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STATUTORY ENVIRONMENTAL ASSESSMENT

EIA SCREENING DETERMINATION FOR OFFSHORE GEOPHYSICAL AND ENVIRONMENTAL SURVEYS FOR BARRYROE K SITE SURVEY

RAMBOLL

STATUTORY ENVIRONMENTAL ASSESSMENT EIA SCREENING DETERMINATION FOR OFFSHORE GEOPHYSICAL AND ENVIRONMENTAL SURVEYS FOR BARRYROE K SITE SURVEY

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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 Exola DAC, a wholly owned subsidiary of Providence Resources Plc (referred to herein as the 'applicant') for an Environmental Impact Assessment (EIA) Screening Determination, submitted in respect of a site survey within the Barryroe licence area (SEL1/11) (referred to as the' Barryroe K site').

The site survey will comprise a seabed and shallow geophysical survey and an environmental seabed and habitat assessment survey, encompassing a potential well location at Barryroe K as well as a single environmental control point located approximately 7 km southeast of the survey area. The survey will cover an area of approximately 9 km^2, and the greater working area in which the survey vessel may manoeuvre during line turns and equipment deployment and recovery is approximately 22 km^2.

The competent authority (DCCAE) is required to give consideration to the potential for likely significant effects of such activities on the environment, having regard to the European Union (Environmental Impact Assessment (EIA)) (Petroleum Exploration) Regulations 2013 (as amended) and the EU Directive (2011/59/EU), as amended by Directive 2014/52/EU (herein referred to as "The EIA Directive") and relevant jurisprudence and guidelines.

This report provides a review of the applicant's request for EIA screening determination (supported by an EIA Screening Report). Public consultation on the information provided by the applicant has been undertaken by the DCCAE. The consultation responses received by the DCCAE have been taken into consideration in the preparation of this report.

The report provides a conclusion that can be used by the DCCAE to issue a screening determination. The information presented in the applicant's screening report is considered to be complete and that no further information is required and provides adequate information to allow the DCCAE to issue a screening determination.

Table ES.1 summarises the overall screening determination.

Table ES.1: Summary of screening assessment for projects listed on Annex II of the EIA Directive

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

1. INTRODUCTION

Ramboll UK Limited (herein referred to as Ramboll) has been commissioned by the Department for Communications, Climate Action and Environment (herein referred to as 'DCCAE') to provide assistance with regards to the statutory assessment of a request by Exola DAC, a wholly owned subsidiary of Providence Resources Plc (referred to herein as the 'applicant') for an Environmental Impact Assessment Screening Determination, submitted in respect of a site survey within the Barryroe licence area (SEL1/11) (referred to as the Barryroe K site).

1.1 Project Background

The applicant is proposing to undertake a site survey within the Barryroe licence area (SEL1/11) situated in the North Celtic Sea Basin, approximately 49 km southeast of the closest coastline at Ballymacshoneen, Butlerstown North, County Cork on the south coast of Ireland. The site survey will comprise a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey, encompassing a potential well location at Barryroe K. A single environmental control point located approximately 7 km to the southeast of the survey area will also be sampled. The survey area is approximately 9 km^2 and the greater working area, within which the survey vessel may manoeuvre during line turns and during equipment deployment and recovery, is approximately 22 km^2.

The aim of the survey is to:

- Accurately determine water depths and provide information on depth of sediments overlying chalk bedrock and to identify and map any chalk exposures;
- Provide information on the seabed and sub seabed conditions to ensure the safe emplacement and operation of semi-submersible drilling rig at the proposed well location;
- Provide information on the cultural potential of the survey area, including the location of any shipwrecks or other underwater cultural heritage features;
- Assess the survey area for the presence of any Annex I habitats (as defined in the EC Habitats Directive 92/43/EC); and
- Obtain environmental baseline samples across the survey area to establish a benchmark for ongoing environmental monitoring as per OSPAR guidelines.

