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**STATUTORY
ENVIRONMENTAL
ASSESSMENT
APPROPRIATE
ASSESSMENT
SCREENING
DETERMINATION AND
NIS REVIEW FOR
EUROPA INISHKEA**

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INISHKEA**

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EXECUTIVE SUMMARY

Ramboll UK Limited (herein referred to as Ramboll) has been commissioned by the Department for Communications, Climate Action and Environment (herein referred to as DCCAE) to provide assistance with regards to the statutory assessment of an application by Europa Oil & Gas (Inishkea) Limited (referred to herein as the applicant).

The applicant has submitted an application to carry out a geophysical and environmental survey (seabed and shallow soils) and environmental baseline survey to inform a habitats assessment in the Inishkea area in Blocks 18/19 and 18/20.

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

This report provides an assessment of the Inishkea Survey Appropriate Assessment Screening and Natura Impact Statement Report submitted by the applicant to enable the DCCAE to make a Screening Determination.

Public consultation on the application has been undertaken by DCCAE. All submissions and observations received by the DCCAE have been taken into consideration in the preparation of this report.

Ramboll confirms that the information provided by the applicant is considered to be adequate, up to date and that no other information was required to allow the DCCAE to make a Screening Determination that an Appropriate Assessment is required, and that the applicant provided a stage 2 Natura Impact Statement.

1. INTRODUCTION

Ramboll UK Limited (herein referred to as Ramboll) has been commissioned by the Department for Communication, Climate Action and Environment (herein referred to as DCCAE) to provide assistance as competent experts for the statutory assessment of an application for consent submitted by Europa Oil & Gas (Inishkea) Limited (referred to herein as the applicant) to carry out proposed geophysical and environmental site survey over Licensing Blocks 18/19 and 18/20 at "Inishkea" well location.

This report provides an assessment of the Inishkea Survey combined Appropriate Assessment Screening and Natura Impact Statement Report submitted by the applicant, prepared and approved by Ramboll as competent experts having relevant qualifications and experience. The authors hold undergraduate and postgraduate qualifications in environmental science (or related disciplines), professional qualifications including chartered status with the Society for the Environment and full membership of the Institute of Environmental Management and Assessment (MIEMA) and have long standing experience as expert practitioners within the fields of offshore development, environmental impact assessment and the appraisal of applications in the context of the Birds and Natural Habitat regulations.

1.1 Project Background

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

2. TERMS OF REFERENCE

2.1 Legislative context

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

The AA Screening confirms that the project has been screened having regard to the Birds and Habitats Directives, the Birds and Natural Habitats Regulations and relevant jurisprudence of the EU and Irish courts.

2.2 Relevant guidance

This report has been prepared having regard to guidance on appropriate assessment for planning authorities, published by the Department for Environment, Heritage and Local Government (DEHLG) in 2009². In addition, the structure and content of this report is based upon the methodology published by the European Communities in 2002³ and Commission notice C (2018) 7621⁴.

2.3 Consultation

2.3.1 Prescribed Bodies

Notification of the application was issued to the following organisations:

- National Parks and Wildlife Service;
- Irish Maritime Administration, Department of Transport, 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 of the prescribed bodies responded with observations on the application as outlined below.

¹ Amending Directive 70/409/EEC

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

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

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

- Response email from Maritime Safety Policy Division, Department of Transport, Tourism and Sport dated 13/05/19;
 - The Maritime Safety Policy Division, wish to inform [the Applicant] 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.

Appropriate regard has been given to the issues raised in this submission.

2.3.2 Public Consultation

The application by the applicant was advertised by DCCAE on their website following receipt of the application on 15 May 2019. Submissions were advertised by the DCCAE to be received by close of business on 14 June 2019.

Six responses were received, and the points raised by these have been considered and responded to as provided in the following sections of this report:

- Response letter from Irish Whale and Dolphin Group (IWDG) dated 19/05/19;
- Response letter from private individual (name withheld for privacy) dated 12/06/19;
- Response email from Gluaiseacht for Global Justice dated 14/06/19;
- Response email from private individual (name withheld for privacy) dated 14/06/19;
- Response letter from Gas Networks Ireland dated 14/06/19; and
- Joint response letter from Not Here, Not Anywhere, Futureproof Clare, Love Leitrim and Friends of the Earth Ireland undated.

2.3.1 General Consultation Responses

The following general responses have been received:

- General economic comments
 - It will be extra hard for countries who have a history of benefiting financially from oil and gas developed in their territory to cease exploration and development of fossil fuels. But fortunately (due to previous dodgy deals) Ireland has only minimally benefitted from any gas development in its territory. As an example of this in November when Vermilion took over as operator of the Corrib, they declared that "we do not expect to pay income taxes related to cash flows generated from the Corrib project".
<https://www.independent.ie/business/irish/corrib-operator-eyes-expansion-and-taxfree-cash-37575461.html>
 - Brian O Cathain who is currently a director with Europa and formerly MD of the Corrib project has also previously said that "Corrib will never pay tax" -

<http://www.shelltosea.com/content/news-release-corrib-will-never-pay-tax-says-projects-former-md>. Europa CEO Hugh Mackay has previously commented on Ireland's oil and gas terms: "The geological ingredients here are good. The fiscal terms are fantastic" <https://www.rte.ie/news/business/2013/0218/368394-europa-oil-ireland/>. So while everyone will have to deal with the consequences of these oil & gas fields being developed only the company shareholders are benefitting. If you truly believe that climate disruption is upon us then this application would not be even entertained.

- Companies like Europa Oil & Gas risk not only the destruction of fish stocks, tourism industry and marine life, but their own investments. Shell Oil recently left the Corrib gas field with losses of up to a billion. The millions that it costs to set up a new fossil fuel infrastructure represent "stranded assets". Even if oil and gas reserves are found, the benefit to Ireland would be minimal. In the event that Europa does end up paying tax on the Inishkea licence, it would be one of the lowest rates in the world. Petroleum extraction tariffs are only 25% - 40%, paltry compared to a 78% tax rate for oil companies in Norway.
- Seismic testing for oil and gas has serious consequences for the marine ecosystem and those whose livelihoods depend on it. In Ireland, the seafood industry provides 11,000 jobs and has a GDP of €1.1 billion. In contrast, the oil and gas industry has provided only 270 long-term jobs and in the case of some operators, has never paid tax as we will discuss further on.
- Companies like Corrib have paid no tax to the Irish state at all, despite running for over 3 years and earning €734m in revenue in 2018. Their current operator Vermillion have said that "we do not expect to pay income taxes related to cash flows generated from the Corrib project". Brian O'Cathain, former MD of the Corrib project and current director of Europa, has publically said that "Corrib will never pay tax".
- As for buying fuel, there is no obligation for Europa to sell any oil that might be found in Inishkea to the Irish people, or even to land the oil in Ireland. As there are no oil refineries in Ireland, it is likely that it will be cheaper to ship the oil to other countries.
- Environmental legislation is ignored by the government Minister and department promoting oil and gas development to the loss of the Irish tax payer.
- General climate change comments
 - When you became Minister for Climate Action you said that we would require "a revolution in how we live" well this is a test for you, to see if they were just nice words or is climate change something that you actually believe in and can act bravely on. You have also said that "We need to step-up our response to climate disruption. The window for opportunity is closing. The decisions we take now will define the next century,". One of these important decisions is to stop developing new sources of fossil fuel. The consequence of this decision could be still in the atmosphere in 200 years time, in the year 2219 and could be still causing climate disruption then. You attended a school strike for climate action on the 15th March this year. This has been inspired by the Greta Thunberg who has previously written. "You say nothing in life is black or white. But that is a lie. A very dangerous lie. Either we prevent 1.5C of warming or we don't. Either we avoid setting off that irreversible chain reaction beyond human control or we don't. Either we choose to go on as a civilisation or we don't. That is as black or white as it gets. There are no grey areas when it comes to survival." Well, here you have a black and white choice to show are you on the side that will choose to fight for our future civilisation or choose short-term profit for oil companies. A report from Oil Change International Gas entitled "Burning The Gas: 'Bridge Fuel' Myth" found that gas is not a viable bridge fuel

