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STATUTORY ENVIRONMENTAL ASSESSMENT
EIA SCREENING DETERMINATION FOR CORRIB FIELD P6 FLEXIBLE FLOWLINE INSTALLATION

RAMBOLL

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EXECUTIVE SUMMARY

Ramboll UK Limited (herein referred to as Ramboll) was commissioned by the then Department for Communications, Climate Action and Environment, now 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 Environmental Impact Assessment (EIA) Screening Determination, submitted in respect of the installation of a new flexible flowline connecting the P6 wellhead with the Corrib central manifold at the Corrib Field. The new flexible flowline will be shorter in length (158 m) than the existing flowline (1,560 m) and will significantly reduce the unnecessary flow restrictions between the P6 wellhead and the Corrib central manifold.

The applicant has submitted an application for consent to carry out the works which includes the mobilisation of a Remotely Operated Vehicle (ROV) support vessel and two work class ROVs to the installation location at the Corrib Field. Verification of the dynamic positioning (DP) and ultra-short baseline (USBL) systems will be undertaken. Prior to the removal of the existing P6 flexible flowline, an as-found survey will be undertaken, which will include underwater video/stills and a geophysical survey. The flowline replacement will be carried out by ROV, with the existing flowline decoupled from the Corrib central manifold and P6 wellhead and the terminations moved at either end to allow the new flexible flowline to be installed. The existing flowline will be capped and preserved in situ on the seabed for future use. Following completion of the installation works there will be reinstatement of the worksite and an as-left survey will be undertaken.

The application was originally submitted in January 2020 and then withdrawn in July 2020 due to the works not proceeding in 2020. The applicant then resubmitted their application in September 2020, with revised dates for progressing works on the Corrib Field P6 Flexible Flowline in either 2021 or 2022.

The competent authority (DECC) is required to give consideration to the potential for likely significant effects of such activities on the environment, having regard to the EU Directive (2011/59/EU), as amended by Directive 2014/52/EU (herein referred to as "The EIA Directive")and relevant jurisprudence and guidelines.

This report provides a review of the EIA Screening Report prepared by RSK on behalf of the applicant and submitted with their application. Public consultation on the information provided by the applicant has been undertaken by the DECC. The consultation responses received by the DECC have been taken into consideration in the preparation of this report.

The report provides a conclusion that can be used by the DECC to issue an EIA screening determination. The information presented within the applicant's EIA Screening Report is considered to be complete and that no further information is required and provides adequate information to allow the DECC to issue an EIA screening determination.

Table ES.1 summarises the overall screening conclusion.

Table ES.1: Summary of Screening Assessment for Projects listed on Annex II of the EIA Directive

Outcome of Screening Report Assessment	Overall Screening Opinion / EIA Required?
~~Likely Significant Effects on the Environment~~	~~**EIA required**~~
~~More information is required to inform decision~~	~~**Unknown if EIA is required – Request further information from the applicant**~~
No Likely Significant Effects on the Environment	**EIA not required**

1. INTRODUCTION

Ramboll UK Limited (herein referred to as Ramboll) has been commissioned by the then Department for Communications, Climate Action and Environment, now 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 Limited (referred to herein as the applicant) for an Environmental Impact Assessment (EIA) Screening Determination, submitted in in respect of the Corrib Field P6 Flexible Flowline Installation 2020.

The application was originally submitted in January 2020 and then withdrawn in July due to the works not proceeding in 2020. The applicant then resubmitted their application in September 2020, with revised dates for progressing works on the Corrib Field P6 Flexible Flowline in either 2021 or 2022.

1.1 Project Background

Vermilion Exploration & Production Ireland (Vermilion) plan to replace the flexible flowline connecting the P6 subsea wellhead with the Corrib central manifold. The new flowline will be shorter in length (158 m) than the existing flowline (1560 m) and will significantly reduce unnecessary flow restrictions between the wellhead and the manifold. The work scope will require the mobilisation of a remotely operated vehicles (ROV) construction support vessels and two ROVs. The operations will comprise As-Found and As-Left geophysical surveys, as well as the works to replace the flowline.

This report has been prepared as a statutory assessment of a request for an Environmental Impact Assessment screening determination.

1.2 Documents Reviewed

The following documents have been reviewed to inform this report:

- Corrib Field P6 Flexible Flowline Installation 2020: EIA screening and environmental risk assessment ref 660841 dated 24 January 2020, updated 10 June 2020 and updated again 03 September 2020;
- Corrib Field P6 Flexible Flowline Installation 2020: Method Statement Revision 03 dated August 2020; and
- Corrib Field P6 Flexible Flowline Installation 2020: Application to Conduct an Offshore Survey.

This report has been prepared by competent experts with appropriate expertise in EIA.

2. TERMS OF REFERENCE

2.1 Legislative Context

This EIA screening assessment has been prepared in line with applicable European and Irish legislation, including:

- EU Directive on assessment of the effects of certain public and private projects on the environment (Environmental Impact Assessment) Directive (2011/92/EU) and as amended by Directive 2014/52/EU;

2.2 Relevant Guidance

This report has been prepared having regard to guidance on EIA screening for planning authorities, published by the Department of Housing, Planning and Local Government (DHPLG) in 2018[1]. In addition, the structure and content of this report is based upon the methodology published by the European Commission in 2017[2].

2.3 Consultation

2.3.1 Prescribed Bodies

The following bodies were notified of the original application made in January 2020 and of the revised application made in September 2020:

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

Two responses were received in relation to the original application made in January 2020 as follows:

- Maritime Services Division, Department of Transport, Tourism and Sport dated 17 February 2020; and
- Maritime Safety Policy Division, Irish Maritime Administration, Department of Transport, Tourism and Sport dated 28 January 2020.

Two responses were received in relation to the revised application made in September 2020 as follows:

- Maritime Safety Policy Division, Irish Maritime Administration, Department of Transport dated 18 September 2020; and

[1] https://www.housing.gov.ie/sites/default/files/publications/files/guidelines_for_planning_authorities_and_an_bord_pleanala_on_carrying_out_eia_-_august_2018.pdf
[2] http://ec.europa.eu/environment/archives/eia/eia-guidelines/g-screening-full-text.pdf

- Sea Fisheries Protection Authority dated October 2020.

