



## **ENVIRONMENTAL IMPACT ASSESSMENT (EIA) SCREENING DETERMINATION**

### **Project Proposal**

On 15<sup>th</sup> May, 2019 Europa Oil & Gas (Inishkea) Limited (a wholly owned subsidiary of Europa Oil & Gas (Holdings) PLC) (**Europa**) submitted an application to the Minister for Communications, Climate Action and Environment (**DCCA**) seeking approval to undertake a geophysical and environmental baseline site survey over Licensing Blocks 18/19 and 18/20, offshore Ireland in 2019 or 2020. The survey called the 'Inishkea survey' is located approximately 4 km north-west of the western-most end of the Corrib gas pipeline and over 63 km from landfall at Inishkea South Island which is located approximately 4 km west of the Mullet Peninsula, County Mayo, Ireland.

It is proposed that survey operations will be undertaken by a single survey team between June and late November 2019. Excluding weather and technical downtime, survey operations are expected to take a total of 14 survey working days. If the survey has not commenced or concluded in 2019, operations will be undertaken sometime between early February 2020 and late November 2020.

The aim of the geophysical and environmental baseline survey is to:

- Accurately determine water depths and seabed/ subsurface geology at the site.
- Identify any seabed obstructions and confirm the location of any existing infrastructure (such as pipelines, wellheads).
- Assist in the identification of all geo-hazards and geological conditions that may be of significance to future drilling activities.<sup>1</sup> This may include shallow gas, channelling, faults and other geological features that may be of significance.
- Provide information on the cultural potential of the survey area, including the location of any shipwrecks or other underwater cultural heritage features;
- Identify and delineate Annex I habitats (as defined in the EC Habitats Directive 92/43/EC) or other sensitive habitats and identify any areas of environmental interest.
- Establish environmental baseline to establish a benchmark for ongoing environmental monitoring as per OSPAR guidelines.
- Acquire sediment samples for determination of physico-chemical baseline conditions

The following documents were submitted with the Europa Inishkea Survey application:-

- (i) Europa Inishkea Site Survey – Cover letter;

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<sup>1</sup> Drilling activities do not form part of the survey operations proposed in the Europa application.

- (ii) Europa Inishkea Prospect Site Survey – Screening for Environmental Impact Assessment and Environmental Risk Assessment Report, prepared by RPS on behalf of Europa;
- (iii) Europa Inishkea Prospect Site Survey – Screening for Appropriate Assessment and Natura Impact Statement Report, prepared by RPS on behalf of Europa;
- (iv) Europa Inishkea Prospect Site Survey – Survey Technical Specifications Report, prepared by RPS on behalf of Europa;
- (v) Europa Inishkea Prospect Site Survey - Pre-Survey Fishery Assessment, prepared by RPS on behalf of Europa.

### **Assessment Process**

The Environment Advisory Unit (**EAU**), a functionally separate and independent unit of the Department (**DCCA**E) 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 respect of applications made to the Minister for permission to undertake “*activities*” under an exploration licence or petroleum prospecting licence.

EIA – In Ireland, the *European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013* (S.I. 134 of 2013), as amended by the *European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019* (S.I. 124 of 2019) provide (at Regulation 3(1B)) that the EAU shall carry out an EIA Screening Assessment and make a Determination 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 will be required.

Habitats – The European Communities (Birds and Natural Habitats) Regulations 2011 – 15, 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 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 required Stage 2 Appropriate Assessment) in accordance with the Birds and Natural Habitats Regulations, in respect of applications to the Minister for permission to undertake “*activities*” under an exploration licence or petroleum prospecting licence.

On receipt of an application, the Petroleum Affairs Division in DCCA E (**PAD**) places the application on the DCCA E website for consultation and refers the application, and any associated responses to the consultation, to the EAU for the purposes of carrying out its 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 Petroleum Affairs Division in the Department who will make a recommendation to the Minister of State regarding whether consent should be given for the ‘activities’ applied for.

### Independent Expert Advisors

DCCAIE has further engaged Ramboll UK Limited (**Ramboll**) to provide advice to the EAU with regard to the carrying out of statutory environmental assessments of applications for permission to carry out “*activities*” under an exploration or petroleum prospecting licence.