between fossil fuels and renewables, nor is it clean, inexpensive, or necessary.
http://priceofoil.org/content/uploads/2019/05/gasBridgeMyth_web-FINAL.pdf

- The Earth is in a state of climate emergency. For the planet to remain a safe operating space for humanity, global temperatures must be maintained at less than 2°C above pre-industrial levels. To do this, 80% of the known fossil fuels need to stay in the ground. Even at 1°, we are already experiencing serious effects, with India reaching an unprecedented 51° in June 2019. Even countries like Ireland with a temperate oceanic climate will be severely affected. According to the Department's website, the more immediate impacts predicted include:
 - Sea level rise;
 - More intense storms and rainfall events;
 - Increased likelihood and magnitude of river and coastal flooding;
 - Water shortages in summer;
 - Increased risks of new pests and diseases;
 - Adverse impacts on water quality; and
 - Changes in distribution and phenology (the timing of lifecycle events) of plant and animal species on land and in the oceans.

Ireland's performance on climate action is among the worst in Europe and projections from the Environmental Protection Agency indicate that the government will manage to reduce greenhouse gas emissions by at best 1% by 2020, falling far short of its 20% commitment under the Paris agreement.

- Minister of State Sean Canney recently stated in the Dáil that "In 20 years' time, we will have transitioned away from this type of fuel [gas] but we cannot do it overnight." If this is the Department plan we shouldn't be supporting search for more oil or gas for companies that have fought the energy transition tooth and nail.
- Of course the knock-on effects of burning those oil and gas reserves, i.e. climate change, will have a far more serious consequence on our economy. The government predicts that costs from direct damages from flooding alone will rise to €1.15 billion per year by 2050.
- General contractual comments
 - Europa have signed a site survey contract with Fugro. The Minister should not allow Fugro to operate in Irish waters. Fugro have previously carried out illegal seismic surveys off the coast of occupied Western Sahara in violation of international law as established by the UN Legal Council. <https://www.somo.nl/wp-content/uploads/2010/05/Fugro-Overview-of-controversial-business-practices-in-2009.pdf>
 - Fugro, the seismic survey firm that Europa plan to use, have already violated international law and ethical norms in conducting tests offshore of Western Sahara.
- General regulatory process comments
 - PAD as a facilitator of oil and gas exploration fails as a regulator due to a conflict in interest and is unable to protect the marine environment. .

Appropriate regard has been given to the issues raised in these submissions, however the observations are not considered to be relevant to the scope of this report and therefore are not addressed further.

The DCCAE have noted the observation regarding potential conflict of interest. This EIA Screening assessment report has been prepared by Ramboll on behalf of the DCCAE as an independent competent expert. Ramboll reports to the Environmental Advisory Unit at the DCCAE (not PAD). Robust institutional arrangements have been made to address conflict of interest concerns. The

screening assessment process is carried out by persons who have no involvement in PAD and who are required to be independent in the exercise of their functions.

2.3.2 Project Specific Consultation Responses

The following project specific consultation responses have been received:

Consultee	Project Specific Comments	Response
IWDG	No where in the documentation are lines to be acquired stated so it assumed that this will be a continuous acquisition. This would be best stated clearly and the reasons why this is necessary or permissible should be given or else the lines declared.	A request for an anticipated line plan to be included within the NIS will be made to the applicant.
IWDG	It can be argued that line turns will be short but in the event of this not being the case what will happen? Given that there are no lines described in the documentation it is impossible to assess the extent of the impact of the survey.	The requirement for, adequacy and methodology of any proposed mitigation will be reviewed as part of the NIS review.
IWDG	The Survey Technical report paragraph 1 is titled "Application for approval to conduct a seismic and site survey". Seismic surveys generally include airguns however no airguns are listed in the equipment of this document. Therefore, I am led to conclude the author has a different view of what constitutes a seismic survey. However, in the EIA and NIS report the equipment listed included on page 43 a 10 cubic inch airgun which is described as having a peak source level of 196 db re 1 μ Pa @ 1 m, this is indeed news to me and I would welcome a source or reference for this assertion. I note that none of the equipment information is referenced and since the source of a small airgun (10 cubic inches also) is given by Richardson (1995) in Marine Mammals and Noise as 222 db re 1 μ Pa @ 1 m, I see no reason to change this figure unless someone can provide a reference to this effect.	The survey includes the use of a 10 cu inch airgun as described by the applicant's EIA Screening Report. Details of this equipment will be requested to be included in the NIS from the applicant to include peak source levels and references for these.
IWDG	The Chirp Sub Bottom Profilers (SBPs) use frequencies of 2-15 kHz (Edgetech 3300) and 1-16 kHz (Edgetech 2205) as describe on page 43 on the AA Screening and NIS document. The Edgetech 3300 is described on page 10 as having a 1-16 kHz range in common with the 2205. This is a very minor oversight but given the lack of references the numbers given, source levels of this equipment should be checked. The source level given for the	The applicant has been requested to provide consistency between documents in regard to the equipment proposed and its output sound levels. For completeness,