The following observations were made:

- General comments and comments on environmental issues
  - I wish to inform you that (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, Storage 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.
  - As per Sea Pollution (Miscellaneous Provisions) Act 2006 Part 3 Para 20 and 21 refers, the operator should include in the submission
    - A risk assessment re hydrocarbon discharge should be included in submission.
    - A plan for the prevention and minimisation of any accidental discharge.
  - The Mayo area has a comprehensive inshore fishing fleet, however the area for site works is further offshore so shouldn't adversely affect the inshore fleet.
  - There would be fishing activity by vessels for demersal and pelagic species in the surrounding area to the site. These may be Irish vessels but may also be foreign vessels. However, the fishing in the surrounding areas shouldn't be adversely affected.
  - There should be little risk with the proposed activities from a food safety point of view, the main concern would be from any chemical spillage, however these concerns are addressed in the documents provided. There is no active aquaculture site close to this area and therefore foresee no negative impact on any of the shellfish growing sites due to the considerable distances between the Corrib site and any aquaculture site.

Appropriate regard has been given to the issues raised in these submissions, and relevant provisions are included in the mitigation and management commitments in section 5 of this report.

2.3.2 Public Consultation

The original application was advertised by the DECC on their website following receipt on 29 January 2020. Invitations for submissions were advertised by the DECC to be received by close of business on 28 February 2020 ensure consideration by the Minister.

One response was received, and the points raised by this have been considered and responded to in the following sections of this report:

- Response from a private individual (name withheld for privacy) dated 28 February 2020.

Following receipt of additional information from the applicant, the DECC advertised a further consultation period on this information from 17 June 2020 to 02 July 2020. Two responses were received to this consultation:

- Response from a private individual (name withheld for privacy) dated 18 June 2020; and

- Response from a private individual (name withheld for privacy) dated 02 July 2020.

The revised application was advertised by the DECC on their website following receipt on 18 September 2020. Invitations for submissions were advertised by the DECC to be received by close of business on 18 October 2020 ensure consideration by the Minister. One response was received to this consultation:

- Response from Irish Whale and Dolphin Group dated 16 October 2020.

2.3.3 General Consultation Responses

The following general responses have been received:

- Referring to Article 6 of the Environmental Impact Assessment Directive, why is the public participation process regarding the further information less than 30 days?
- It has been noted that of late PAD has failed to supply survey references and these are required for documentation and enable clarity of which procedures and documentation apply to each job. It would be helpful if such references (used in previous years by PAD) were added to all documentation. It is noted that two different regulatory reference ids are used in the forms in the 2017 report and therefore presumably these are not regulatory reference numbers. Furthermore, MMOs should be required to submit data forms in excel, making evaluation of data easier and allowing it to be added to a database without retyping.

  The reporting requirements in 2017 were known and stated as a requirement in the documentation submitted prior to this work. Therefore reporting "must" be carried out as outlined in the guidelines and if it is not the case in 2017 it should be regarded as unsatisfactory and non-compliant when reviewed by the regulator. It is noted there is mention of an annual report, but this does not alter requirements which are due 30 days after project completion. So, in the case an annual report is irrelevant to the reporting requirements.

The above comments are either general comments relating to the application or process or are not relevant to the application and EIA screening under consideration. A response has been issued from DECC on the timeframes for consultation and the issue of reporting on the current application is addressed in Table below.

2.3.4 Project Specific Consultation Responses

The following project specific responses have been received:

Consultee	Project Specific Comments	Response
Private Individual	This application appears to be a re-hash of the application made last year by the same company, Vermilion Exploration and Production Ireland Limited (Vermilion) with the only discernible difference being that reference is now made to Corrib Well P6 as opposed to Corrib Well P3 last year. I remain concerned, among other things, as last year about the non-stated rationale for what is referred to as 'replacement works at Corrib Well P6'. I am further totally confused by the email I received from PAD at 13:09 this afternoon. Attached to said email is a letter dated 24 February 2020 (referring	The Petroleum Affairs Division (PAD), Department of Communications, Climate Action and Environment responded to this email on 28 February 2020, as follows: In relation to your query, Condition 20 of the Corrib Consent to Operate states that: "Subsea facilities and flowlines will be subject to annual inspection to ensure that protection measures remain effective and any remedial measures necessary to provide additional protection will be undertaken as soon as practically

Consultee	Project Specific Comments	Response
	to Letter of Approval to conduct an Offshore Pipeline Survey and Inspection and maintenance programme of the Offshore Facilities between to Corrib Field manifold and the landfall at Glengad, Co. Mayo from Petroleum Affairs Division, Department of Communications, Climate Action and Environment dated 24 February 2020.) In relation to application above, is it the intention of Vermilion to wait three months to see whether or not Judicial Review proceedings will be initiated or is it their intention to go ahead with works purportedly allowed by a Minister of State during an interregnum (shades of Frank Fahey many years ago) and for these allegedly permitted works to take place before the current application for much the same type of work - with attendant environmental factors not yet assessed - should take place. This would involve a replication of environment disturbance to the same area should it occur consecutively and not concurrently. There is no clarity of either purpose or information available to me to make a coherent submission in this regard as is my right. I ask that this current application, ref above, not be deemed assessable until there is clarity from the applicant, Vermilion, in relation to, at a minimum, whether works - with attendant environmental consequences - are intended to be undertaken consecutively or concurrently. I consider receipt of email from PAD today, detailed below, is an attempt by the Minister of State and PAD to pre-empt proper assessment of this current application. In a word, not for the first time with Corrib, this process appears to be in a mess.	possible. The first such inspection will be undertaken within the first month from the start of commercial gas production, when the flowlines are at maximum operating pressure and temperature". The letter of approval which was referred in your email refers to an application received on 16 April 2019, for (2019 annual maintenance survey to conduct an offshore pipeline survey and inspection of the offshore facilities in the Corrib Field) following observations made as part of the public consultation process. It is PAD's understanding that VEPIL propose to carry out this survey in the spring/summer of 2020. VEPIL applied for consent for their 2020 annual maintenance offshore survey and flexible flowline replacement works at Corrib Well P6, Corrib Field, northeast Atlantic, Ireland on 29 January 2020 and submissions have been invited by close of business today. Details of the proposed works, including proposed "replacement works at Corrib Well P6", and when they will be carried out is contained in the application documents which are on the Department's website.
Private Individual	The further information requested is, presumably, buried within what I believe may be described as a 'document dump' submitted by the applicant; it is therefore contrary to the spirit of the Aarhus convention in that is makes it nearly impossible for a public stakeholder to reasonably access the information in order to make a submission thereon. I had, reasonably, suggested that the	Updated information provided by the applicant was made available to the public for consultation on the DECC's website. The format of the information is considered by Ramboll to be acceptable.