The 'European Union (Environmental Impact Assessment (EIA)) (Petroleum Exploration) Regulations 2013 (S.I. No 134/2013)' (as amended in 2019) (herein referred to as the 'EIA Regulations'), require that applications made the Minister by holders of petroleum exploration licences or petroleum prospecting licences for permission to undertake "activities" under the licence must be assessed to establish if they would be likely to have a significant effect on the environment. This requires that all applications to carry out exploration activities must be subject to an EIA Screening in the first instance to determine if an EIA is required.

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

1.2 Documents Reviewed

The following documents have been reviewed to inform this report:

- Barryroe K Site Survey Environmental Impact Assessment (EIA) Screening, Ref P1250-04-01, dated January 2020;
- Application for Approval to Conduct a Seabed Geophysical, Environmental Baseline and Habitat Assessment Site Survey, Ref BAR-PGE-K100, undated;

- Barryroe K Site Survey Appropriate Assessment Screening and Natura Impact Assessment, Dated January 2020;
- Pre-survey Fishery Assessment at Barryroe (SEL1/11) North Celtic Sea, South West Coast of Ireland, Sinbad Offshore Support Ltd, Ref BAR-PGE-K101, Dated 13 January 2020;
- Barryroe K Site Survey Environmental Impact Assessment (EIA) Screening, Ref P1250-04-01, dated March 2020;
- Appendix 1 responding to Environmental Advisory Unit Clarifications received in March 2020; and
- Updated Appendix 1 responding to Environmental Advisory Unit Clarifications received in April 2020.

This report has been prepared by competent experts with appropriate expertise in Environmental Impact Assessment.

2. TERMS OF REFERENCE

2.1 Legislative Context

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

- EU Directive on assessment of the effects of certain public and private projects on the environment (Environmental Impact Assessment) Directive (2011/92/EU) and as amended by Directive 2014/52/EU;
- European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 (S.I. No 134/2013); and
- European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (S.I. No 124 of 2019).

2.2 Relevant Guidance

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

2.3 Consultation

2.3.1 Prescribed Bodies

The following bodies were notified of the application:

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

One response was received as follows:

- Irish Coastguard (& National Maritime Operations Centre), Department of Transport, Tourism and Sport dated 04 February 2020.

The following observations were made:

- As per Sea Pollution (Miscellaneous Provisions) Act 2006 Part 3 Para 20 and 21 refers the operator should include in the submission:

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

    - A risk assessment re hydrocarbon discharge should be included in submission; and
    - A plan for the prevention and minimisation of any accidental discharge.
- Operations such as the "ship to ship" transfer of fuels or other HNS substances which present a hazard to the marine environment are prescribed operations within the Irish EEZ and as such require a permit for operations from the Irish Coast Guard (DTTAS).
- The Operator should update and advise the IRCG of the commencement and suspension or termination of survey operations offshore via the Marine Rescue Coordination Centre (MRCC) Dublin and a Radio Navigational Warning (RNW) should be promulgated via the same.

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

2.3.2 Public Consultation

The application by the applicant was advertised by the DCCAE on their website following receipt of the application on 20 January 2020. Invitations for submissions were advertised by DCCAE to be received by close of business on 21 February 2020 to ensure consideration by the Minister.

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

- Response from a private individual (name withheld for privacy) dated 20 February 2020;
- Response from a private individual (name withheld for privacy) dated 20 February 2020;
- Response from a private individual (name withheld for privacy) dated 20 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from a private individual (name withheld for privacy) dated 21 February 2020;
- Response from Not Here Not Anywhere dated 21 February 2020; and
- Response from a private individual (name withheld for privacy) dated 21 February 2020.

Following receipt of additional information from the applicant, the DCCAE advertised a further consultation period on this information from 01 April 2020 to 15 April 2020. One response was received, and the points raised have been considered and responded to as provided in the following sections of this report:

- Response letter from An Taisce undated, received 15 April 2020.

2.3.3 General Consultation Responses

The following general responses have been received:

- General economic comments
    - The benefits to the people of Ireland are nominal at best, illusory if honest.
    - Offshore drilling is economically costly, particularly when compared to lack of benefit it provides to the Irish economy. The seafood industry, which supports 11,000 jobs, is already suffering due to biodiversity loss, which offshore drilling will only exacerbate. Comparatively, oil and gas extraction in Ireland has only provided 270 long terms jobs.