Consultee	Project Specific Comments	Response
	<p>chirper system (page 43) is 200 and 195 db re 1 µPa (peak). This is considerably lower than the source level of naval sonar. However military sonar using frequencies of 1 to 10 kHz (Wensveen et al., 2019) and commercial chirpers use the same frequency range, with the same frequency modulation or CHIRP (Compressed High Intensity Radiated Pulse) technology, that are known to have considerable impact on beaked whales at extensive distances at much lower received levels (Wensveen et al., 2019) than the source level of the commercial chirp systems in the report. The argument that these systems will have minimal impact seems without evidence and it seems unlikely that beaked whales will be able to tell the difference between commercial CHIRP signals and naval CHIRP sonar. Given the recent large number of strandings of both Cuviers and sperm whales in Ireland in this area and since strandings represent a small sample (8% according to a French study) of whales killed at sea, with many carcasses simply sinking at sea. It would be prudent to operate a shut down for these species should they occur within the operational area. The area is a known location for beaked whales and it would seem prudent to apply precautionary measures. The impact of naval sonar occurs over a very wide area and commercial CHIRP systems are likely to have a much more limited impact, nevertheless a shutdown for animals detected should be considered given the limited range that both visual observers and acoustic detections will operate to. PAM systems generally are believed to have a maximum detection range for beaked whales of 2 to 3 km but in all likelihood this range will be much less due to vessel noise, while sperm whales can be detected over a greater area. However, given the location on the shelf edge a 24-hour PAM operation should be maintained with a clear authority to stop operations and restart based on PAM operations alone. Without a shutdown behavioural responses of cetaceans to a sound source can lead to fatalities in an area where significant acoustic effects (probable) have already taken place.</p>	<p>clarification will be sought from the applicant in regard to what would happen should a break of sound occur during the hours of darkness.</p> <p>It should be noted that should any marine mammals enter the operational area whilst surveying is underway, then it is accepted that they have entered the area with knowledge of the noise levels and therefore a shut down of equipment is not required.</p>
IWDG	<p>PAM should be operated by at least one person capable of identifying beaked and sperm whale acoustics as well as localisation using acoustic signals.</p>	<p>The requirement for, adequacy and methodology of any proposed mitigation will be reviewed as part of the</p>

Consultee	Project Specific Comments	Response
		NIS review.
IWDG	<p>I think it only prudent given recent mortalities in deep diving species (beaked and sperm whales) due to what is probably naval sonar and given the similarity of acoustic characteristics of commercial chirper systems which operate in the same frequency range, albeit with lower source levels and different directionality, that a precautionary approach to chirper should be undertaken. If no animals are present extra mitigation measures will have little or no impact on the survey. Beaked whales appear to show fidelity to locations of high food availability (Southall et al, 2019). There are no studies of the impact of commercial CHIRP systems on whales but there is no basis to assume they have no impact. Therefore I would urge you to consider the potential impact of a system that in many ways mimics mid-frequency naval sonar and to mitigate accordingly.</p>	<p>The recommendation for an enforced shut down of equipment should marine mammals enter the operational zone is included as an example in Irish guidelines. However, this is used for areas of high residency.</p> <p>The requirement for, adequacy and methodology of any proposed mitigation will be reviewed in light of the NIS to be submitted by the applicant.</p>
Private Individual (name withheld for privacy)	<p>While the Inishkea Survey will provide information that may be of significance to future exploration and potential production activities, it is a standalone project and not part of a larger programme of development that will create a requirement or imperative for future developments to be licensed. Any future plans or projects (developments) will be subject to separate/new authorisations. Any potential indirect, secondary or cumulative effects (including climate change) associated with future developments (i.e. further exploration or appraisal phase / oil and gas production) should any future developments arise, will be considered when any necessary consents for the activities are brought sought.</p> <p>The paragraph above is sufficient to refuse this application for the following reasons:</p> <p>(i) It goes against common sense and is unacceptable that any reasonable person that this application can first, be described and second, assessed as a 'standalone' project; it can claim no rationale other than as part of proposed/planned fossil fuel development/production – there can be no 'may' about it. Should that be claimed, against all logic, then why it is taking place at that specific location – why not in an area</p>	<p>The aims and objectives of the Inishkea survey are considered reasonable for the following reasons:</p> <ul style="list-style-type: none"> • Higher resolution data will be available from the site survey compared to the more general data sets. • The seabed conditions may have changed since the more general data sets were completed. • Infrastructure is not always located where they are meant to be and therefore it is important that these are accurately located. • New anthropogenic or natural seabed obstructions need to be identified and accurately located. • The spatial extent of Annex I habitats will

Consultee	Project Specific Comments	Response
	<p>that is not a potential fossil fuel prospect?</p> <p>(ii) The stated aim of the survey is set out below:</p> <ul style="list-style-type: none"> a. Accurately determine water depths and seabed/subsurface geology at the site (<i>This should already be established or establishable – through Marine Survey Ireland for example, without recourse to this particular proposed action which is not a plan/project in and of itself</i>) b. Identify any seabed obstructions and confirm the locations of any existing infrastructure (such as pipelines, wellheads) (<i>Only pipelines, wellheads out there are Corrib’s, again unnecessary</i>) c. Assist in the identification of all geo-hazards and geological conditions that may be of significance to future drilling activities [Drilling activities do not form part of this project and are therefore not assessed in this report]. This may include shallow gas, channelling, faulting and other geological features that may be of significance (<i>can be read as admission of future drilling intent, otherwise this ‘standalone survey’ wouldn’t be happening; note shown in [] above is arrogant, dismissive and contemptuous of Irish and EU environmental law as well as contrary to common sense</i>) d. Provide information on the cultural potential of the survey area, including the location of any shipwrecks or other underwater cultural heritage features (<i>can wait, not essential for anything other than, in this instance, intended fossil fuel exploration/production</i>) e. 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 (<i>surely these habitats are already identified and delineated, otherwise they would be habitats and, in the alternative, it is not the function of a fossil fuel company to do so</i>) f. Establish environmental baseline to establish a benchmark for ongoing environmental monitoring as per OSPAR guidelines (<i>as</i> 	<p>change over time and requires accurate positioning to ensure protection.</p>

Consultee	Project Specific Comments	Response
	<p><i>above plus no need for baseline and/or benchmark activities other than fossil fuel 'development' related)</i></p> <p>g. Acquire sediment samples for determination of physico-chemical baseline conditions (<i>can be done in any comparable area but again not necessary other than with purpose of plan/project which is much more than stated</i>)</p>	
<p>Private Individual (name withheld for privacy)</p>	<p>Extract Table 2.12 Screening for EIA and ERA Report. The proposed survey GWA overlaps the western-most end of the Corrib gas pipeline. Pipeline inspection survey. Vermillion intend to undertake pipeline inspection survey at the Corrib Gas Field pipeline and infrastructure in 2019. The proposed survey programme involves a geophysical and visual survey on the subsea infrastructure between the Corrib Field and the landfall. The information provided above is incomplete – the full range of applied-for works is accessible at [link to DCCA website provided].</p>	<p>The applicant has been requested to ensure that documentation submitted is accurate and complete.</p>
<p>Private Individual (name withheld for privacy)</p>	<p>Table 2.3 Fish Species of Conservation Concern which may be present in the vicinity of the proposed Inishkea Survey. Applying the Precautionary Principle, the list above should, of itself, be sufficient to refuse this application – the frightening status of so many species is horrendous; no amount of assessment, mitigation or conditioning can alter that status unless fossil fuels are, as of now, left in the ground. The paradigm has indeed shifted.</p>	<p>The requirement for, adequacy and methodology of any proposed mitigation will be reviewed in light of the NIS to be submitted by the applicant.</p>
<p>Private Individual (name withheld for privacy)</p>	<p>Both the EIA and AA Screening Reports are essentially similar and, in my view, presented in an attempt to tick legally required 'boxes' together with impressing through bulk rather than pertinent content those who may not be familiar with such documents. I note there is no non-technical summary and offer the view that it may not have been possible to produce such a document while attempting to maintain the fiction that this application is for a standalone plan/project.</p>	<p>There is no requirement to provide a non-technical summary with the documentation submitted by the applicant.</p> <p>The adequacy of the documentation submitted by the applicant is reviewed and reported by this series of reports to inform screening opinions and Appropriate Assessment (as applicable).</p>
<p>Gluaiseacht for Global Justice</p>	<p>According to a 2017 journal paper published in Nature Ecology and Evolution has shown that seismic surveys can cause a two to three-fold increase in mortality in plankton populations and could kill zooplankton at a distance of 1.2 km (https://www.nature.com/articles/s41559-017-0195). The site survey application has said that it will employ Marine Mammal Observers (MMOs) and that "Airgun operations will not commence if marine mammals are detected within 1,000 m radius of the sound source". However, the Applicant hasn't stated anything about</p>	<p>The requirement for, adequacy and methodology of any proposed mitigation will be reviewed in light of the NIS to be submitted by the applicant.</p>