Consultee	Project Specific Comments	Response
	format of the applicant response be modelled on that of Europa Energy's consultants format but at this stage do not know if such was suggested by the applicant by the EAU – if it was, then the applicant has chosen to ignore it and continue as heretofore; if it wasn't suggested to the applicant then I believe it should have been for the reasons stated above.	
	It is unclear when permitted works from last year on P3 will take or have taken place.	Marine Notice No 19 of 2020 was published by the Department of Transport, Tourism and Sport confirming that this work was to commence on the 06 May 2020, lasting approximately 20 days. The PAD section of DECC have confirmed that his work was completed.
	Figure 3-3: Corrib sub-sea overview and proposed P6 flowline replacement is alarming in terms of proper environmental assessment. The legend on Figure 3-3 clearly and unambiguously states 'Gas Pipeline (future) Umbilical (future)'. Any reasonable person reading this could only conclude that this application, purportedly for consent for an offshore survey and replacement at a specific P6 location is in essence a stalking horse for future planned work for which NO information is provided.	This application is for the replacement of the flowline between P6 and the manifold. Any future works undertaken by the applicant would be subject to future applications.
	Figure 3-4 speaks of 'potential locations' of new flowline – what, at this stage, can possibly be 'potential' about it?? Given the length of the proposed flowline is already given and that P6 and the manifold are fixed points then where/how, logically, can 'potential locations' exist?	The applicant is proposing a 158 m length of replacement flowline be installed, which is Option C on Figure 3-4.

Consultee	Project Specific Comments	Response
IWDG	The EIA states the USBL system is stated as operating "a very low sound pressure intensity level", why can't these levels be stated precisely? Generally, this equipment operates with source levels of 185 to 206 dB re1mPa approximately. Claims regarding disturbance should be based on frequency (given correctly in this case) and source levels. Additionally, it is known that much acoustic equipment produces waste noise or noise outside the target frequencies. Generally, this is not studied and may differ for different operations of the same piece of equipment.	The applicant states correctly that the source levels of the USBL will be lower than that of other geophysical equipment operating in the same frequency range, specifically the MBES. The assessment has been based on the worst-case equipment for sound intensity levels, the MBES, therefore the outcome of the underwater noise impact assessment in the EIA Screening can be applied to the USBL in a precautionary manner. The operating frequency of the USBL has been provided in the report, which is considered acceptable.
	Additionally, the USBL system at 21 kHz is within the hearing range of cetaceans as a whole and not just "small cetaceans" as stated. Mitigation recommended for the USBL on page 58 includes a soft start. Further information on mitigation is stated in Section 6. This again states the use of soft starts. It is probably not possible to initiate a soft start with the ROV/USBL acoustics, where the ROV is switched on before it is put in the water. After which the HiPap pole is usually lowered. It is not easy to think how a soft start can always be practically implemented and while a soft start should be carried out it may not be always possible and this should be acknowledged.	It is acknowledged that the USBL operates within a frequency range utilised by all cetaceans and pinnipeds. Although the document states "small cetaceans", this does not affect the validity of the conclusions of the EIA Screening. Though page 58 mentions soft start, it does not explicitly state that it will be undertaken for the USBL. Section 6 details the types of equipment / surveys that mitigation is applicable to, under the NPWS guidance, and does not include USBL in this list. Furthermore, page 43 of the application states that soft start procedures will be followed during the surveys when using the MBES survey equipment (*no other equipment mentioned*). Therefore, it is our understanding that the applicant does not intend to undertake mitigation for the USBL, which is in accordance with the NPWS guidance.
	The soft start specified for the MBES system in section 6.1.2.2 is logical and commendable and covers the transmit range for the equipment precisely and requires 10 dB increments of sound. Generally, elsewhere 6 dB sound increments, which is a doubling of sound pressure, is the recommended standard, but 10 dB steps are acceptable in this case. However as the MBES system is deployed on the ROV the necessity of soft starting the MBES system using an	It is noted that the 10 dB increments have been provided as an example of the soft start procedure undertaken for the MBES; other methods are also detailed in Section 6.1.2.2. The applicant has proposed to undertake soft starts of the MBES, in line with environmental best practice. There is no requirement to undertake mitigation measures

Consultee	Project Specific Comments	Response
	inaudible frequency of 400 kHz, while the USBL is obviously operating in audible frequency ranges seems questionable but since multi-beam operation will not impact marine mammals it is not really important to mitigate for this equipment.	for the USBL under the NPWS Guidance.

	The statement in the EIA Screening "*The MMO must submit a report, as outlined in NPWS code of practice, within 30 days of the proposed activities to the relevant Licensing Authority, and copy the report to the NPWS"* is welcome but has been stated in previous EIA Screenings for example in the 2017 works. Additionally, there is a commitment to log soft starts and report on these as stated in 2017. It would be worthwhile if the regulator stated in the licence who would review the MMO reports to ensure these are in line with requirements as clearly stated in the EIA and NPWS guidelines and if the license clearly assigned a PAD or regulatory reference for said works.
	The guidelines state:
	The MMO report must include the following:
	• Executive Summary – A concise text at the beginning of the report highlighting the MMO work undertaken and summarising in turn:
	  • All marine mammal detections made during the survey programme;
	  • All detections made prior to the commencement of the operation/activity (e.g. before ramp-up);
	  • All operational responses to the presence of animals in the area and the associated outcomes;
	  • All occurrences of night-time operation/activity, continuation into poor weather and stoppages;
	  • Any and all problems arising during implementation of the prescribed mitigation; and
	  • A concluding statement regarding the operational efficacy of the mitigation measure performed.
	• Dates and location(s) of the plan/project;
	• Name, address and qualifications of the MMO(s) on the Platform/Vessel;
		The issues raised around reporting will be brought to the attention of PAD and a condition will be added to any consent issued to require the applicant to submit an MMO report in line with the NPWS code of practice.