Providence Resources recent layoffs is proof of the industries unstable nature in relation to employment. Furthermore, there is little potential tax benefit to Ireland from the gas industry. Ireland has some of the lowest petroleum extraction tariffs in the world. The Corrib site is yet to pay any taxes to the Irish state despite earning revenues of €734 million in 2018.

- General comments on health safety and environmental issues
  - Fossil fuels have placed us in a pariah category of sovereign states re carbon emissions. We should be urgently pursuing plans to offset the carbon emissions from our farming with rewilding of bogs and public ownership of seaweed beds. The application is disrespectful of our democratically declared climate and biodiversity emergencies and of the Irish people.
  - Fossil fuels are dirty, outdated and morally untenable re our obligations to other low-lying countries.
  - I think at this point it goes without saying the detrimental effects fossil fuels are having on our planet. However, I will say it anyway as this is clearly not being understood in its enormity by those trying to drill for fossil fuels and those who are willing to allow this. It is undisputed by the science and the experts in the fields that we are in the throws of a existential climate crisis and the continued use and exploration of fossil fuels are detrimental to that crisis.
  - I strongly object to this site survey taking place due to my concerns about its impact on climate change. Internationally we need to be cutting down and eliminating the use of fossil fuels if we wish to keep the temperature from rising to a point where it would have a devastating impact on this planet.
  - Any projects intending to continue and expand fossil fuel investment in Ireland are simply not acceptable. As a country ranking amongst with worst in Europe on climate action (2020 Climate Change Performance Index), we must be working to cut down and eliminate fossil fuel and be incentivising progression towards more sustainable alternatives.
  - It is critical that our use of fossil fuels is contained within a wider strategy to minimise the harmful effects such energy sources are having on the environment and climate. Until such a strategy is in place, further drilling and fuel exploration should be curtailed.
  - It is embarrassing that the state is even considering the application following the Taoiseach's grand announcement at last year's United Nations Climate Summit that Ireland would end fossil fuel exploration.
  - We remain convinced that the Department has a moral duty to require considerations of health and safety before permitting any exploration, drilling site surveys or such. We would suggest that this would not be an onerous requirement.
  - I do not want this to happen, because I am extremely worried about the climate crisis because it will threaten the human race's survival by causing sea levels to rise, and causing infectious diseases to spread, as well as other problems.
  - The Intergovernmental Panel on Climate Change has estimated we cannot use all of the fossil fuel reserves that have been found, without irreversibly damaging the climate, so that means we should not explore to find more fossil fuel reserves.
  - Refuse this application and revoke all existing exploration licences under the public interest power in Article 43 of Bunreacht na h'Eireann. The authority has been vested to the State to protect our right to life and right to a healthy environment. Do your duty.
- General comments on legal entities and contractor

- Providence Resources is very weak financially. After its last CEO resigned over the company's financial difficulties, Providence Resources has recently announced they only have enough funds to last until April. Only companies of financial substance should be allowed to operate in Irish waters. In attempts to save money, Providence Resources laid off most of their technical staff. Although Providence was granted licences for fossil fuel exploration in the past, they do not have the same expertise as now as when those early licences were granted. This lack of expertise increases the risk to health and safety and to marine life that this site survey poses.
- I also would suggest that a company with a precarious financial situation like Providence Resources should not be granted permission to undertake this site survey. It is vital that if this work has to be done then it is done by companies with the resources to successfully undertake it and with the fully complement of technical staff.
- I am also concerned that Providence Resources share price has plummeted from £14.925 at the start of last year to £3.00 as of last week. This collapse in share price will doubtless make the organisation desperate to show profitability in any new endeavour they undertaken, I fear they will take shortcuts with health and safety as well as environmental regulations. Such heavy industry needs to be in calm hands who can be expected to follow guidelines and regulation to the letter, not an ailing Plc desperate to stay out of receivership.
- Exola's parent company, Providence Resources, is in a precarious financial position having been unable to find investors for the project. International investors can see the writing is on the wall for projects like Barryroe and it is clear that Providence no longer have the financial resources or technical expertise required to complete the project.
- As you may be aware Providence Resources has had a very difficult recent history. In particular it was forced during 2019 to shed a number of its staff including those who appeared to us to be providing the technical resources of the group. We are unable to determine from the public documents what technical expertise remains within the group. We believe that this might be insufficient, we have not seen from them evidence that it does have such staff. We believe that it would be correct for the Department to request from the group a disclosure of its resources. Failing our being able to see what they have by way of such staff (if they have any (we believe it is appropriate to be cautious).