Consultee	Project Specific Comments	Response
	<p>Zooplankton observers and what will happen if zooplankton is in the radius of 1.2km of the sound source. There is also widespread further anecdotal evidence of the damage that these seismic surveys cause to marine life in the area of the survey such as this interview with a Norwegian fisherman on the after effects of seismic surveys on the area that he fished: https://www.youtube.com/watch?v=nGfoZ7WkxIM</p> <p>No mitigation measures have been put in place for the zooplankton decimation that will occur if this seismic survey is allowed to proceed.</p> <p>The EIA quotes a study supported by the Joint Industry Program of the Oil and Gas Producers Association to justify their conclusion that there was "No likely significant effects" on the different species types but even quote that study as saying "zooplankton and ichthyoplankton can be killed within a distance of less than 2 m and sub lethal injuries expected within 5 m."</p>	
<p>Gluaiseacht for Global Justice</p>	<p>It has been shown that seismic surveys disrupt fish also, yet there is no mention of a Fish Observer in the application. The Pre-survey Fishery Assessment states that "Recommendations have been made to mitigate any possible adverse interaction between the survey and fisheries." But no recommendations have been made to mitigate any possible adverse interaction between the survey and fish. The applicant hasn't provided a list of species or quantities that it is willing to decimate for profit and which ones not. Therefore, the application is incomplete.</p>	<p>The requirement for, adequacy and methodology of any proposed mitigation will be reviewed in light of the NIS to be submitted by the applicant.</p>
<p>Not Here, Not Anywhere, Futureproof Clare, Love Leitrim and Friends of the Earth Ireland</p>	<p>The seafood industry is already suffering from biodiversity loss with key species like Atlantic Cod, Atlantic Salmon and Bluefin Tuna in Irish seas now on the International Union for the Conservation of Nature endangered list. Nature Journal has shown that one blast from oil and gas exploration alone kills 64% of zooplankton – the basis of the marine ecosystem – for up to 0.7 miles.</p> <p>To carry out such surveys, ships tow multiple airgun arrays that emits thousands of high decibel explosive impulses to map the seafloor. The auditory assault from seismic surveys has been found to damage or kill fish eggs and larvae and impair the hearing and health of fish, making them vulnerable to predators and leaving them unable to locate prey or mates or communicate with each other. These disturbances disrupt and displace important migratory patterns, pushing marine life away from suitable habitats like nurseries and foraging, mating, spawning and migratory corridors. In addition, seismic surveys have been implicated in whale beaching and stranding incidents.</p>	<p>A Fisheries Assessment has been undertaken and submitted by the applicant. The requirement for, adequacy and methodology of any proposed mitigation will be reviewed in light of the NIS to be submitted by the applicant.</p> <p>Multiple air guns are not being proposed by the applicant.</p>
<p>Not Here, Not Anywhere, Futureproof Clare, Love</p>	<p>The routine operations associated with offshore drilling produce many toxic wastes and other forms of pollution. Each drill well generates tens of thousands of gallons of waste drilling muds (materials used to</p>	<p>This application does not include any drilling (exploratory or otherwise). Any such subsequent</p>

Consultee	Project Specific Comments	Response
Leitrim and Friends of the Earth Ireland	lubricate drill bits and maintain pressure) and cuttings. Drilling muds contain toxic metals such as mercury, lead and cadmium that may bioaccumulate and biomagnify in marine organisms, including in our seafood supply. The water that is brought up from a given well along with oil and gas, referred to as "produced water", contains a toxic brew of benzene, arsenic, lead, toluene and varying amounts of radioactive pollutants. Each oil platform can discharge hundreds of thousands of gallons of produced water daily, contaminating both local waters and those down current from the discharge. An average oil and gas exploration well spews roughly 50 tons of nitrogen oxide, 13 tons of carbon monoxide, 6 tons of sulphur oxides and 5 tons of volatile organic chemicals. The seismic disturbance from drilling can also cause deafness and internal bleeding in whales and dolphins.	application for drilling by the applicant would be subject to separate review under the relevant EIA and Habitats Directives. Furthermore, the potential effects of future drilling (exploratory or otherwise) has been considered in the Irish Offshore Strategic Environmental Assessment (IOSEA) 5 Appropriate Assessment.
Not Here, Not Anywhere, Futureproof Clare, Love Leitrim and Friends of the Earth Ireland	Oil spills have disastrous economic and environmental consequences and volume is a limited measure of damage or impact. Even smaller spills have already proven disastrous to ecosystems, such as the Exxon Valdez oil spill which spilled 10.8 million US gallons of crude oil into Alaskan waters. This eventually impacted 1,300 miles of coastline and killing hundreds of thousands of animals including seals and orcas. In 2011 a serious spill took place in an oilfield majority owned by the state-owned China National Offshore Oil Corporation (CNOOC), in the Bohai sea of North East China. This caused total economic losses of CNY 12.56 billion (€1.6bn) and polluted 840 square km of clean water.	This application does not include any drilling (exploratory or otherwise) and therefore there is no risk of significant oil spills as a result of the surveys proposed. Any such subsequent application for exploratory drilling by the applicant would be subject to separate review under the relevant EIA and Habitats Directives. Furthermore, the potential effects of future drilling (exploratory or otherwise) has been considered in the Irish Offshore Strategic Environmental Assessment (IOSEA) 5 Appropriate Assessment.
Private Individual (15 June 2019)	Comments provided relating to applications from Europa, Vermillion and CNOOC: PAD routinely accept Environmental reports concluding that there will be no significant impact based on the information available. If baseline data is not commissioned by developers how can any assessment be made of significant effect. Any assessment on a lack of data to assess a significant effect is worthless and un-scientific. A BACI survey is required in both footprints to assess the abundance and density of beaked and baleen whales in the Slyne basin prior to imposing and an oil and gas development footprint. If baseline data is not available how can a conclusion stating, "in relation to the proposed surveys there will be no significant effects on the environment"? A cetacean survey on a basin scale/project footprint is required prior to licensing further oil and gas	The adequacy of information available upon which to base this screening assessment is reviewed in this report. The conclusions of this report are that applicant is required to provide a Natura Impact Statement to support Appropriate Assessment. The conclusions of the NIS will be made based on best scientific knowledge. A specific cetacean survey is not required in order to conclude the AA Screening