Consultee	Project Specific Comments	Response
	• Name of any other Platform/Vessel involved in the operation/activity; • Latitudes, Longitudes or Grid references for the area(s) of operations monitored by the MMO; • Details of the observation platform used for marine mammal monitoring, including its height above sea level; • Details of all sound-producing operations/activities undertaken during the period of survey; • Details for monitoring watches conducted for marine mammals; • Details of all marine mammal sightings recorded outside monitoring watches (e.g. incidental observations), including records from additional personnel onboard; • Details of any problems encountered during marine mammal monitoring, start-up procedures, ramp-up (soft start) procedures or during full scale operation/activity. Looking at a previous report from the Corrib field, the latest available report is for 2017 when the field was managed by Shell. This contains a Summary but not all the information required in the summary such as night-time operation and operational responses to marine mammals, problems with mitigation and efficacy. Details showing location of project are vague and no precise details are available. There may be some problems with GDPR regarding personal data on reports, but the names of the MMOs are not present (except on forms) and it is not clear they in fact wrote this report, which is required from them. A description of the vessels involved is normal but absent. Latitudes and longitudes of operations area are absent. Details of the observation platform are absent. Details of sound producing activity are only obtained from operations form only and are not in the report and should be. Additionally, the operations form does not allow us to know what piece of equipment was in use at any one time, though at one time a pinger is mentioned in the comments on the Operations form. Details of monitoring watches are to be in the report and simply cutting and pasting in the Effort forms does not really suffice. Details of sightings outside watches should be	

Consultee	Project Specific Comments	Response
	recorded separately in the report, even if this is stated as none. Details of any problems encountered are also not included in the report as required. Additionally, an Operator's report is required, also within 30 days of project completion. This information could be included in the MMO report as it is environmental data only that is required and much of the information is the same. However, it does require "specifications and acoustic characteristics of all sound producing equipment" and details of the equipment ramp-up.	

3. PROJECT DETAILS

Table 3.1 provides a template for summarising information relating to a proposed project, when an EIA Screening Report for Seismic/ Geophysical survey is submitted for review.

Table 3.1: Application Details

Project Title:	Corrib Field P6 Flexible Flowline Installation
Applicant:	Vermillion Exploration & Production Ireland Ltd
Exploration Licence Reference:	n/a – part of Corrib Petroleum Lease
Date EIA Screening Request Received (Respond within 90 days):	10/09/2020

Brief Project Description:

The objective of the survey is to install a new flexible flowline connecting the P6 wellhead with the Corrib central manifold at the Corrib Field. The new flexible flowline will be shorter in length (158 m) than the existing flowline (1,560 m) and will significantly reduce the unnecessary flow restrictions between the P6 wellhead and the Corrib central manifold. The proposed work scope to do this is as follows:

- Mobilisation of the ROV support vessel (Siem Spearfish) and two ROVS from a UK port to the Corrib Field10;
- Trials and verification of dynamic positioning (DP) system and ultra-short baseline system (USBL) to be undertaken prior to arrival within the Corrib Field exclusion zone;
- Completion of an As-Found Survey at the P6 work site, including underwater video / stills, acoustic geophysical survey and any seabed preparation works required prior to commencement;
- Depressurisation and isolation of the existing flowline from the central manifold and P6 wellhead (gas displaced into subsea process system);
- Disconnection of existing flowline from central manifold and P6 wellhead (existing flowline will be left in situ on the seabed);
- Preparation of laydown area and lay route for new flexible flowline;
- Deployment of the new flexible flowline from the support vessel and connection to central manifold and P6 wellhead using ROVs and the remotely operated ICARUS tie-in tool;
- Pressure testing and pre-commissioning activities for new flowline;
- Installation of protective concrete mattresses along length of new flexible flowline and in places along disconnected flowline to provide stability;
- Reinstatement of the worksite and completion of an As-Left Survey including underwater video / stills and geophysical survey;
- Demobilisation of the support vessel and ROVs back to UK port.

The As-Found and As-Left surveys will be carried out using the ROVs using a combination of survey techniques, namely multibeam echo sounder (MBES) and underwater video / camera imagery. A range of other sensors may also be used as part of the survey and ROV operations including: Sound Velocity Probes (SVPs) (used to calibrate acoustic survey equipment); as well as navigation / positioning sensors including a subsea Ultra Short Baseline (USBL) beacon system, obstacle avoidance sonar, an altimeter, Motion Reference Unit (MRU), Inertial Navigation System (INS) and Doppler Velocity Log (DVL). The As-Found and As-Left surveys will be approximately 2 line km.

The survey is proposed to last approximately 6 days and occur between the months of May and October 2021 or 2020.

4. SCREENING CHECKLIST

4.1 Determining Whether a Project Should be Subject to an EIA

Under Article 4(1) of the EU Directive on assessment of the effects of certain public and private projects on the environment (Environmental Impact Assessment) Directive (2011/92/EU), as amended by Directive (2014/52/EU) (herein referred to as 'the EIA Directive'), projects listed in Annex I of the EIA Directive shall be made subject to an EIA.

Under Article 4(2) of the EIA Directive, member states must determine whether projects listed in Annex II of the Directive shall be made subject to an EIA through either case-by-case examination and / or thresholds or criteria set by the member state.

Table 4.1 sets out the first step in determining whether a project requires an EIA under the EIA directive.

Table 4.1 Checklist – EIA Screening for Seismic/ Geophysical Survey or Exploratory Drilling Project

a) Is the project listed on Annex I of the EIA Directive? • If Yes, EIA is required for the project. • If No, EIA may be required for the project - Proceed to Section b)	No
b) If No - Is the project listed on Annex II of the EIA Directive? • If Yes, EIA may be required for the project - proceed to Sections 4.2 and 4.3. • If No, EIA is not required for the project.	No, however the applicant has requested an EIA Screening determination from the DECC and has provided the necessary supporting information.

4.2 Information to be Provided by the Developer on the Projects Listed in Annex IIA of the EIA Directive

Under Article 4(4) of the EIA Directive, a minimum amount of information is required to be provided by the Developer on the characteristics of the project and its likely significant effects on the environment.

The checklist provided in this section (Table 4.2) confirms whether the EIA Screening Report submitted for a project listed on Annex II of the EIA Directive provides the required information.

The developer is required by Article 4(4) to consider (where relevant) the available results of other relevant assessments on the effects of the environment carried out pursuant to other Union legislation other than the EIA Directive.