Ramboll conducted an independent assessment of the information provided by the Applicant by reference to the relevant selection criteria set out in Annex III of the EIA Directive and their Report entitled “Statutory Environmental Assessment EIA Screening Determination for Europa Inishkea” (**Ramboll Report**) is shown at Appendix 1.

### Legislative Background

The EIA Directive (Directive 2011/92/EU, as amended by Directive 2014/52/EU) 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. 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.

In Ireland, the European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 (S.I. No 134/2013), as amended by the European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (S.I. 124 of 2019), (**EIA Petroleum Exploration Regulations**) give effect to the EIA Directive in the context of applications to the Minister for permission to conduct “*activities*” under an exploration licence or a petroleum prospecting licence.

“*Activities*” are defined in Regulation 2 of the EIA Petroleum Exploration Regulations as meaning:

- (a) searching for petroleum (within the meaning of section 8(7) of the Petroleum Act 1960) under an exploration licence, or
- (b) doing anything referred to in section 9(5) of the Petroleum Act 1960 under a petroleum prospecting licence,

and includes deep drillings.

Section 8(7) of the 1960 Act provides that “*searching for petroleum*” means:

*‘...the doing by the licensee under an exploration licence of all such things as are in his opinion necessary or desirable for the purpose of ascertaining the character, extent or value of the petroleum in the area to which the licence extends and, in particular and without prejudice to the generality of the foregoing power, includes exploring for petroleum by using geological, geophysical, geochemical and topographic examination, making borings, sinking pits, removing water from old workings and taking and removing reasonable quantities of petroleum and other minerals for analysis, test, trial or experiment.’*

Section 9(5) of the 1960 Act provides as follows:

*‘Every petroleum prospecting licence shall be expressed and operate to authorise the licensee, during the currency of such period as is specified in the licence, to enter on the land specified in the licence and there do all such things as the licensee considers necessary or desirable for the purpose of ascertaining the character, extent or value of the petroleum under such land and, in particular and without prejudice to the generality of the foregoing power, for the purpose aforesaid, to make geological, geophysical, geochemical and topographic examinations and to make borings, sink pits, remove water from old workings and take and remove reasonable quantities of petroleum and other minerals for the purpose of analysis, test, trial or experiment.’*

Applications for geophysical examinations (including site surveys) by holders of exploration or petroleum prospecting licences come within the above definitions and are therefore subject to the requirements of the EIA Petroleum Exploration Regulations in relation to EIA Screening.

Regulation 3(1B) of the EIA Petroleum Exploration Regulations provides, in this regard, that where the holder of an exploration licence or petroleum prospecting licence makes an application to the Minister under Regulation 3(1) for permission to undertake activities under the licence, the Environment Advisory Unit of the Department (**EAU**): “*shall make a determination, having taken account of the matters specified in paragraph (2A), 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*”.

Regulation 3(2A) refers to: (a) the criteria specified in Annex III of the EIA Directive and (b) where relevant, the results of preliminary verifications or assessments of the effects on the environment carried out pursuant to European Union legislation (other than the EIA Directive).

Regulation 3(2B) provides that where a determination is made that the proposed activities would be likely to have significant effects on the environment, the EAU shall specify, with reference to the relevant criteria listed in Annex III, the main reasons for the determination.

Regulation 3(2C) provides that where a determination is made that the proposed activities would not be likely to have significant effects on the environment, the EAU shall specify:-

- (a) with reference to the relevant criteria listed in Annex III, the main reasons for that determination,
- (b) any features (proposed by the applicant) of the proposed activities which would avoid or prevent what would otherwise be significant adverse effects on the environment, and

- (c) any measures proposed by the applicant to avoid or prevent what would otherwise be significant adverse effects on the environment.

Regulation 3(2) provides that, where the EAU makes a determination that the activities would be likely to have significant effects on the environment: *“the Unit shall require the applicant to submit an environmental impact statement in respect of the activities the subject of the application.”*

### **Notified Bodies**

Notification of the Inishkea Survey application was issued to the following organisations:

- National Parks and Wildlife Service;
- Irish Maritime Administration, Department of Transport, Tourism and Sport;
- Ship Source Pollution Prevention Unit Irish Maritime Administration, Department of Transport, Tourism and Sport;
- Irish Coast Guard (& 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;
- Commissioners of Irish Lights

One responded with comments as shown in Section 2.3.1 of the Ramboll Report, referenced above and included at Appendix 1.