Consultee	Project Specific Comments	Response
	exploration/Corrib/Europa.	and NIS review for the proposed survey works.
	<p>Will PAD explain what evidence they have to continue their policy of ignoring the question which must be asked, how can whales and dolphins, which depend on acoustics for communication, food and reproduction, not be significantly affected by a seismic survey? Particularly when a leading cetacean scientist has called the use of airguns “the most severe acoustic insult to the marine environment short of naval warfare.” Can PAD explain why no EIA has ever been done for a seismic survey in Ireland? The precautionary principle and the polluter pays principle are ignored by PAD.</p> <p>In case C-323/17 People Over Wind and Peter Sweetman v Coillte, the CJEU ruled that mitigation measures could not be taken into account at screening stage of an appropriate assessment. The mitigation proposed does not implement a strict protection regime for cetaceans and no evidence is provided of efficacy. Mitigation which has no effect cannot be used to justify licensing oil and gas development. Baseline data is not available, has never been collected/commissioned to make assessments on several species including baleen and beaked whales off Ireland’s west coast in to Corrib gas and Europa oil footprint .</p>	<p>This report provides a review of the applicant’s request for Appropriate Assessment screening and reviews the adequacy of the Natura Impact Statement (NIS) for the proposed surveys. Where further information is required to support the Appropriate Assessment this report sets out the request for further information.</p>
	<p>Figure 2.4 EIA and ERA Screening Report shows the proximity of the Inishkea prospect/LO to the Corrib production infrastructure. Given, as stated – and not by accident – that the closest point of the Inishkea LO area is just 4 km from Corrib but 63 km from Inishkea South, this is extremely worrying. Any reasonable, but uninformed, person would easily conclude that, rather than build a 63 km pipeline and all associated works on Inishkea South, why not just hook into the Corrib infrastructure. Not that simple and not that allowable under EU environmental law. The Corrib Gas Project is a standalone plan/project and, it is my belief, claimed consents were assessed for just Corrib alone, which is now extant and therefore not retrospectively assessable – and some of these consents continue to be challenged through the superior courts</p>	<p>The application in hand is for geophysical and environmental survey (seabed and shallow soils) and environmental baseline survey. The comments regarding potential future production and export of gas via the existing Corrib gas pipeline are beyond the scope of this report.</p>

3. REVIEW OF APPLICANT AA SCREENING REPORT

3.1 Project Details

Table 3.1 provides a summary of the key project information.

Table 3.1: Project Information

Project Title:	Inishkea Site Survey
Project Type:	Geophysical Survey and Environmental Baseline Survey
Applicant:	Europa Oil & Gas (Inishkea) Limited
Exploration Licence Reference:	Licensing Option Blocks 18/19 and 18/20
Date AA Screening Report Received:	15 May 2019

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

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

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

3.3 Description of the Project

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

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

Table 3.2: Description of Project

Europa Oil & Gas (Inishkea) Limited propose to undertake a geophysical and environmental baseline survey to inform a habitats assessment in the Inishkea area in Blocks 18/19 and 18/20, located approximately 63 km off the west coast of County Mayo, Ireland.

The survey area would comprise an 80 km² working area within which all survey activities would take place and includes the currently proposed location of a future well, though no drilling forms part of this licence application. The working area also includes space for vessel manoeuvring, survey line turns and equipment deployment/recovery. Water depths within the greater working area range from around 350 m to 700 m below mean sea level.

The geophysical survey is expected to comprise the following activities:

- Vessel-mounted or vessel-towed equipment:
 - Dual Frequency Side Scan Sonar (towed fish, Edgetech EM400 or similar, 100 kHz/500 kHz or similar)
 - Single-beam Echosounder (hull-mounted Kongsberg EA400 or similar, 35 kHz to 200 kHz or similar)
 - Multi-beam Echosounder (hull-mounted Swathe Multibeam Kongsberg EM710 or similar, 70 kHz to 100 kHz or similar)
 - Sub-Bottom Profiler (hull-mounted pinger or chirp system, Edgetech 3300 or similar, 1 kHz to 16 kHz or similar)
 - Sub-bottom profiler (1 x 10 cu. in. airgun)
 - Ultra-short baseline (USBL) (topside, hull mounted HiPAP 502 USBL or similar)
 - Magnetometer (towed fish, Geometrics G882 caesium vapour or similar)
- Autonomous or Hybrid Underwater Vehicle (UAV) mounted equipment:
 - Multi-beam Echosounder (AUV-mounted Simrad EM2040 or similar, 300 kHz or similar)

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- Sub-bottom profiler (AUV-mounted Edgetech 2205 Chirp or similar, 1 kHz to 16 kHz or similar)
- Side Scan Sonar (AUV-Mounted Tritech Seaking, Dual frequency, 200 kHz/550 kHz or similar)
- USBL (seabed, HiPAP 502 USBL or similar)
- Seabed Sampling Equipment:
 - AUV-mounted stills/video camera
- Seabed Imaging Equipment:
 - Box corer/Grab sampler/Gravity corer

The environmental baseline survey will comprise the following activities:

- Benthic sampling using a box corer and/or grab sampler at approximately 20 stations within the site survey area. Approximately five reference stations will also be sampled located at least 2 km from the proposed site. Macrofaunal samples will be processed and preserved on recovery ahead of onshore analysis. Sediment sample will be prepared and stored in preparation for onshore analysis to include: particle size analysis, total organic carbon, total organic matter, hydrocarbons and metals.
- Gravity cores will be acquired to ground-truth shallow soils and for basic offshore geotechnical testing (including pocket penetrometer). Cores will be recovered and cut offshore in preparation for storage and potential future geotechnical testing.
- Benthic sampling using core and grab samples will result in disturbance to the seabed. This disturbance will be temporary and limited to the footprint of the core and grab samples. The footprint of the grab and corer samplers to be used will be 0.1 m² to 1 m², with maximum sediment penetration of 0.5 m. The footprint of the gravity corer is relatively small and limited to the core barrel that has a diameter of 110 mm. Sediment penetration of the gravity corer is approximately 2 m to 4 m.
- Prior to undertaking sediment sampling, the stations will be visually inspected using AUV mounted cameras and/or drop down camera systems to ensure the area to be sampled does not support sensitive habitats. Sampling will not be undertaken where sensitive habitats are identified.
- Mapping of known shipwrecks and geophysical data gathered during the survey will ensure that no seabed sampling activities will occur in the vicinity of any features of historic or cultural importance.