Table 4.2: 'Information to be Provided' Criteria, as set out in Annex IIA of the EIA Directive, Meet the Minimum Requirements

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the minimum requirements:**
a) A description of the project including in particular: (a) A description of the physical characteristics of the whole project and, where relevant, the demolition works. (b) A description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.	Yes	An adequate description of the project works is included. Several figures showing the location of the existing and new infrastructure are provided. The total line distance over which geophysical data acquisition will occur is 2 line km. The environmental receptors that are or may be present in the location of the proposed works have been described sufficiently. A figure has been provided to show the nearby designated sites to the works, and a table to display the distance to these sites.
b) A description of the aspects of the environment likely to be significantly affected by the project.	Yes	An adequate description is provided of the physical environment, benthic environment, Annex IV species (cetaceans, turtles), seals, fish (including migratory fish), seabirds, protected areas, and human environment.
c) A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from: (a) The expected residues and emissions and the production of waste, where relevant; (b) The use of natural resources, in particular soil, land, water and biodiversity.	Yes	An adequate description is given of the likely effects on the environment from the expected residues and emissions and production of waste. Vessel discharges and other waste streams from the vessel will be managed in accordance with the requirements of MARPOL 73/78. There is sufficient description of the natural resources to be used and whether this is likely to result in a significant effect.
d) The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.	N/A	An assessment of whether the criteria of Annex III were taken into account is described in Section 4.3 below.

4.3 Criteria to Determine Whether a Project Listed on Annex II of the EIA Directive is Likely to have a Significant Effect on the Environment

Under Article 4(3) of the EIA Directive, when determining whether a project listed on Annex II requires EIA, the Irish government (as the member state) must take into account the relevant selection criteria set out in Annex III of the Directive.

Annex III criteria is grouped into 3 main categories; 'characteristics of the projects', 'layout of the projects' and 'type and characteristics of the potential impact' of the projects.

The checklists provided in this section (Table 4.3 – 4.5) have been developed to allow the assessor to ascertain whether a screening report submitted for a project listed on Annex II of the EIA Directive meets the requirements for a screening opinion to be determined and determine whether the project is likely to have any significant effects on the environment.

4.3.1 Characteristics of Project

Table 4.3 summarises the consideration given by the applicant to the 'Characteristics of the Projects' in the EIA Screening Report.

Table 4.3: 'Characteristics of the Project' Criteria, as set out in Annex III of the EIA Directive

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements:**
a) The size and design of the whole development;	Yes	The size and design of the Corrib field itself is discussed, including the parameters of the existing P6 flowline to be decommissioned and potential locations of the new flexible flowline. The total line distance over which geophysical data acquisition will occur is 2 line km. The survey vessel has been identified as well as the anticipated equipment.
b) Cumulation with other existing or approved developments;	Yes	The applicant has detailed five other projects that could result in cumulative impacts with the proposed project, as they will occur within 200 km of the proposed survey and have the potential to overlap on a temporal scale. The cumulative impacts that have been considered are underwater noise (with potential for disturbance from physical presence of the vessel also mentioned).
c) The use of natural resources, particularly land, soil, water and biodiversity;	Yes	An adequate description of the use of natural resources has been provided by the applicant.
d) The production of waste;	Yes	An adequate description on the production of waste has been provided by the applicant.
e) Pollution and nuisances;	Yes	An adequate description of the pollution and nuisances generated by the project have been provided by the applicant.

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements:**
f) The risk of major accidents and / or disasters, which are relevant to the project concerned (including those caused by climate change);	Yes	An adequate description of the risk of accidental events has been provided. The likelihood of such an event occurring is considered to be very low. The project will implement industry standard protocols and procedures to minimise the risk of occurrence of such an event. The overall significance of the impact is determined as minor (very unlikely). There is no consideration of climate change risks. However, it is acknowledged that the Corrib Field is located in an area of frequent bad weather conditions therefore operations are designed to be undertaken in adverse conditions. Additionally, due to the short-term nature of the works it would not be expected that climate change would be a consideration over the lifetime of the project.
g) Risks to human health (e.g. due to water contamination or air pollution).	Yes	An adequate description of the substances and materials that could be harmful to human health has been provided.

4.3.2 Location of Project

The 'Location of Projects' Criteria, as set out in Annex III of the EIA Directive, considers the environmental sensitivity of geographical areas likely to be affected by projects with particular regard to the specified criteria.

Table 4.4 provides a template to determine whether a EIA Screening Report submitted by an applicant for a project listed on Annex II of the EIA Directive, meets the requirements for the 'Location of the Projects' Annex III criteria, required for the assessor to determine an EIA Screening Opinion.

Table 4.4: Checklist to Determine Whether 'Location of the Projects' Criteria, as set out in Annex III of the EIA Directive, Meet the Minimum Requirements to Determine a Screening Opinion.

The environmental sensitivity of geographical areas likely to be affected by the project are considered in the Screening Report, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements for a screening opinion:**
a) The existing and approved land use;	Yes	The applicant describes the existing use of the seabed within the area of the proposed works. The Corrib natural gas field (Corrib Field) is described adequately to understand the location of the works.

The environmental sensitivity of geographical areas likely to be affected by the project are considered in the Screening Report, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements for a screening opinion:**
		The occurrence of shipping and fishing activity as well as existing oil and gas infrastructure is identified within the EIA Screening Report.
b) The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the areas and its underground;	Yes	The applicant acknowledges the presence of the following resources in the vicinity of the project: commercial fisheries, offshore waters, biodiversity, shipping, cultural heritage and other users.
c) The absorption capacity of wetlands, riparian areas & river mouths;	N/A	The project location as well as the proposed activities means that this criterion is not applicable.
d) The absorption capacity of coastal zones and marine areas;	Yes	The absorption capacity of the marine environment (and coastal where applicable) were adequately described.
e) The adsorption capacity of mountain and forest areas;	N/A	The project location as well as the proposed activities means that this criterion is not applicable.
f) The absorption capacity of nature reserves and parks;	N/A	The project location as well as the proposed activities means that this criterion is not applicable. Natura 2000 sites are considered separately.
g) The absorption capacity of areas classified under national legislation (e.g. Natura 2000 area);	Yes	The applicant has listed protected sites under national legislation (Natura 2000) and also OSPAR MPAs that are relevant to the project. Further information is provided by the applicant in an Appropriate Assessment Screening Report and they have been assessed separately.
h) The absorption capacity of areas in which there has already been a failure to meet the environmental quality standards, laid down by legislation and relevant to the development or in which it is considered	N/A	There are no known areas nearby where there has already been a failure to meet the environmental quality standards.

The environmental sensitivity of geographical areas likely to be affected by the project are considered in the Screening Report, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements for a screening opinion:**
that there is such a failure;		
i) The absorption capacity of densely populated areas;	N/A	The applicant states that there are no densely populated areas at the survey location.
j) The absorption capacity of landscapes and sites of historical, cultural or archaeological significance.	Yes	The applicant states that there are no reported or encountered areas with cultural heritage or archaeological significance in the Corrib Field and offshore pipeline area.