### **Public Consultation and Process**

On 15<sup>th</sup> May 2019 the Europa ‘Inishkea Survey’ application documents were posted on the DCCAE website and the public invited to make submissions thereon during a 30 day consultation period ending on the 14 June 2019. The following responses were received and the points raised have been considered as part of the EIA screening assessment process.

- Submission received from IWDG, dated 19th May 2019;
- Submission received from private individual, dated 12th June 2019;
- Submission received from private individual, dated 13th June 2019;
- Submission received from Gas Networks Ireland (GNI) dated 14th June 2019;
- Submission received from Not Here Not Anywhere, Futureproof Clare, Love Leitrim, Friends of the Earth Ireland, dated 14th June 2019; and
- Submission received from Gluaisecht, dated 14th June 2019

Having reviewed the Europa ‘Inishkea’ application and accompanying documents and the responses received to the public consultation, Ramboll recommended that further information be obtained from Europa in relation to their application on the basis that insufficient information had been provided with the application to enable an EIA Screening Assessment and Determination be made in respect of the proposed geophysical and environmental baseline site survey. Adopting that recommendation, additional information was sought from the applicant on 24<sup>th</sup> July 2019. The

Department website was updated to reflect the position and the bodies who submitted observations following the initial consultation were notified of the decision to request further information.

The Applicant submitted the following additional information on the 28th August 2019:

- Europa Oil & Gas (Inishkea) – Response to Requests for Further Information and Clarifications to inform Environmental Impact Assessment Screening, prepared by RPS on behalf of Europa.

On 30th August 2019, the supplemental information received from the applicant was posted on the Department website for comment by 13<sup>th</sup> September 2019. Two responses were received and the points raised have been considered as part of the EIA screening assessment process.

- Submission received from Not Here Not Anywhere, Futureproof Clare, Love Leitrim, Friends of the Earth Ireland, dated 12th September 2019;
- Submission received from Private individual, dated 13<sup>th</sup> September 2019.

The consultation responses received (including the project specific observations) are shown in Paragraphs 2.3.2 – 2.3.4 of the Report prepared by Ramboll, as part of the external review of the applicant's Screening for Environmental Impact Assessment and Environmental Risk Assessment Report and Response to Requests for Further Information and Clarifications to inform Environmental Impact Assessment Screening (prepared by RPS on behalf of Europa). The Ramboll Report is at Appendix 1 to this Determination.

### ***EIA Screening Assessment and Determination***

Further to Regulation 3(1A) of the EIA Petroleum Exploration Regulations, the EIA Screening Assessment of the Europa Inishkea Survey application is carried out based on information provided by the Applicant on the characteristics of the proposed activity and its likely effect on the environment as specified in Annex IIA of the EIA Directive and any description provided by the applicant of the features of the proposed activities and the measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

In accordance with Regulation 3(1B) and (2A), in carrying out an EIA Screening Assessment of the application to determine whether the activities the subject of the application 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.

In carrying out the EIA Screening assessment of the proposed Inishkea Survey in accordance with these criteria, I have carefully considered the following documents:-

- Documents provided by the Applicant –
  - (i) Europa Inishkea Site Survey – Cover letter;
  - (ii) Europa Inishkea Prospect Site Survey – Screening for Environmental Impact Assessment and Environmental Risk Assessment Report, prepared by RPS on behalf of Europa;

- (iii) Europa Inishkea Prospect Site Survey – Survey Technical Specifications Report, prepared by RPS on behalf of Europa;
  - (iv) Europa Inishkea Prospect Site Survey - Pre-Survey Fishery Assessment, prepared by RPS on behalf of Europa;
  - (v) Europa Inishkea – Response to Requests for Further Information and Clarifications to inform Environmental Impact Assessment Screening, prepared by RPS on behalf of Europa;
- Ramboll Report entitled “Statutory Environmental Assessment EIA Screening Determination for Europa Inishkea” (at Appendix 1 to this Determination) prepared following Ramboll external review of the EIA Screening and ERA Report and Response to Requests for Further Information and Clarifications to inform Environmental Impact Assessment Screening Report, prepared by RPS on behalf of Europa;
  - Submissions received during the public consultation processes; and
  - Observation received from Notified Bodies.

