An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

CORRIB FIELD: APPLICATION FOR APPROVAL TO CONDUCT AN INSPECTION AND MAINTENANCE SURVEY PROGRAMME OF THE CORRIB OFFSHORE GAS PIPELINE

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCREENING DETERMINATION

I. Project Proposal

Further to the petroleum lease granted to the Corrib Gas Partners pursuant to Section 13 of the Petroleum Act 1960 (**Corrib Petroleum Lease**), a number of additional consents have been granted in respect of the Corrib Gas Field development, the details of which can be found on the DECC website. The consents granted in respect of the Corrib Gas Field development include a consent to operate the Corrib Gas Pipeline, granted in December 2015 pursuant to Section 40 of the Gas Act 1976, which is subject to a number of conditions, including the following:-

> 20. *'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 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'.*

On 10th December 2021 Vermillion Exploration and Production Ireland Ltd (VEPIL) (hereafter referred to as Vermillion) submitted an application to the Minister for the Environment, Climate and Communications seeking Ministerial approval to undertake a geophysical and visual survey programme of the Corrib offshore gas pipeline, sections of the umbilical, Bellanaboy Bridge Gas Terminal (BBGT) treated surface water outfall pipeline, and infield flowlines and umbilicals between the Corrib Field manifold and the landfall at Glengad, northwest Co. Mayo, between the months of March and December 2022. A visual survey using an underwater vessel deployed video / and stills camera (nearshore) and ROV (offshore) will also be undertaken.

The application also makes reference to maintenance and repair works that may be required (if any) following the survey works. However, this EIA Screening Determination only covers survey and inspection, and accordingly any potential maintenance / repair works (if any required) are not considered further in this determination. While it is noted that original consent to operate the Corrib Upstream Gas Pipeline (issued by the Minister on 29 December 2015) is considered to provide consent for any required maintenance / repair works, should these be required, it is a matter for Vermillion to ensure that if any further consents are required for works that they apply accordingly for such consents and this determination is without prejudice to any requirement that may arise for such application.

The proposed 2022 survey programme will include geophysical and visual inspection of the bulk of the Corrib subsea infrastructure between the Corrib Field and the landfall at Glengad.

The proposed survey programme will comprise two main components:

- Offshore pipeline and subsea structure inspection and maintenance survey work from a suitable ROV support vessel. Previously the survey programme has been carried out using the *Edda Sun*. A similar vessel will be sourced to undertake the survey works. This vessel will be responsible for the survey works covering the area of the Corrib offshore field assets as well as seabed infrastructure as far inshore as Broadhaven Bay.
- Nearshore pipeline inspection using the survey vessel *Leah-C* or similar. This vessel will be responsible for the survey covering the area primarily within Broadhaven Bay as far as the inshore limit of safe navigation.

The offshore and nearshore elements of the work programme will investigate features such as free-spanning and scouring, pipeline burial depth and integrity, as well as cathodic protection measures. The survey will be carried out using a combination of acoustic survey techniques (e.g. multibeam echo sounder, sub-bottom profiler, side-scan sonar). In addition, a visual survey using underwater video / camera imagery and ROV will be undertaken.

The vessel is not known at present and will be identified once a survey contractor has been appointed. The vessel will have a similar specification and capabilities to those used in previous years including the *Edda Sun*. The specifications for the *Edda Sun* have been used as a surrogate in this assessment for the activities proposed for 2022.

A smaller multipurpose nearshore vessel will be used to undertake survey work in nearshore areas and this vessel will be identified once a survey contractor has been appointed. The vessel will have a similar specification and capabilities to those used in previous years including the *Leah-C*. The specifications for the *Leah-C* have been used as a surrogate in this assessment for the activities proposed for 2022.

It is estimated that the total data acquisition period for the offshore and nearshore surveys will be approximately 20 days (dependent on weather conditions) with the survey taking place between March and December 2022.