4.3.3 Type and Characteristics of the Potential Impact

The 'type and characteristics of the potential impact' criteria, as set out in Annex III of the EIA Directive, consider whether a project is likely to have a significant effect on the environment. Likely significant effects are considered in relation to the criteria set out in Tables 4.3 and 4.4, with additional regard to the impact on the project factors specified in Article 3(1) of the EIA Directive: population and human health; biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; Land, soil, water, air and climate; material assets and cultural heritage and the landscape, in addition to the interaction between these factors.

Table 4.5 provides a template to determine whether a Screening Determination could be made in regard to the type and character of the potential impact of a project.

Table 4.5: Template to Determine Screening Opinion for Type and Character of the Potential Impact of a Project

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Population and human health	**Physical presence of vessel and equipment – obstruction to other sea users (fishing vessels)** The potential for interaction with fisheries is described. Key aspects of the project that influence the level of interaction (e.g. spatial and temporal extent) are also detailed. **Physical presence of vessel and equipment - Accidental Hydrocarbon spill (unplanned event)** The potential for an accidental oil spill at sea is mentioned and potential causes are identified. There is a very low probability of an event.	The magnitude and spatial extent of the impact;	Yes	**Physical presence of vessel and equipment – obstruction to other sea users (fishing vessels** The report states that physical presence of the vessels may cause interactions with fisheries. Duration of the impact will be the length of the survey. The report details mitigation measures for reducing the impact. Impact is considered negligible. **Physical presence of vessel and equipment - Accidental Hydrocarbon spill (unplanned event)** Nature of the oil spill impact and the pollutant release impact is characterised. Duration of liquid release impact will very short due to rapid dispersion and dilution. The report details mitigation measures for reducing the impact. The applicant concludes that, due to the very low likelihood of occurrence of such an event, the impact is of minor significance.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
	Physical presence of vessel and equipment – Displacement of pollutant liquids into environment The release of pollutant liquids in the new flexible flowline, which will occur as part of the survey, is characterised.	The expected onset, duration, frequency and reversibility of the impact;	Yes	**Physical presence of vessel and equipment – Displacement of liquids into environment** The nature of release of liquids to the environment is characterised. The report details mitigation measures for reducing the impact. Impact is considered negligible. As the impacts are not significant, they are not considered for cumulative impact assessment.
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	
Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and	Protected marine mammals (e.g. Habitats Directive Annex II and IV species) have a known distribution within the proposed survey area. **Underwater Acoustic Emissions (noise) – Vessel engines and geophysical equipment on sensitive species** Sensitive species to underwater noise, such as cetaceans, seals, fish, seabirds, and turtles, have a known distribution in the survey area. The planned	The magnitude and spatial extent of the impact;	Yes	**Underwater Acoustic Emissions (noise) – Vessel engines and geophysical equipment on sensitive species** The report details an estimate for disturbance to marine receptors (specifically harbour porpoise, which could be considered the worst-case scenario) from underwater noise. Duration of underwater noise impacts is 2 days, with reversibility assessed.
		The nature of the impact;	Yes	
		The transboundary	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Directive 2009/147/EC;	geophysical survey uses a multi-beam echosounder (MBES) and other acoustic sources which operate across a range of different frequencies which could interact with sensitive marine receptors. Comparison of the acoustic output of the geophysical survey equipment and impact thresholds of the marine receptors has been undertaken. The report uses information in the literature on similar systems as opposed to project-specific modelling. This is considered satisfactory as the literature example is likely to have a greater impact radius and therefore represents a worst-case approach. **Physical disturbance – flowline replacement works** The replacement of the flowline will lead to physical disturbance of the seabed environment. Changes to the seabed environment include localised suspension of sediments and temporary and permanent alteration to the seabed habitat. Loss of benthic habitat is predicted, though importance and uniqueness of benthic habitats in the Corrib field is low. **Protected Areas** See review of NIS for comments on sufficiency of protected areas assessment. Impact pathways to designated areas are through impacts to their features (marine mammals, habitats), which are detailed above.	nature of the impact;		The impact will occur to the immediate benthic environment. The probability of impact to marine species is low (taking into account mitigation). No likely significant effect is predicted for underwater noise on marine receptors, taking into account mitigation measures. The residual impact is considered low. Underwater noise is considered for cumulative impacts. **Physical disturbance – flowline replacement works** The report details the spatial scale and temporal nature over which physical seabed disturbance will occur. The overall significance of this impact is determined negligible. No mitigation is proposed for seabed impacts however it is considered that none would be applicable. As the impacts are not significant, they are not considered for cumulative impact assessment.
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Land, soil, water, air and climate;	**Removal and installation of the flowline – water quality and changes to seabed** Key activities are adequately defined and relevant and associated impacts are identified. Potential interaction with relevant receptors considered. Effects are considered by the applicant to be negligible. **Physical presence of vessel and equipment – routine water quality/marine discharges** The potential discharges into the marine environment are identified and the legal vessel requirements understood. Any discharges are likely to be small in volume. **Atmospheric emissions - Air quality** The report details the amount of atmospheric emissions and the required procedures to minimise them. **Accidental Hydrocarbon spill** The potential for an accidental oil spill at sea was discussed and potential causes identified. **Planned Pollutant Release – Water quality**	The magnitude and spatial extent of the impact; The nature of the impact; The transboundary nature of the impact; The intensity and complexity of the impact; The probability of the impact; The expected onset, duration, frequency and reversibility of the impact;	Yes Yes Yes Yes Yes Yes	**Removal and installation of the flowline – water quality and changes to seabed** The report identifies spatial extent and magnitude of the impacts to the seabed and planned release. The report also characterises the intensity and complexity of the seabed impact. Impact is considered negligible; however, it is unavoidable. **Physical presence of vessel and equipment – routine water quality/marine discharges** Impact is determined as of minor significance. **Atmospheric emissions - Air quality** Extent of impact from routine and atmospheric emissions is negligible. Impact is determined as of minor significance. **Accidental Hydrocarbon spill** Accidental hydrocarbon spill is characterised and deemed of low likelihood and not expected to occur. Impact is determined as of minor significance (Very unlikely). **Planned Pollutant Release – Water quality** The relevant receptors for planned pollutant increase are identified. Probability of the impact is inferred to