The EIA screening assessment of the proposed Inishkea Site Survey carried out by 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, 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, 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 the potential impact (as set out in Annex III of the EIA Directive) 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 documentation highlighted above by reference to the Annex III criteria, I agree with and adopt the conclusions reached in the Ramboll Statutory Environmental Assessment EIA Screening Determination for Europa Inishkea Report (at Appendix 1) regarding the adequacy of the information provided by the Applicant and accordingly am satisfied that the Applicant has provided sufficient information to enable an EIA Screening Assessment of the proposed Europa Inishkea Site Survey.

I further agree with and adopt the response to the observation received from the Maritime Safety Policy Division, Department of Transport, Tourism and Sport (as a notified body), set out in section 2.3.1 of the Ramboll Report and the responses to the project specific observations received during the public consultation process, as set out in section 2.3.4 of the Ramboll Report (at Appendix 1).

As regards the additional observations received during the public consultation process regarding the current regulatory process and structures in DCCAIE (as set out in section 2.3.3 of the Ramboll Report), these are addressed in the “Assessment Process” section of this Determination, which describes the structural changes that have occurred in the Department’s management of the environmental assessment and decision making processes.

As regards the additional observations received during the public consultation process, comprising general economic comments, general comments on health, safety and environment issues (including climate change), general comments on legal entities and contractor and general comments on gas infrastructure, which are set out in section 2.3.3 of the Ramboll Report, these are outside the scope of the EIA Screening Assessment process.

I note the applicant’s own conclusion that the proposed Europa Inishkea Site Survey is not likely to have a significant effect on the environment and that an EIA is not, therefore, required.

I further agree with and adopt the EIA Screening Assessment carried out by Ramboll in respect of the Europa Inishkea Survey by reference to the Annex III criteria and the conclusions reached in the Ramboll Statutory Environmental Assessment EIA Screening Determination for Europa Inishkea Report (at Appendix 1 to this Determination). The Ramboll Report concludes that, because of the nature and extent of the proposed activities, there are not likely to be significant effects on the environment from this project alone or in combination with other projects, subject to the implementation of the mitigation commitments detailed at section 5 of the Ramboll Report.

Accordingly, I am satisfied and have decided that the proposed geophysical and environmental baseline site survey over Licensing Blocks 18/19 and 18/20, offshore Ireland to take place in 2019 or 2020 is not likely to have a significant effect on the environment and, consequently, an Environmental Impact Assessment is not required in respect of the application, subject to the implementation of the mitigation measures referred to in Section 5 of the Ramboll Report, which I adopt and set out Table 1 of this Determination (below). This decision is contingent on the inclusion of these mitigation measures in any consent granted in respect of this application.

Further, the vessel proposed to be used for the proposed survey is the MV Fugro Venturer. Adopting the recommendation in the Ramboll Report, any consent granted in respect of this application must further require that the applicant obtain prior approval from DCCAIE should an alternative survey vessel be proposed, in which case confirmation will be required that the survey equipment and methodology on any replacement vessel are equivalent to that described in the RPS EIA Screening Reports submitted by Europa; namely:

- Screening for Environmental Impact Assessment and Environmental Risk Assessment Report; and
- Response to Requests for Further Information and Clarifications to inform Environmental Impact Assessment Screening Report,



and that the nature and extent of the proposed activities described in these Reports has not materially changed. 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, in accordance with Regulation 3(2E) of the EIA Petroleum Exploration Regulations, the public will also be informed of this EIA Screening Determination, with the Determination being published on the Department's website and notice thereof being published in a national newspaper.

Jean Clarke

A handwritten signature in cursive script that reads "Jean Clarke". The signature is written in black ink on a white background.