II. DECC Assessment Process

The Environment Assessment Unit (**EAU**), a functionally separate and independent unit of DECC is responsible for carrying out environmental screening and any environmental assessments determined as being required following screening, in accordance with the requirements set out in Directive 2011/92/EU, as amended by Directive 2014/52/EU (**EIA Directive**) and Directive 92/43/EEC, as amended, (**Habitats Directive**), in the context of applications within an exiting petroleum lease, such as the within application, that seeks Ministerial approval to conduct a survey and inspection of an existing offshore gas pipeline and associated infrastructure.

EIA – In Ireland, environmental assessments of such applications are carried out by the EAU in accordance with the EIA Directive. Where the activities the subject of the application fall outside the projects listed in Annex I of the EIA Directive, an EIA Screening Assessment and Determination is carried out by the EAU in the first instance, as to whether the activities the subject of the application would, or would not be likely to have, significant effects on the environment by virtue, *inter alia*, of their nature size and location. Where it has been determined, following screening, that the activities the subject of the application, are likely to have significant effects on the environment, an environmental impact assessment is required.

AA / Habitats Assessments – The European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011, as amended) (**Birds and Natural Habitats Regulations**) give effect to the Habitats Directive as a matter of Irish law and require, inter alia, that a public authority carry out screening for Appropriate Assessment of a plan or project for which an application for consent is received. Where a public authority, following screening, determines that an Appropriate Assessment is required, the Birds and Natural Habitats Regulations require that the assessment carried out by a public authority include a determination pursuant to Article 6(3) of the Habitats Directive as to whether or not the plan or project would adversely affect the integrity of a European site. The EAU is responsible for carrying out Stage 1 AA screening assessments, and any Stage 2 Appropriate Assessment determined as being required following screening, in accordance with the Birds and Natural Habitats Regulations, in respect of applications, such as this one, to carry out a survey and inspection relating to the existing offshore gas pipeline and associated infrastructure.

On receipt of an application, the Geoscience Regulation Office (**GSRO**) previously the Petroleum Affairs Division in the Department of the Environment, Climate and Communications (**DECC**) places the application on the DECC website for public consultation and refers the application, and any associated responses to the consultation, to the EAU for the purposes of carrying out environmental assessments.

On the completion of all environmental assessments by the EAU and after incorporating any suggested conditions which may be recommended by the EAU, the application will then be evaluated by the GSRO in the Department who will make a recommendation to the Minister regarding whether consent should be given for the activities the subject of the application.

III. Independent Expert Advisors

DECC has further engaged Ramboll UK Limited (herein referred to as **Ramboll**) as independent expert environmental advisors to provide advice to the EAU with regard to the carrying out of statutory environmental assessments of applications for permission to carry out works within an existing petroleum lease, such as the present application by Vermillion.

Ramboll has conducted an independent assessment of the information provided by Vermillion, by reference to the relevant selection criteria specified in Annex III of the EIA Directive. The expert report prepared by Ramboll, having carried out an external review of the EIA Screening and Environmental Risk Assessment Report that was prepared by RSK on behalf of Vermillion, is shown at Appendix 1 ("**Ramboll Report**").

IV. Environmental Impact Assessment Screening: Legislative Background

The EIA Directive requires that projects that are likely to have significant effects on the environment by virtue, *inter alia*, of their nature, size or location are made subject to an environmental impact assessment.

Under Article 4 of the EIA Directive, projects listed under Annex I are automatically subject to an environmental impact assessment and for projects listed in Annex II, Member States shall determine whether the project shall be subject to an assessment and can make the determination through either one of both (a) case by case examination or (b) thresholds set by the Member State.

Article 4(4) of the Directive requires, in respect of projects listed in Annex II, that the developer provide information on the characteristics of the project and its likely significant effects on the environment. The list of information to be provided is set out at Annex IIA; namely:

1. A description of the project, including in particular:
(a) a description of the physical characteristics of the whole project and, where relevant, of 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.

2. A description of the aspects of the environment likely to be significantly affected by the project.

3. 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.

Annex IIA further provides that the criteria listed in Annex III of the Directive shall be taken into account, where relevant, when compiling the information required in 1 – 3 above.

Article 4(4) further provides that the developer may also provide a description of any features of the project and/or measures designed to avoid or prevent what might otherwise have been significant adverse effects on the environment.

