt of a NIS, the DECC (as the competent authority) will undertake an AA to determine whether the proposed project is likely to have an adverse effect on the integrity⁶ of any relevant European sites with regards to their conservation objectives, both individually and in combination with other plans or projects. On completion of the AA, the DECC will produce an AA Conclusion Statement.

Table 4.1 provides a checklist of information that should be provided by the applicant's NIS (or supporting documents), with regards to European site(s) and/or species that may be affected by the proposed project, in order for the DECC to undertake an AA.

Table 4.1: Summary of European site information to be included in a NIS (or supporting documentation)

NIS Content	Does the applicant's NIS provide the following information? (Y/N)	Briefly Explain Answer:
The Conservation Status of relevant Habitats and Species listed under Annex II of the Habitats Directive;	No	The applicant has not noted the conservation status of all the qualifying features of the SACs taken forward to Appropriate Assessment (Stage 2). The conservation status of the qualifying features of SACs screened in to Stage 2 should be included.
The Conservation Status of relevant Species listed under Annex I of the Birds Directive;	No	The applicant has not noted the conservation status of all the qualifying features of the SPAs taken forward to Appropriate Assessment (Stage 2). The conservation status of the qualifying features of SPAs screened in to Stage 2 should be included.
The baseline conditions of any relevant European site(s);	Yes	The applicant has given a brief description of the European sites within screening distance, including baseline condition, such as population estimates.

⁵ Note - Natura Impact Statement (NIS) is an Irish specific term used following transposition of the Birds and Habitats Directives into national legislation.

⁶ Ecological integrity has been defined in as 'the coherence of the site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or populations of species for which it is classified' (Managing Natura 2000 sites, EC, 2000)

STATUTORY ENVIRONMENTAL ASSESSMENT

NIS Content	Does the applicant's NIS provide the following information? (Y/N)	Briefly Explain Answer:
The conservation objectives and qualifying features of any relevant European site(s);	Yes	The applicant has noted the relevant conservation objectives for each SAC/SPA identified within screening distance.
Any management plans associated with relevant European site(s);	No	Although, there are no management plans available for the marine features of any sites screened in by the applicant, this should be stated in the applicant's report.
Details on each species and habitat type for which relevant European site(s) are designated and spatial mapping of the distribution and temporal mapping, including lifestyle stages;	No	Although the applicant has included thorough details on each of the species brought forward to Stage 2, the only spatial mapping included is a broad-scale map showing the sites within screening distance of the project area (Figures 4-1 and 4-2 of the NIS). The applicant has not included distribution maps for individual species; however has stated that the density in the project area is likely to be low and has provided the abundance and temporal use of each site by its qualifying features. Distribution/abundance maps using the most recently available data should be included.
Information on population profile of the species and their conservation status (e.g. size, population structure etc.)	No	The applicant has included information on population estimates associated with the European site and has described the sensitivity of each feature in adequate detail; however has not included the current conservation status of each species. The conservation status of each species at each site taken forward to Stage 2 should be noted in the NIS.
Ecosystem structure and functioning of the site and its overall conservation state;	Yes	The applicant has included a description of each European site, and has included the management objectives inferring overall conservation state.
The role of the site within the ecosystem region and the Natura 2000 network;	Yes	The applicant has included information on European site

STATUTORY ENVIRONMENTAL ASSESSMENT

NIS Content	Does the applicant's NIS provide the following information? (Y/N)	Briefly Explain Answer:
		connectivity, and use of sites by features of other sites.
Any other aspects of the site or its wildlife that is likely to have an influence on its conservation status and objectives (e.g. current management activities, other developments etc.)	Yes	The applicant has noted the conservation objectives for each site. There are no management plans available for any screened in sites that are likely to affect marine features. The applicant has included information on site connectivity and the use of the site other important, non-qualifying species where applicable.

Table 4.2 provides a checklist of information that should be provided in the NIS (or supporting documents), in order for the DECC to complete an AA.

Table 4.2: Summary of information to be included in a NIS (or supporting documentation) for consideration in AA

NIS Content	Does the applicant's NIS provide sufficient detail to inform an Appropriate Assessment? (Y/N)	Briefly Explain Answer:
A description of size, scale and objectives of the proposed plan or project;	Yes	The applicant has sufficiently described the project scale and the potential area of effect.
A description of the pressures of the proposed plan or project, its likely impacts on the conservation objectives and local site characteristics;	Yes	The applicant has provided a detailed description of the project and has characterised the likely impacts that have resulted in the need of an Appropriate Assessment.
Identification of all European sites located within the zone of influence of the proposed plan or project, together with qualifying interests and conservation objectives;	No	The applicant has used a 200 km screening distance, or mean maximum foraging range (whichever is larger) for SACs and SPAs. The applicant has identified the qualifying interests at most sites, however has not listed all species for all sites – notably common bottlenose dolphin <i>Tursiops truncatus</i> at two SACs. The qualifying species of all sites should be listed.
Methodologies, analysis and data sources utilised to demonstrate use of best scientific knowledge;	Yes	The applicant has used a variety of reputable and recent studies in order to substantiate the assessments made.
A scientific assessment, analysis and statement of the significant effects including direct, indirect,	Yes	The applicant has provided a detailed assessment of the effects associated with the pressures brought forward, and