Environment Advisory Unit, 6<sup>th</sup> November, 2019  
Department of Communications, Climate Action and Environment

**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	In line with current recommendations from PAD and NPWS, Europa will maintain a 100 km separation distance between concurrent acoustic surveys that may be operating. Implementing the 100 km separation zone between concurrent acoustic survey operations will ensure in-combination effects from noise generating equipment are avoided. Europa are in regular communication with operators proposing to undertake operations offshore Ireland in 2019. Survey operations will be coordinated to ensure a 100 km separation is maintained between surveys during concurrent geophysical operations.		X
	Final details of the timing and duration of the survey, including proposed survey vessel, will be communicated to PAD of DCCAIE in advance of operations commencing.		X
	Final survey lines and transects will be confirmed to PAD DCCAIE prior to survey.		X
	The location of environmental seabed sampling stations, including reference stations, have yet to be identified. Once locations have been confirmed details will be provided to PAD DCCAIE.		X
	Prior to undertaking seabed sampling operations, a visual inspection will be undertaken using AUV mounted cameras and/or drop down video.		X
Archaeology	Using geophysical data to ensure no marine archaeology sites are disturbed.		X
	The services of a suitably qualified and suitably experienced maritime archaeologist, to include experience in the interpretation of marine geophysical data, shall be engaged in advance of any such survey to undertake the Underwater Archaeological Impact Assessment (UAIA) so as to inform on the cultural potential of the area and advise on the known or potential location of any shipwrecks or other UCH within the specified survey area. This is particularly relevant where grab samples, etc. are being carried out.		X
	The UAIA should comprise detailed desktop study and archaeo-geophysical interpretation of all geophysical survey results as well as assessment of the results of all sampling.		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	The UAIA shall be licensed by the Department of Culture, Heritage and the Gaeltacht and a detailed method statement shall accompany the licence application by the archaeologist.		X
	Ideally the archaeologist would be on board the survey vessel to view the geophysical data in real time and identify known or potential UCH as it is encountered. If this is not possible the results of all marine geophysical survey undertaken shall be made available to the archaeologist for assessment and interpretation, and to inform on any potential submerged cultural heritage or submerged palaeo-landscape evidence.		X
	The UAIA report shall be forwarded to the Underwater Archaeology Unit of the Department of Culture, Heritage and the Gaeltacht for consideration and further comment in advance of any site investigation/sampling works taking place.		X
Annex I Habitats	Details of any previously unknown Habitats Directive Annex I Habitats will be recorded and shared with the NPWS of the DCHG.		X
Interactions with Other Sea Users	Details of the vessel (vessel name and call sign etc.) and survey equipment will be communicated through a Marine Notice published on the Department for Transport, Tourism and Sport (DTTS) website. During survey operations Radio Navigation Warnings will be broadcast daily.		X
	Implementation of communications strategy described in Section 3.3 of the Fishery Assessment before the survey commences, with emphasis on notifying EU fishers.		X
	It is recommended that all persons involved with this survey should be mindful that fishing vessels are also operating under licence and have equal status and access rights. As such it is imperative that respectful relations are developed and maintained for the duration of the proposed survey. These good relations are also important to the success of other oil and gas industry exploration in the future.		X
	It is recommended that a designated Spanish and French speaking person ashore, with a working knowledge of both the fishing industry and offshore operations should be available in the event that liaison with foreign fishing vessel owners is required. It would be envisioned that this person would work in conjunction with the FLO.		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	It is recommended that coordinates to be shared with the fishing industry are always shown in WGS84 Lat-long format.		X
	Broadcast of regular Sécurité messages by the survey vessel.		X
	It is recommended that the survey vessel should be particularly mindful of Rule 18 of the IMO Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREGs) which covers “Responsibilities between vessels”.		X
Underwater Noise	Qualified MMOs to be appointed to monitor marine mammals and operator’s implementation of the DAHG guidance.		X
	Seismic surveying shall not commence if marine mammals are detected within a 1,000 m radial distance of the sound source.		X
	Pre-start monitoring will only be undertaken when visual conditions are conducive to effective monitoring and outside the hours of darkness. Sound producing activities will only commence where the pre-start monitoring periods have elapsed with no marine mammals detected within the monitored zone by the MMO.		X
	Sound-producing activities will only commence in daylight hours where effective visual monitoring by the MMOs is achieved.		X