During survey operations, the vessel will be required to maintain position at stations for periods of time or will be travelling at approximately 3.5 to 5 knots along rectilinear routes. To maintain the integrity of the survey and positioning of the survey equipment, the vessel will be limited in its ability to manoeuvre. However, should it be required the vessel will be able to move away on short notice.

The estimated duration of the survey is 14 working days and is expected to take place in the period between May and late November 2019. If the survey has not commenced or concluded in 2019, operations will be undertaken sometime between early February 2020 and late November 2020. Final timings and durations of the survey will be communicated to PAD of DCCAE in advance of operations commencing. The survey will be undertaken by Fugro Survey Limited.

Project Element	Have these features of the project been identified by the applicant? (If not, please provide details)
Spatial Extent (size, scale, area etc)	Yes
Supporting Infrastructure	Yes
Transportation Requirements	Yes
Physical changes that will result from the project (e.g. from excavation, dredging)	Yes
Emissions and Waste	Yes
Resource Requirements (e.g.	Yes

water abstraction)	
Duration of each phase e.g. <ul style="list-style-type: none"> • Phase 1 Construction • Phase 2 Operation • Phase 3 Decommissioning 	Yes

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

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

Table 3.3: In-combination Assessment

Brief Description of identified plans / projects that might act in-combination (Operational, Consented and Proposed (but not yet approved) projects) with the proposed project:		
The applicant's AA screening report considers the following projects that might act in-combination with the proposed project: <ul style="list-style-type: none"> • Vermillion – Corrib Gasfield pipeline inspection survey; • CNOOC – Site survey over the Slyne/Erris Basin and surrounding continental shelf • Europa – Site surveys in the Porcupine Basin • Nexen/CNOOC – Drilling operations at Iolar prospect. Note it is understood that at the time of writing this report, this survey is now complete • ENI Ireland BV – Site surveys in the Porcupine Basin • Kinsale Energy and PSE Seven Heads Limited – Decommissioning gasfield infrastructure • Marine Institute – Acoustic fisheries survey 		
Project Element	Is the predicted magnitude / extent of identified likely in-combination effects considered by the applicant?	Summary
Spatial Extent (define boundaries for examination of in-combination effects)	Yes	The applicant has defined the spatial extent of the effects of the project (specifically, underwater noise emissions) in order to determine potential in-combination effects with other projects.
Impact Identification (e.g. noise, chemical emissions etc.)	Yes	The applicant has identified the potential impacts arising from the project and considered which of the impacts identified are relevant to the determination of in-combination LSE (specifically, underwater acoustic emissions) and has linked these clearly to pathways that might transmit impacts to receptors.
Pathway Identification (e.g. via water, air etc)	Yes	The applicant has identified potential impact / pressure pathways (specifically, underwater acoustic emissions) between the proposed development and other projects.

3.4 Identification of relevant European sites and species

The applicant's AA screening report considers the designated European sites and species that may be impacted by the project, including consideration of direct, indirect and in combination

effects. As projects that lie out with European sites may still have an impact upon their integrity, particularly in a marine environment where the environment is extremely dynamic and species may be highly mobile, identifying potential zones of influence surrounding the European sites is a key component.

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

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

NB Sites presented in Appendix A of the Applicants AA Screening Report have been cross referenced against current lists of Natura sites – no omissions of relevant sites have been determined. On this basis the list of sites presented by the Application in Appendix A have been considered below.

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant’s consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
1. West Connacht Coast SAC [002998]	61	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
2. Inishkea Islands SAC [000507]	62	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
3. Clew Bay Complex SAC [001482]	100	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
4. Blasket Islands SAC [002158]	247	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
5. River Moy SAC [002296]	106	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
6. Cumeen Strand / Drumcliff Bay [000627]	156	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements

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Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
7. Glenamoy Bog Complex [000500]	80	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirement
8. Blackwater River SAC [0032171]	Not specified	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown	Additional information required
9. Blacksod Bay/ Broadhaven SPA [004037]	68	No	No	No	No	No	No	Site is no longer listed in revised documentation and no justification provided for removal.
10. Duvillaun Islands SPA [004111]	68	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
11. Inishglora and Inishkeeragh SPA [004084]	65	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
12. Inishkea Islands SPA [004004]	63	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
13. Mullet Peninsula SPA [004227]	68	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements

Natura site/ Annex IV species identified by assessor	Distance from Project Site (km)	Are the Natura site / Annex IV species identified by the applicant?	Are all the qualifying interests / Annex IV listed by the applicant?	Are direct impacts to the Natura Site / Annex IV species considered by the applicant?	Are indirect impacts to the Natura Site / Annex IV species considered by the applicant?	Are Potential Zones of Influence on the Natura Site / Annex IV species considered by the applicant?	Are in combination effects considered by the applicant?	Briefly summarise whether the applicant's consideration of relevant Natura sites / Annex IV species which may be affected by the proposed project, meets the requirements for a screening opinion:
14. Termoncarragh Lake and Annagh Machair SPA [004093]	69	Yes	Unknown	Yes	Yes	Yes	Yes	Consideration meets requirements
15. Cetacean species (Annex IV species)	Present in Irish Waters	Yes	Yes	Yes	Yes	Yes	Yes	Consideration meets requirements
16. Marine reptile species (Annex IV species)	Present in Irish Waters	Yes	Yes	Yes	Yes	Yes	Yes	Consideration meets requirements
17. European otter (Annex IV species)	Present in Irish Waters	Yes	Yes	Yes	Yes	Yes	Yes	Consideration meets requirements
18. Migratory fish (Annex II species)	Present in Irish Waters	Yes	Yes	Yes	Yes	Yes	Yes	Consideration meets requirements
19. Pinniped species (Annex II species)	Present in Irish Waters	Yes	Yes	Yes	Yes	Yes	Yes	Consideration meets requirements

3.5 Screening for Appropriate Assessment of Likely Significant Effects on Natura sites and adverse effects on Annex IV species.