STATUTORY ENVIRONMENTAL ASSESSMENT

NIS Content	Does the applicant's NIS provide sufficient detail to inform an Appropriate Assessment? (Y/N)	Briefly Explain Answer:
cumulative and in combination effects of the relevant European site(s) and/or species which are expected to occur as a result of the development;		has included a concluding statement on the assessment outcome: no likely significant effect.
Details of any appropriate mitigation measures undertaken, or proposed to be undertaken by the applicant to mitigate any significant effects on the environment or on the European site(s) and/or species, and the period within which any such measures shall be carried out by the developer;	Yes	The applicant has detailed mitigation measures, both embedded (industry standard, best practice) and additional (project-specific).
An assessment of the scope and scale of residual effects after mitigation (including direct, indirect, cumulative and in combination effects);	Yes	The applicant has included assessment of residual effects after taking mitigation into account.
A conclusion in relation to whether or not the project would adversely affect the integrity of any European site (either individually or in cumulation with other existing or consented developments)	Yes	The applicant has provided a conclusion as to whether or not the project will adversely affect European sites.

4.2 Summary of Additional Information Required to complete Appropriate Assessment

Tables 4.3 provides a summary of additional information requested to allow DECC to complete the Appropriate Assessment.

Table 4.3: Additional Information Required

Additional Information Requested	Additional information required:
	<p>Potential effects on the qualifying habitat features of the Broadhaven Bay SAC associated with the mini-dredging tool and placement of rock filter units should be assessed, or, if there is no interaction between feature and pressure, screened out.</p> <p>Qualifying features have not been included for several SACs/SPAs, despite being listed on the NPWS/ScotLink websites. These features (noted in Table 3.4 and listed below) should be included:</p> <ul style="list-style-type: none"> • Common bottlenose dolphin <i>Tursiops truncatus</i>, of the Dullivaun Islands SAC; • Brook lamprey <i>Lampetra planeri</i>, of the Lough Corrib SAC; • Common bottlenose dolphin, of the Slyne Head Islands SAC;

STATUTORY ENVIRONMENTAL ASSESSMENT

	<ul style="list-style-type: none"> • Annex I Reef habitat [1170], of the Kilkieran Bay and Islands SAC; • European otter <i>Lutra lutra</i>, of the West of Ardara / Maas Road SAC; • Annual vegetation of drift lines, of the Rutland Island and Sound SAC; • Red-throated diver <i>Gavia stellata</i>, of the Blacksod Bay / Broadhaven SPA; • Slavonian grebe <i>Podiceps auritus</i>, of the Blacksod Bay / Broadhaven SPA; • Black-throated diver <i>Gavia arctica</i>, of the Inner Galway Bay SPA; • Common guillemot <i>Uria aalge</i>, of the Rum SPA; • Black-legged kittiwake <i>Rissa tridactyla</i>, of the Rum SPA. <p>The applicant has described using the mean maximum foraging range for seabirds species from Woodward <i>et al.</i> (2019), however the furthest SPA from the project area considered is located 397 km away (southwest Wales). Using Manx shearwater <i>Puffinus puffinus</i> as an example (1,347 km), we would expect sites on the coast of mainland Europe to be considered within the document, such as those on the French and Spanish coasts. Whilst, it is noted that there is no direct line of sight between these SPAs and the project area, they should still be included for consideration.</p> <p>The minor errors with regard to site codes/features highlighted in Table 3.4 of the report should be rectified, as follows:</p> <ul style="list-style-type: none"> • Correction to remove shoveler <i>Anas clypeata</i> as a qualifying species, of the Inner Galway Bay SPA; • Correction of the Latin namesite code for Kerry Head SPA, from "004153" to "004189", as per NPWS; • Correction of the site code for Puffin Island SPA, from "00403" to "004003", as per NPWS; • Correction of the Latin name for red-throated diver, of the Rum SPA; • Correction of the site code for Glannau Aberdaron ac Ynys Enlli / Aberdaron Coast and Bardsey Island SPA, from "UK901321" to "UK9013121"; <p>Clarification should be provided on the operating frequency of the doppler velocity log (DVL), as there is inconsistency in the document.</p> <p>The applicant has not explicitly stated the distance used for screening of other plans and projects. Though it states that the study area for the project and cumulative effects encompasses typical foraging and migratory ranges for qualifying features of European designated sites, the explicit distance should be detailed.</p> <p>Abundance / distribution maps of sensitive marine mammal species.</p> <p>Inclusion of all qualifying features of all sites within area of effect.</p> <p>Conservation status of all features of all sites screened into Stage 2.</p>
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STATUTORY ENVIRONMENTAL ASSESSMENT

	Inclusion of a statement noting that there are no management plans for the sites screened into assessment.
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