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
	Key activities (flowline replacement) are adequately defined and relevant and associated chemical releases are identified. Management measures which have been put in place ensure discharges of pollutants are non-significant are also identified.	The cumulation of the impact with the impact of other existing or approved developments;	Yes	be low. Routine emissions impacts are minimised through standard procedures. Duration is inferred to be the duration of the survey for routine emissions however pollutant release will lead to very short-term changes. Impact is considered negligible. As the impacts are not significant, they are not considered for cumulative impact assessment.
		The possibility of effectively reducing the impact.	Yes	
Material assets, cultural heritage and the landscape	**Cultural Heritage and Archaeological Significance** The area of works is an established offshore gas field. There are no reported areas with cultural heritage in the field. No features of archaeological significant were found between the field and landfall of the offshore pipeline. Therefore, there is no impact pathway. **Landscape** There are no area or features of high landscape value or scenic value on or around the project, therefore there is no pathway for impact.	The magnitude and spatial extent of the impact;	Yes	There are no reported areas of cultural heritage significance for the Corrib Field and no archaeological features of significance were discovered during construction of the offshore pipeline. The impacts are therefore not considered significant. There are no areas or features of high landscape value or scenic value and therefore impacts upon this environmental receptor are not considered significant.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	
The interaction between the factors	The applicant's report provides explicit consideration of the interaction between factors i.e. in-combination effects on a single receptor.	The magnitude and spatial extent of the impact;	Yes	The report concludes that there will be no in-combination effects arising from the project, through any pathway alone or in-combination.
		The nature of the impact;	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
		reducing the impact.		

5. MITIGATION AND MANAGEMENT COMMITMENTS

The mitigation and management commitments set out in Table 5.1 have been complied with reference to the commitments made by the applicant in the documentation reviewed. Table 5.1 documents the commitments made and whether these would be considered industry best practice or whether a condition is recommended to be included should permission be granted.

Table 5.1: Checklist to Identify Mitigation Measures Committed to by the Applicant.

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Physical Presence	The work will be scheduled so as to minimise the duration of the project activities and to confine activities to as small an area as possible (i.e. directly over the pipeline and umbilical route, and other seabed assets being surveyed).		X
	Dedicated MMO and vessel crew will monitor for any interactions with Annex IV species that cause concern	X	
	Acoustic Survey equipment will be mounted directly on ROV reducing the likelihood of interaction (such as entanglement) with Annex IV species.		X
	Other equipment such as the replacement flexible flowline, rock gabions and concrete mattresses will be lowered to the seabed using a taut vertical cable, reducing the likelihood of interaction (such as entanglement) with Annex IV species.		X
	The degree of physical presence of equipment and material on the seabed during construction will be confined to as small an area as possible in order to limit the spatial extent of disturbance. Works will also be undertaken over a short duration.		X
	The ROV support vessel will be largely stationary and confined to the immediate area of operations at the Corrib Field.		X
Physical Disturbance	The existing flexible flowline will be moved only at the ends where it joins to the P6 wellhead and at the Corrib Central Manifold in order to minimise disturbance to the seabed and limit the degree of resuspension of seabed sediments.		X
	At the end of the installation works, the work site on the seabed will be reinstated and where possible equipment and materials will be removed. An As-Left survey will be undertaken to confirm that the work site has been left in as good a state as possible prior to departure.	X	
	The existing flowline will be preserved for future use in situ on the seabed, thus minimising the disturbance to the seabed environment that would be caused by its removal, but also ensuring that it can be reused in the future.		X
Interactions with Other Sea Users	Fisheries liaison procedures in place to mitigate interaction with fisheries and other users. This liaison will include relevant fisheries and other maritime organisations to communicate the operations and survey schedule and enable activities to be planned accordingly.	X	
	All works will be within the fisheries exclusion zone at the Corrib Field and a Notice to Mariners should be issued prior to the works commencing.	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Underwater Noise	At the start of proposed activities, power will increase slowly from a low intensity (a 'soft start') to encourage avoidance reactions by marine mammals, fish and marine reptiles.	X	
	The ROV support vessel operator must provide a report (including a daily log) on the operation of survey equipment that will indicate the soft starts and their duration to the Marine Mammal Observer (MMO, see Mitigation for Marine Megafauna below). This information will be made available to the NPWS	X	
	Following NPWS Guidance (2014) This includes pre-start monitoring, soft start, and guidance on breaks in sound output.		X
	A qualified and experienced Marine Mammal Observer (MMO) will be present onboard the ROV support vessel. The MMO will have undergone marine mammal observation training (JNCC or equivalent) and have spent a minimum of six weeks of marine mammal survey experience at sea over a three-year period	X	
	The MMO must submit a report, as outlined in the NPWS code of practice, within 30 days of completion of the proposed activities to the relevant Licencing Authority, and copy the report to the NPWS	X	
	The MMO must use a distance measuring stick, reticle telescope or binoculars to ascertain distances to marine mammals.	X	
	Pre soft start scans (pre-start monitoring) Sound-producing activities will only commence in daylight hours where effective visual monitoring, as performed and determined by the MMO, has been achieved. Where effective visual monitoring is not possible, the sound producing activities shall be postponed. • Effective visual monitoring determines the presence or absence of megafaunal species before sound-producing activities commence, and should be undertaken in good weather conditions, where the sea state is low and visibility is good (no fog, heavy rain). • MMOs should survey the area for the presence of species 30 minutes before the onset of the soft start. • A minimum distance of 500 m is required between the centre of the sound source and the nearest species before soft start can commence. • If species seen within 500 m of the centre of the sound source the start of the sound source(s) should be delayed until they have moved away, allowing adequate time after the last sighting for the animals to leave the area (30 minutes). If species do not leave the area it is recommended that the vessel alters course to ensure that the animals are outside the 500 m exclusion zone when soft start commences (This measure may not be implementable, as survey operations will be undertaken while the vessel is	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	stationary with equipment deployed to the seabed at the Corrib Field). • An agreed and clear on-site communication signal must be used between the MMO and the Works Superintendent as to whether the relevant activity may or may not proceed, or resume following a break (see below). It shall only proceed on positive confirmation with the MMO. • Soft start should commence after a 500 m area around the vessel has been confirmed clear of species for 30 minutes.		
	Soft Start/Ramp up procedure • In commencing an acoustic survey operation, the following soft start (or ramp up) must be used, including during any testing of acoustic sources, where the output peak sound pressure level from any source exceeds 170 dB re: 1µPa @1m: a. Where it is possible according to the operational parameters of the equipment concerned, the device's acoustic energy output shall commence from a lower energy start-up (i.e., a peak sound pressure level not exceeding 170 dB re: 1µPa @1m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20 minutes. b. This controlled build-up of acoustic energy output shall occur in consistent stages to provide a steady and gradual increase over the ramp up period (e.g., output peak sound pressure level of 170 dB→ 180 dB→ 190 dB→ 200 dB→ 200+ dB over 20 minutes). c. Where the acoustic output measures outlined in steps (a) and (b) are not possible according to the operational parameters of any such equipment, the device shall be switched "on" and "off" in a consistent sequential manner over a period of 20 minutes prior to commencement of the full necessary output. • In all cases where a ramp up procedure is employed the delay between the end of ramp-up and the necessary full output should be minimised to prevent unnecessary high-level sound introduction into the environment. • Once the ramp up procedure commences, there is no requirement to halt or discontinue the procedure at night-time, nor if weather or visibility conditions deteriorate nor if species occur within a 500 m radial distance of the sound source, i.e., within the Monitored Zone.	X	
	Break in sound input • If there is a break in sound output for a period greater than 30 minutes (e.g., due to equipment failure, shut-down, survey line or station change) then all pre-start monitoring and a subsequent ramp up procedure	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	(where appropriate following pre-start monitoring) must be undertaken. • For higher output survey operations which have the potential to produce injurious levels of underwater sound a shorter 5 - 10 minute break limit is required after which period all pre-start monitoring and a subsequent ramp up procedure (where appropriate following pre-start monitoring) shall recommence as for start-up.		
Atmospheric Emissions	Regular maintenance of onboard engines in line with MARPOL 73/78 Annex VI; Maritime Registry of Shipping (MRS); and any other similar requirements.	X	
	The use of a modern vessel that complies with the Clean Design class requirements for fuel efficiency and emissions control.	X	
Discharges to the Sea	Shipboard waste disposed of in accordance with MARPOL 73/78 Annex V with the biochemical oxygen demand of sewage and galley waste discharges reduced to 50 mg/l and macerated to less than 25 mm, using a treatment process before release	X	
	Material Safety Data Sheets (MSDS) will be made available for any chemicals to be used. Chemicals used will be where possible PLONOR listed or registered on the OCNS and assessed under the OSPAR HMCS based on their toxicity in the aquatic environment. Chemicals considered for use as part of this work scope are assessed as having the least impacts in the aquatic environment based on toxicity, biodegradation and bioaccumulation. In addition, the volumes of chemicals that are to be discharged should be kept to a minimum.	X	
Accidental release	Refuelling of the vessel will not be undertaken at sea but in port where spills, although unlikely to happen, can be responded to more easily, and will reduce the risk of any exposure to marine life.		X
	The vessel will operate with strict safety, navigational, operating and communications procedures in place in order to avoid collisions. This will include the use of Automatic Identification System (AIS) tracking, adherence to the Collision Regulations, communication with other vessels and 24 hour look ahead plans.		X
	The fuel to be used by the vessel is regular marine grade oil (MGO) and not heavy fuel oil (HFO) that could represent a greater environmental hazard if spilled.		X
	Onboard the vessel, the valves between fuel tanks will be kept closed, thereby minimising the potential for complete fuel loss. Refuelling will occur according to a specific procedure.		X
	The vessel is built according to Clean Design class requirements and as such is of double-hulled design, further reducing the likelihood of a loss of inventory of fuel oil in the event of a collision or grounding.		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	Maintenance, audit and inspection plans will be in place to mitigate the potential risk of an oil leak at an early stage.	X	
	Shipboard Oil Pollution Emergency Plans (SOPEP), spill mitigation equipment and other facilities are kept onboard the vessel in order to contain or minimise spills, the vessel crew will be trained in the use of the plans and equipment.	X	
	The Emergency Response Plan will set out how spill response resources (personnel, command structure, equipment etc.) will interface, including co-ordination between other operational and survey operators, if applicable.	X	
Archaeology	Not applicable since there are no features of archaeological significance present, based on the previous work undertaken by the applicant.		
General	Use of the lowest equipment output possible in order to obtain the desired data quality	X	
	Vessel(s) working on the Corrib Project will operate in accordance with the Vessel Code of Conduct for Inspection and Maintenance Surveys (Document No. COR-14-SH-0227, 2018). This document forms part of the Operators Environmental Management Plan (EMP) and details specific measures for vessel operators to avoid impacts to marine mammals (particularly small cetaceans). Where at all possible when operating acoustic geophysical survey equipment as part of the As-Found and As-Left surveys the principles of the vessel Code of Conduct will be followed as a matter of good environmental practice.	X	