The EIA Directive requires that when carrying out an EIA Screening Assessment, the relevant selection criteria as set out in Annex III shall be taken into account.

Article 4(6) of the EIA Directive requires that an EIA Screening Decision must be made as soon as possible and within a period not exceeding 90 days from the date on which the developer has submitted all the information required.

V. Vermillion Application: Assessment Process

Vermillion submitted the following documents with the application submitted on 10th December, 2021 (along with a cover letter):-

(i) Notification of Application to Conduct an Offshore Pipeline Survey and Inspection / Maintenance Programme of the Offshore Facilities in 2022. Submitted by Vermilion Exploration & Production Ireland Ltd on 10 December 2021
(ii) Application to conduct a survey in 2022
(iii) Corrib Subsea Infrastructure - Inspection and Maintenance Surveys EIA Screening and Environmental Risk Assessment for Annex IV species, signed and dated 8th December 2021, prepared by RSK on behalf of Vermillion;
(iv) Corrib Subsea Infrastructure - Inspection and Maintenance Surveys 2022 Natura Impact Statement, signed and dated 8th December 2021, prepared by RSK on behalf of Vermillion.

VI. Notified Bodies

The following bodies were notified of the application submitted by Vermillion in December 2021:-

- Irish Maritime Administration (IMA), Department of Transport;
- Marine Survey Office, IMA, Department of Transport;
- Maritime Safety Policy Division, IMA, Department of Transport;
- Marine Notices, IMA, 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 Agriculture, Food and the Marine;
- Department of Housing, Local Government and Heritage;
- Development Applications Unit, National Parks and Wildlife Service, Department of Housing, Local Government and Heritage
- Marine Institute;
- Department of Defence;
- Mission Support Facility, Irish Air Corps;
- Naval Headquarters;
- Commission for Regulation of Utilities; and
- Commissioners of Irish Lights.

One response was received as follows: Maritime Safety Policy Division, Department of Transport.

The response received is shown in Section 2.3.1 of the Ramboll Report, referenced above and included at Appendix 1.

VII. Public Consultation on Vermillion Application

The application and accompanying documents were published on the Department website on 23rd December 2021 and the public invited to make submissions thereon up to the 8th February, 2022 (the 30 day consultation period was extended due to the Christmas period). No responses were received from the public in response to this application.

VIII. Vermillion Application: EIA Screening Assessment and Determination

In carrying out the EIA Screening Assessment of the Vermillion application in accordance with the Annex III criteria, I have carefully considered the information contained in the following documents:-

- Documents provided by the Applicant:
    - Application Letter to Conduct an Offshore Survey
    - Application to Conduct a Survey in 2022
    - Corrib Subsea Infrastructure Inspection and Maintenance Surveys EIA Screening and Environmental Risk Assessment for Annex IV species, signed and dated 8th December 2021 prepared by RSK on behalf of Vermillion;

- Corrib Subsea Infrastructure Inspection and Maintenance Surveys 2022 Natura Impact Statement, signed and dated 8th December 2021, prepared by RSK on behalf of Vermillion;

- EIA Screening Determination for Vermillion Inspection/ Maintenance Survey of Pipeline and Subsea Structures 2022 prepared by Ramboll (the Ramboll Report, included at Appendix 1);
- Response received from notified body; Maritime Safety Policy Division, Department of Transport.

In carrying out an EIA Screening Assessment of the Vermillion application to determine whether the proposal to undertake a geophysical and visual survey programme of the Corrib offshore gas pipeline, sections of the umbilical system, Bellanaboy Bridge Gas Terminal (BBGT) treated surface water outfall pipeline, and infield flowlines and umbilicals between the Corrib Field manifold and the landfall at Glengad, northwest Co. Mayo, between the months of March and December 2022 would, or would not, be likely to have significant effects on the environment, it is necessary to have regard to, *inter alia*, the relevant selection criteria as outlined in Annex III of the EIA Directive.

As evidenced in the Ramboll Report, when carrying out their assessment of the proposed survey and inspection described in the Vermillion application, Ramboll considered the different project elements by reference to the Annex III criteria.