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

Table 3.5: Assessment of Likely Significant Effects AA Screening

<p>Summary of LSE</p> <p>The applicant’s AA screening report only identified potential interactions of underwater acoustic emissions generated by geophysical equipment (single beam echo sounder, multi beam echo sounder, side scan sonar and sub bottom profiler) and the USBL positioning equipment with marine mammals (harbour porpoise, common bottlenose dolphin, grey seal and harbour seal), birds (various species) and fish listed as Qualifying Interests of designated Natura 2000 Sites or listed as Annex II or IV species to the Habitats Directive. The applicant has subsequently screened out the effects of noise on birds, fish, low frequency cetaceans, European otter and turtles.</p>
<p>Do you agree with the applicant’s AA screening assessment? Why?</p> <p>Yes. Ramboll agree that a NIS is required to support the application, however it should be noted that:</p> <ul style="list-style-type: none"> • The applicant has relied on the implementation of mitigation and monitoring measures, such as application of separation distances with other projects to avoid in-combination effects among others to arrive at their conclusion that there would be no LSE on the Natura Sites. • Ramboll agrees that the measures specified are appropriate and represent current good practice. It is noted that the applicant references National Parks and Wildlife Services (NPWS) guidance⁵ and the PAD Rules and Procedures Manual⁶ and states that risk of direct effects to the designated Annex II and IV species can be successfully reduced through the implementation of the mandatory statutory measures listed within these references. • It is noted that in accordance with relevant jurisprudence, mitigation must be disregarded at the AA screening stage. While this report acknowledges that some of the measures proposed may be considered to be ‘embedded’ or inherent to the project design, other aspects are considered to be mitigation and are specified or required due to the sensitive receptors identified and the potential LSE (for example, the use of marine mammal observers and soft start procedures). • This report concludes that it is not possible, as a matter of scientific certainty, to rule out the risk of a LSE (without mitigation). As such an AA is required and the applicant must provide a NIS to allow the AA to be prepared to consider the potential adverse effects on the integrity of European sites, taking account of their relevant conservation objectives.

3.6 Screening Determination

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

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

⁵ NPWS (National Parks and Wildlife Services), 2014. Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters

⁶ PAD (Petroleum Affairs Division), 2007 [Draft 2014 edition]. Rules and Procedures for Offshore Petroleum Exploration and Appraisal Operations.

Table 3.6: Summary of Applicant’s Screening Report Review

Is the plan or project directly connected with or necessary to the nature conservation management of the Natura site?	No
Is the project or plan likely to have significant effects on the environment?	Yes, as described by the applicant’s documentation.
Is an AA required? (Yes / No / More Information Required?)	Yes, there is potential for likely significant effects of the Project on European sites and species. Therefore, a NIS is required to assess the likely significant effects in view of the European sites and species and their conservation objectives.
What further information is required to inform AA Screening Opinion (if any)?	None. Information was provided by the applicant to be able to conclude that a NIS is required to support the application. Additional information has been requested below to be included in the NIS submitted by the applicant.

Table 3.7: Recommendation of Screening Determination

Outcome of Screening Report Assessment	Overall Screening Opinion / AA Required?
Likely or Potentially Likely Significant Effects on Natura Sites identified, and project is not directly connected with or necessary to the nature conservation management of the Natura site.	Appropriate Assessment is required because it cannot be excluded on the basis of the information provided by the applicant that the project will have likely significant effects either individually or in combination with other plans or projects on a European site or species.
No Likely Significant Effects on Natura Sites identified, and project is not directly connected with or necessary to the nature conservation management of the Natura site.	Appropriate Assessment is not required.

4. STAGE 2 APPROPRIATE ASSESSMENT

4.1 Natura Impact Statements

A NIS⁷ is a scientifically robust examination of a proposed plan or project, which is used to characterise any possible implications of the project on the conservation objectives of any relevant European site(s). The primary purpose of the NIS is to provide the competent authority with the information required to complete an Appropriate Assessment (AA).

Following the receipt of a NIS, the DCCAE (as the competent authority) will undertake an AA to determine whether the proposed project is likely to have an adverse effect on the integrity⁸ of any relevant European sites with regards to their conservation objectives, both individually and in combination with other plans or projects. On completion of the AA, the DCCAE will produce an AA Conclusion Statement.

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

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

NIS Content	Does the applicant's NIS provide the following information? (Y/N/Unsure)	Briefly Explain Answer:
The Conservation Status of relevant Habitats and Species listed under Annex II of the Habitats Directive;	No	For each Natura site assessed there is information on the conservation objectives, however specific information on the conservation status is missing.
The Conservation Status of relevant Species listed under Annex I of the Birds Directive;	N/A	Species listed under Annex I of the Birds Directive are not considered within the Stage 2 NIS and are therefore not included within the review below.
The baseline conditions of any relevant European site(s);	No	There is a missing European Site (Blacksod Bay/ Broadhaven SPA [004037]). The Applicant needs to clarify this.
The conservation objectives and qualifying features of any relevant European site(s);	No	See above

⁷ Note - Natura Impact Statement (NIS) is an Irish specific term used following transposition of the Birds and Habitats Directives into national legislation.

⁸ Ecological integrity has been defined in as 'the coherence of the site's ecological structure and function, across its whole area, that enables it to sustain the habitat, complex of habitats and/or populations of species for which it is classified' (Managing Natura 2000 sites, EC, 2000)

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NIS Content	Does the applicant's NIS provide the following information? (Y/N/Unsure)	Briefly Explain Answer:
Any management plans associated with relevant European site(s);	No	There is no reference to the presence or absence of any management plans.
Details on each species and habitat type for which relevant European site(s) are designated and spatial mapping of the distribution and temporal mapping, including lifecycle stages;	Yes	No habitats are considered within the Stage 2 NIS Assessment, just four Annex II species. For each of these species the relevant Natura site is detailed and the abundance (of the species) and temporal distribution is provided.
Information on population profile of the species and their conservation status (e.g. size, population structure etc.)	No	Although information is provided on the population numbers of each species, additional information should be provided on why these species are listed within Annex IV.
Ecosystem structure and functioning of the site and its overall conservation state;	No	There is no specific information on the ecosystem structure or function of each Natura site. Though each feature of the site is described (Section 2.2.2), there is no description of the site as a whole.
The role of the site within the ecosystem region and the Natura 2000 network;	No	The survey location is described in terms of the Annex II and IV species present in the area and the relationship with Natura 2000 sites.
Any other aspects of the site or its wildlife that is likely to have an influence on its conservation status and objectives (e.g. current management activities, other developments etc.)	No	No additional aspects of each site that are missing, however one site is missing and confirmation needs to be sought from the applicant as to why this is no longer included.