6. CONCLUSIONS

Table 6.1 provides a summary of the review of the applicant's EIA screening assessment.

Table 6.1: Conclusions of Screening Assessment, Based on Checklists Provided in Table 4.3-4.5, for Projects listed on Annex II of the EIA Directive

Summary of features of project and of its location indicating the need for EIA: Vermillion Exploration & Production Ireland wish to install a new flexible flowline connecting the P6 wellhead with the Corrib central manifold at the Corrib Field. The new flexible flowline will be shorter in length than the existing flowline and will significantly reduce the unnecessary flow restrictions between the infrastructure. The proposed works will require the use of an ROV support vessel and 2 ROVs. In addition to the installation works, an As-Left survey and As-Found survey will be undertaken using geophysical equipment (specifically a multi-beam echosounder) over approximately 2 line km. The location of the Corrib Field is approximately 65 km offshore west Ireland.	
Do you agree with the applicant's screening assessment? If no, why?	Yes. The Screening Report has been prepared on behalf of the applicant by competent experts. Given the nature, size and location of the proposed project activities and the mitigation commitments made by the applicant, likely significant effects are not predicted on the environment either from this project alone or in combination with other plans or projects.
Is the project likely to have significant residual effects on the environment?	No. Given the nature, size and location of the proposed project activities and the mitigation commitments made by the applicant, likely significant effects are not predicted on the environment either from this project alone or in combination with other plans or projects.
Is EIA required? (Yes / No / More Information Required?)	No for the reasons stated above in this table, an EIA is not required, subject to the implementation of the mitigation commitments.
What further information is required to inform decision (if any)?	No further information is required.

Table 6.2: Summary of Screening Assessment for Projects listed on Annex II of the EIA Directive

Outcome of Screening Report Assessment	**Overall Screening Opinion / EIA Required?**
~~Likely Significant Effects on the Environment~~	~~**EIA required**~~
~~More information is required to inform decision~~	~~**Unknown if EIA is required – Request further information from the applicant**~~
No Likely Significant Effects on the Environment	**EIA not required**