In this context the following elements were considered:

- **Characteristics of the Project [section 4.3.1 Ramboll Report]**, with particular regard to size and design of the development, cumulation with other existing or approved developments, use of natural resources (particularly land, soil, water and biodiversity), production of waste, pollution and nuisances, risk of major accidents and/or disasters relevant to the project including climate change, risks to human health.

- **Location of the Project [section 4.3.2 Ramboll Report]**, with particular regard to: existing and approved land use, relative abundance, availability and regenerative capacity of natural resources in the area, absorption capacity of wetlands, riparian areas and river mouths, absorption capacity of the natural environment (paying particular attention to coastal zones and marine areas, nature reserves and parks, areas classified or protected under national legislation, areas where there has been a failure to meet environmental quality standards or in which it is considered there is such a failure, landscapes and sites of historical, cultural or archaeological significance).

- **Types and characteristics of potential impact [section 4.3.3 Ramboll Report],** of the proposed inspection and maintenance surveys with regard to the impact on the factors specified in Article 3(1) of the EIA Directive, taking into account: 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, the cumulation of the impact with the impact of other existing and/or approved projects and the possibility of effectively reducing the impact.

Based on careful consideration of the above referenced documentation by reference to the Annex III criteria:

- I agree with and adopt the conclusions reached in the Ramboll Report (at Appendix 1) regarding the adequacy of the information provided by the Applicant and accordingly am satisfied that Vermillion has provided sufficient information to enable an EIA Screening Assessment of the proposed survey and inspection, being the geophysical and visual survey programme of the Corrib offshore gas pipeline, sections of the umbilical system, Bellanaboy Bridge Gas Terminal (BBGT) treated surface water outfall pipeline, and infield flowlines and umbilicals between the Corrib Field manifold and the landfall at Glengad, northwest Co. Mayo, between the months of March and December 2022.

- I further agree with and adopt the Ramboll responses to:

    - the submission received from a Notified Body: Maritime Safety Policy Division, Department of Transport set out in section 2.3.1 of the Ramboll Report.

- Having considered the EIA Screening and Environmental Risk Assessment Report for Annex IV Species prepared by RSK on behalf of Vermillion in respect of the proposed survey and inspection the subject of the Vermillion application, I note that the Applicant Report reaches an overall conclusion that the proposed survey and inspection, will not require Environmental Impact Assessment. I further note the detailed mitigation commitments contained in sections 6 and 7 of the RSK report, which are relevant to their assessment.

- I agree with and adopt the EIA Screening Assessment carried out by Ramboll in respect of the proposed survey the subject of the Vermillion application. Having assessed the information provided by Vermillion by reference to the Annex III criteria, section 5 of the Ramboll Report goes on to set out in detail the mitigation and management commitments made by Vermillion to avoid or reduce any potential impacts on the environment. The Ramboll Report, section 6, agrees with the EIA Screening Assessment carried out by RSK on behalf of Vermillion and concludes that, given the nature, size and location of the proposed 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.

Accordingly, having adopted the Ramboll Report and the conclusions reached in that report, I am satisfied and have decided that the application by Vermillion to undertake a geophysical and visual survey programme of the Corrib offshore gas pipeline, sections of the umbilical, Bellanaboy Bridge Gas Terminal (BBGT) treated surface water outfall pipeline, and infield flowlines and umbilicals between the Corrib Field manifold and the landfall at Glengad, northwest Co. Mayo, between the months of March and December 2022 is not likely to have a significant effect on the environment and, consequently, an Environmental Impact Assessment is not required in respect of the proposed survey and inspection the subject of the Vermillion application, subject to the implementation of the mitigation measures referred to in Section 5 of the Ramboll Report, which I adopt and set out in Table 1 of this Determination (below). This decision is contingent on the inclusion of these mitigation measures in any consent that may be granted in respect of this application.

Further, as the vessels to be used are not yet known Vermillion must seek approval from the Department prior to commencement of the proposed activities. In this event, confirmation will be required that the survey equipment and methodology on the vessel(s) are equivalent to that described in the EIA Screening Report (appendix 1) and that the description of the development used to inform the Environmental Risk Assessment is still valid. Accordingly, this decision is further contingent on this requirement also being included as a condition of any consent granted in respect of this application.