	Operations in waters <200 m and >200 m, the MMO will conduct pre-start-up constant effort monitoring for 30 and 60 minutes respectively before the sound producing activity is due to commence. Sound producing activity will not commence until monitoring period have elapsed with no marine mammals detected within the monitored zones by the MMO.		X
	In the case of site survey operations in <200 m survey operations the MMO will conduct pre-start-up constant effort monitoring for 30 minutes before the sound producing activity is due to commence.		X
	Pre-start up monitoring shall subsequently be followed by a Ramp-Up Procedure		X
	Commencement of sound producing survey activities will be undertaken using a ‘soft-start’ (ramp up and gradual increase in energy/noise source) procedure for any		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	equipment where the output peak SPL exceeds 170 dB re 1 $\mu$ Pa @ 1 m. The build-up of acoustic energy output will occur in consistent stages to provide a steady and gradual increase in power over a period of 40 minutes in the case of 10 cu in. seismic airgun operation and 20 minutes in the case of site survey activity. Where the power of acoustic noise sources cannot be increased gradually, due to operational parameters of the device, the device will be switched on and off in a consistent sequential manner for the duration of the defined ramp up period prior to commencement of the full necessary output.		
	Where a soft start procedure is employed, the delay between the end of the soft start and the start of the survey will be minimised to prevent unnecessary high level sound introduction.		X
	In all cases the delay between the end of ramp up (i.e. the necessary full seismic output) and the start of a survey line or station will be minimised to prevent unnecessary high level sound introduction into the environment.		X
	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 marine mammals occur within 1,000 m radial distance of the sound source.		X
	Where the duration of a survey line or station change will be greater than 40 minutes the activity shall, on completion of the line/station being surveyed, either:  (a) shut down and undertake full pre-start Monitoring, followed by a Ramp Up Procedure for recommencement; or  (b) Undergo a minor reduction in seismic energy output to a lower energy state where the output peak sound pressure level from any operating source is 165-170 dB re: 1 $\mu$ Pa @ 1 m and then undertake full Ramp Up Procedure on recommencement.		X
	Where the duration of the survey line or station changes is less than 40 minutes the activity may continue as normal (i.e. under full seismic output).		X
	If there is a break in sound output for a period of 5-10 minutes (e.g. due to equipment failure, shut-down, survey line or station change), MMO monitoring will be undertaken to check that no marine mammals are observed within the Monitored Zone (i.e. within the		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	1,000 m radius) prior to recommencement of the sound source at full power		
	Where a marine mammal is observed within the Monitored Zone during such a break of 5-10 minutes, then all Pre-start Monitoring and Ramp Up Procedure (where appropriate following Pre-start Monitoring) shall recommence as in normal start-up operation.		X
	If any case, if there is a break in sound output for a period greater than 10 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) will be undertaken.		X
	Full reporting on MMO operations and mitigation undertaken will be provided to the Regulatory Authority.		X
	In addition to the above measures, MMOs will use of passive acoustic monitoring (PAM) to optimise marine mammal detection around the survey.		X
	Sound producing equipment on the AUV will be switched on at surface following pre-start monitoring and ramp up procedures. Monitoring at depth will be undertaken using PAM.		X
Discharges to the Sea	Treated grey and black water will be discharged in line with MARPOL 73/78 Annex IV	X	
	Food waste will be macerated in line with MARPOL 73/78 requirements, and no discharges will be made within 12 nm of the coastline.	X	
	Discharge of bilge water from the survey vessel will comply with standards set out in the 1973/78 MARPOL Convention with no discharge occurring within the 12 nm limit.	X	
	Solid waste stored onboard and handled to comply with the Waste Management Hierarchy, MARPOL and the Sea Pollution (Prevention of Pollution by Garbage from Ships). Garbage Management Plan will be developed. Contractors must use authorised waste contractors.	X	
	Survey vessel will have a SOPEP in place in accordance with Annex I of MARPOL.	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	Spill kits on board the vessel deck to clean-up spills of utilities hydrocarbons or chemicals before they can enter the sea.	X	
	Refuelling of the survey vessel to be undertaken in port, thus reducing potential for collision or spillage at sea	X	
	Ballast water discharges may be required during operations and will be managed through a Ballast Management Plan		X
	Implementation of a Waste Management Plan describe all operational procedures related to the treatment, disposal and management of generated wastes.		X
Atmospheric Emissions	Compliance with the Merchant Shipping (Prevention of Air Pollution from Ship) Regulations 2010-2017 and the MAPROL Convention 73/78 Appendix VI on atmospheric emissions.	X	
	Operations will be planned to minimise duration, and vessel movements, and ensure efficient operations.	X	