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

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

NIS Content	Does the applicant's NIS provide sufficient detail to inform an Appropriate Assessment? (Y/N/Unsure)	Briefly Explain Answer:
A description of size, scale and objectives of the proposed plan or project;	No	The description of the physical characteristics of the project and the location of the project as adequately described. Information provided includes: <ul style="list-style-type: none"> • The specifics of all the equipment that will potentially be used; • The location of the project; • The physical environment; • The biological environment; and • The socio-economic environment. However, the following information has been omitted: <ul style="list-style-type: none"> • Anticipated number of seabed samples that are to be taken to acquire the analysis listed. It is acknowledged that there are going to be 20 sample stations (plus reference stations), but clarity is required on how many grab deployments and therefore how much sediment will be removed.
A description of the pressures of the proposed plan or project, its and likely impacts on the conservation objectives and local site characteristics;	Yes	The screening process identified that the only source of impact that has the potential to result in significant effects is underwater noise generated by the geophysical survey and positioning equipment. Noise of the vessel, atmospheric emissions, marine discharges, solid/liquid waste, and accidental spills of hydrocarbons have all be screened out due to the offshore survey location.
Identification of all European sites located within the zone of influence of the proposed plan or project, together with qualifying interests and conservation objectives;	No	The relevant European sites are listed along with details of their qualifying features. One site has been removed and clarity is required on why this has occurred.
Methodologies, analysis and data sources utilised to	No	In order to determine the zone of

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NIS Content	Does the applicant’s NIS provide sufficient detail to inform an Appropriate Assessment? (Y/N/Unsure)	Briefly Explain Answer:
demonstrate use of best scientific knowledge;		<p>influence of the impacts the assessment of underwater noise has followed best practice in that assessment has been made by using two industry-standard reports (Southall et al., 2007; NOAA, 2016) to inform the noise level threshold at which PTS occur. However, NOAA have since issued a more recent publication: NOAA (National Oceanic and Atmospheric Administration) (2018). Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, Technical Memorandum NMFS-OPR-55, 2018, which needs to be referenced.</p> <p>Worst-case scenarios, in terms of most sensitive cetacean species, and maximum zone of influence, have been used by the applicant to determine potential significance of effect.</p>
A scientific assessment, analysis and statement of the significant effects including direct, indirect, cumulative and in combination effects of the relevant European site(s) and/or species which are expected to occur as a result of the development;	Yes	For the four species that the survey may result in a potential effect, the closest Nature 2000 sites are all listed and the potential effects, including in-combination, are explored.
Details of any appropriate mitigation measures undertaken, or proposed to be undertaken by the applicant to mitigate any significant effects on the environment or on the European site(s) and/or species, and the period within which any such measures shall be carried out by the developer;	No	<p>Although mitigation measure are detailed and these comply with DAHG, 2014, it is recommended that the Applicant consider:</p> <ul style="list-style-type: none"> • Sound sources on the AUV. Where is the AUV located when these are switched on; and • What happens during the hours of darkness if there is an extended equipment shut down.
An assessment of the scope and scale of residual effects	No	Although it is concluded that given

NIS Content	Does the applicant's NIS provide sufficient detail to inform an Appropriate Assessment? (Y/N/Unsure)	Briefly Explain Answer:
after mitigation (including direct, indirect, cumulative and in combination effects);		strict adherence to the NPWS Guidance (NPWS, 2014) and PAD/ NPWS recommendations, marine mammal will not be subject to noise emissions exceeding the injury thresholds, the previous point needs to be addressed
A conclusion in relation to whether or not the project would adversely affect the integrity of any European site (either individually or in cumulation with other existing or consented developments)	No	See previous comments

4.2 Stage 2: Appropriate Assessment Determination

Tables 4.3 and 4.4 provide a summary of Ramboll's recommendation to enable DCCAE to undertake an AA to determine whether the integrity of a European site is likely to be adversely affected by the proposed project.

Table 4.3: Stage 2 Appropriate Assessment Determination Checklist

Does the NIS (and supporting documentation) contain sufficient information to complete an AA and to prepare an AA Conclusion Statement?	No
Does the NIS conclude that the proposed project or plan is likely to have an adverse residual effect on the integrity of any European sites or species?	No
Do you agree with the conclusion(s) of applicant's NIS? (Briefly explain answer)	No, further information is required to support the Appropriate Assessment as detailed below.
What further information is required to complete an AA (if any)?	The following additional information is required to allow DCCAE to complete the AA and prepare an AA Conclusion Statement: <ul style="list-style-type: none"> • The NIS report should include a line plan and expected line distance over which geophysical data could be acquired, including details of noise emissions during line turns; • Additional details as to the expected noise emissions from the equipment proposed, including peak source levels and references for these details; • Provide details on the anticipated survey vessel that the appointed Fugro survey team will use to undertake the

	<p>survey;</p> <ul style="list-style-type: none"> • Consistency between submitted documentation in regard to the equipment proposed and its output sound levels to ensure that all documentation is accurate and complete; • The applicant has not addressed how the zone of impact surrounding the AUV will be monitored during operation of the AUV. The report has stated that the maximum radius of impact is in close proximity to the vessel, although it is 6 m from the AUV, but no mitigation is currently proposed for potential effects within this area when the AUV is deployed and operational; • Provide up to date information in regard to the survey operations proposed by schemes considered in combination with the Inishkea survey; • Provide additional information on seabed sampling approach (including number of reference stations, anticipated number of seabed samples and amount of sediment to be removed that is being collected at each sample station (including reference stations) to acquire the analysis listed by the applicant; • Clarification in regard to what would happen should there be a break in sound during the hours of darkness; • Commit to deal with risks associated with climate change in subsequent stages of the project, i.e. as part of individual licensing procedures; • The cumulative impact assessment assumes that other seismic surveys known to be proposed (for the HAVFRUE subsea cable system off the Mayo coast) will be separated by at least 100 km should the surveys occur simultaneously, preventing any cumulative effects. Confirmation should be sought regarding how this will be applied in practice. • Provide clarification on whether all qualifying interests and/or Annex IV species have been considered for each of the European sites screened. • Confirmation as to why the Blacksod Bay/ Broadhaven SPA [004037] is no longer included within the screening; • Provide additional information in the report on the Blackwater River SAC. • Confirmation that the applicant has checked the Management Plans for each SAC / SPA; • The applicant has relied on the implementation of mitigation and monitoring measures, such as application of separation distances with other projects to avoid in-combination effects among others to arrive at their conclusion that there would be no LSE on the Natura Sites; • The assessment of Annex II and IV species should be included in the NIS for completeness. • Provide additional clarity on the conservation status of relevant habitats and species listed under Annex II of the Habitats Directive; • Provide clarity on whether there are any relevant habitat types for which European site(s) are designated and spatial mapping of the distribution and temporal mapping
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	<p>as appropriate;</p> <ul style="list-style-type: none"> • Provide further information on the ecosystem structure or function of each European sites; • Provide clarity on whether there are any additional aspects of each European site that require consideration that is likely to have an influence on its conservation status or objectives; and • NOAA have since issued a more recent publication: NOAA (National Oceanic and Atmospheric Administration) (2018). Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing, Technical Memorandum NMFS-OPR-55, 2018, which needs to be referenced and included in the documentation accordingly.
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Table 4.4: Summary of Stage 2 Appropriate Assessment

Outcome of Stage 2 Appropriate Assessment	Stage 2 Appropriate Assessment Determination
AA determines that the proposed plan or project is likely to have an adverse effect on the integrity of a European Site(s) or species	Refuse planning consent or proceed to Stage 3 AA: Alternative Solutions (See Section 6)
The applicant's NIS does not contain sufficient information to determine whether the proposed plan or project is likely to have an adverse effect on the integrity of a European Site(s) or species	Request further information from the Applicant
AA determines that the proposed plan or project is unlikely to have an adverse effect on the environment.	