The Applicant can be informed of this EIA Screening Determination and the public will also be informed with the Determination being published on the Department's website and notice thereof being published in a national newspaper.

Jean Clarke

Environment Assessment Unit, 8th March , 2022
Department of the Environment, Climate and Communications

Judicial Review

Please note that the validity of this EIA Screening Determination may be questioned by Judicial Review under Order 84 of the Rules of the Superior Courts (S.I. No.15 of 1986), as amended. Any application for leave to apply for judicial review must be made promptly and in any event within three months from the date of the Determination. Practical information on judicial review can be obtained from the Citizens Information Board, Ground Floor, Georges Quay House, 43 Townsend Street, Dublin 2 or online (www.citizensinformation.ie) or from the Courts Website (www.courts.ie).

Table 1: Mitigation measures required to be specified in any Consent that may be granted

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Physical Presence	The survey will be scheduled to minimise the duration of the *nearshore vessel* and *offshore vessel* at sea. Activities will be confined to as small an area as possible (i.e. directly over the pipeline and umbilical route, and other seabed assets being surveyed) to minimise acoustic and visual presence.		X
	With the potential exception of the side-scan sonar towfish on the inshore survey, acoustic survey equipment will be mounted directly on the hull of the *nearshore vessel*, or to the ROV of the *offshore vessel*, reducing the likelihood of interaction (such as entanglement) with Annex IV species.		X
Interactions with Other Sea Users	There will be fishery liaison procedures in place to mitigate interaction with fisheries, or other marine users. This includes liaison with relevant fisheries and other maritime organisations to communicate the survey schedule and enable activities to be planned accordingly.	X	
Atmospheric Emissions	Regular maintenance of all engines to minimise emissions in line with: • Maritime Registry of Shipping (MRS); • MARPOL 73/78 Annex VI (as appropriate); and • Any other similar requirements.	X	
Underwater Noise	The applicant and appointed contractors will adhere to 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 survey works.	X	
	The lowest equipment outputs will be used in order to obtain the required data quality.	X	
	At the start of the proposed activities, power will slowly increase from a low intensity (a "soft start") to encourage avoidance reactions by marine mammals, fish and marine reptiles.	X	
	A qualified and experienced Marine Mammal Observer (MMO) will be present onboard both the inshore and offshore geophysical survey vessels. 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 2006 NPWS code of practice[1], within 30 days of completion of the proposed activities to the relevant Licensing Authority and copy the report to the NPWS.	X	

[1] Available at: https://www.npws.ie

	The geophysical vessel operators must provide a report (including a daily log) on the operation of the survey equipment that will indicate the soft starts and their duration to the MMO. This information will be made available to the relevant Licensing Authority and the NPWS.	X	
	The MMO must use a distance measuring stick, reticle telescope or binoculars to ascertain distances to marine mammals.	X	
	Vessel(s) working in or in the vicinity to Broadhaven Bay SAC 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 on marine mammals (particularly small cetaceans).	X	
	Where at all possible when operating acoustic geophysical survey equipment as part of the surveys, the principles of the vessel Code of Conduct will be followed as a matter of good environmental practice. The vessel Code of Conduct describes measures to be taken regarding vessel speed and course changes, as well as the importance of maintaining a watch for animals to ensure that the potential for interactions with large species of marine fauna (including Annex IV species) is minimised.	X	
	An MMO will be present for keeping watch for marine fauna during daylight hours. They will advise the vessel crew of any animals that are sighted so that the appropriate actions can be taken.	X	
	Where at all possible when operating acoustic geophysical survey equipment, the *nearshore vessel* will work in an inshore to offshore direction, in an effort to retain an open aspect for animals to leave the confines of Broadhaven Bay, rather than animals wishing to increase their distance from the sound sources having to head further inshore.		X
	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, as determined by the MMO, is not possible the sound-producing activities shall be postponed until effective visual monitoring is possible.	X	
	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 or heavy rain).	X	
	MMOs should survey the area for the presence of species 30 minutes before the onset of the soft start.	X	
	A minimum distance of 500 m is required between the centre of the sound source and the nearest species before soft start can commence.	X	
	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	X	

	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, whenever feasible, that the survey vessel alters course to ensure that the animals are outside of the 500 m exclusion zone when the soft start commences.		X
	An agreed and clear on-site communication signal must be used between the MMO and Works Superintendent as to whether the relevant activity may or may not proceed, or resume following a break. It shall only proceed on positive confirmation with the MMO.	X	
	Soft start should commence after a 500 m area around the vessel has been confirmed clear of species for 30 minutes.	X	

	Soft start procedure
	• In commencing an acoustic survey operation using the above equipment, 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: 1 µPa @ 1 m:
	  • Where it is possible according to the operational parameters of the equipment concerned, the device's acoustic energy shall commence from a lower energy start up (i.e. a peak sound pressure level not exceeding 170 dB re: 1 µPa @ 1 m) and thereafter be allowed to gradually build up to the necessary maximum output over a period of 20 minutes.
	  • 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 to 180 dB to 190 dB to 200 dB to 200+ dB over 20 minutes).
	  • Where the acoustic output measures outlined above 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 the 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 output • If there is a break in sound output for a period of 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 (where appropriate following pre-start monitoring) must be undertaken.	X	

	• For higher output survey operations which have the potential to produce injurious levels of underwater sound as informed by the associated risk assessment, there is likely to be a regulatory requirement to adopt a shorter 5 to 10 minute break limit 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.		
Discharges to the Sea	Management of discharges in accordance with the requirements of MARPOL 73/78 as appropriate, 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	
	All waste will be handled in accordance with the vessels waste management plan, which will operate in accordance with all national and international legislation/regulations and corporate guidelines.	X	
Archaeology	Not applicable since there are no features of archaeological significance present, based on the previous work undertaken by the applicant. However, should any archaeological features be uncovered, the relevant authorities should be informed.	X	
General	Dedicated MMO and vessel crew will monitor and report immediately any interactions with Annex IV species that cause concern.	X	
	The vessels to be used in this survey, are not yet known therefore Vermillion must seek approval from the Department prior to commencement of the proposed activities. In this event, confirmation will be required that the survey equipment and methodology on the vessel(s) are equivalent to that described in the EIA Screening Report (appendix 1) and that the description of the development used to inform the Environmental Risk Assessment is still valid.		X
Accidental Releases	Refuelling of vessels 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 use of well-maintained and modern vessels, with modern navigational systems to identify / avoid obstacles.		X
	The vessels will operate with strict safety, navigational, operating and communications procedures in place in order to avoid collisions. These 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 vessels is regular marine grade oil (MGO) and not heavy fuel oil (HFO) that could represent a greater environmental hazard if spilled.		X

	All fuels and chemicals aboard the survey vessels will be stored according to regulations and manufacturer's directions. Material Safety Data Sheets (MSDSs) for all chemicals stored onboard will be readily available. Procedures will be in place for dealing with spills and leaks.		X
	Vessel decks will have measures in place to contain fuel / lubricant / chemical leaks, such as bunding and oil / water separators. Spill response equipment will also be present on board vessels and personnel will be trained in its usage. Hydraulic fluids will be selected based on their environmental credentials (low toxicity and inherently biodegradable).		X
	The *offshore survey vessel* has a deck drainage containment and separation system in the event of a spill of oil on deck. Hydraulic fluids used by the ROV and ROV handling equipment have been selected partly based on their environmental credentials, being inherently rapidly biodegradable and having passed stringent LC 50 and EC 50 tests to determine their toxicity to aquatic life.		X
	Onboard the vessel, the valves between the fuel tanks will be kept closed, thereby minimising potential for complete fuel loss. Refuelling will occur according to a specific procedure.		X
	Maintenance, audits 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 all vessels in order to contain or minimise spills, all vessel crews have been trained in the use of the plans and equipment.		X
	The Emergency Response Plan will set out how all spill response resources (personnel, command structure, equipment, etc.) will interface, including co-ordination between other seismic survey operators, if applicable.		X