  In this context, we note that the Minister may choose to remove exploration licences under terms of Article 52(1)d if there is a material change in the technical competence of the authorisation holder. We respectfully submit that they redundancy program is sufficient grounds to warrant an investigation from the Department as to whether this should now be considered.
- Providence Resources has had a very difficult 2019 financially which was on top of a year end 31.12.18 position which saw its accounts being qualified on the going concern basis (and also on the value of assets).

  We believe that companies should only be allowed to carry out any business whatsoever if there is a reasonable chance of there being able to repay any debts they might accrue or to compensate any party who might be (inadvertently to be sure) damaged.

  The survey will not be able to go ahead without money to pay for it. Surely it is reasonable to require that Exola and Providence Resources are of reasonable substance before permission is granted to carry out any work.

  Its previous fund raising was when the shares of Providence Resources stood above 5 in value. That was already a large fall since the start of the year. They now stand at under 3. It is an issue whether they will be able to raise the money. They need to be able to

take the development further, it is not unreasonable surely for them to demonstrate that they can before being permitted to do anything more.

- Under its previous (failed) farm out agreement it surrendered 50% of the Barryroe licence to a Hong Kong entity that promised to fund the future development. The money was not forthcoming and hence Providence Resources troubles. They have announced that they are seeking the return of their 50% (note Landsdowne Oil and Gas has a minority stake) but that means that they do not have this now. Until this issue is resolved we again believe that approval would be pre-mature.

These comments are in regard to the current economic environment, more general comments in regard to climate change and general comments on legal entities and contractor. Appropriate regard has been given to these 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.

2.3.4 Project Specific Consultation Responses

The following project specific responses have been received:

Consultee	**Project specific comments**	**Response**
Private Individual	Offshore drilling can have a profoundly negative impact on the local marine environment too. The seismic booming method used for oil and gas exploration kills zooplankton (the basis for the marine food chain), disrupts migratory patterns and causes internal bleeding in whales and dolphins. The offshore drilling process also produces waste drilling muds full of toxic substances like mercury and lead.	Offshore drilling or airguns are not proposed as part of the site survey.
Private Individual	I am concerned about the environmental impact of offshore drilling on the marine environment.	Offshore drilling is not proposed as part of the site survey.
Private Individual	One blast from oil and gas exploration kills 64% of zooplankton in a region of up to 0.7 miles around the source. These methods have also been found to damage the hearing and health of fish, eventually "disrupting and displacing important migratory patterns and pushing marine life away from suitable habitats" and causing internal bleeding in whales and dolphins.	Airguns are not proposed as part of the site survey.
Private Individual	The offshore drilling process also produces waste drilling muds full of toxic substances like mercury and lead, which "may bioaccumulate and biomagnify in marine organisms, including in our seafood supply".	Offshore drilling is not proposed as part of the site survey.
Private Individual	The potential negative effects on our fishing and tourism sectors (not to mention the reputational damage to Ireland on the international stage) are enormous compared to the tiny benefit of this project in terms of jobs and tax revenues.	The mitigation measures proposed will ensure that there are no significant effects on commercial fisheries or tourism.
Private Individual	We note that all the documents submitted by Exola are by them. Other submissions we have seen are by independent experts. It can of course be argued that experts who are being	The reports submitted by the applicant are produced on their behalf by Orbis

Consultee	Project specific comments	Response
	remunerated by one party are not independent in some sense but that issue does not arise here as independence is not being asserted. As these documents and opinions come to judgements that involve more than mere statement of facts one must ask to what extent the conclusions are valid. There must surely be some grounds for doubt that there is not at least some bias even if that is unconscious. To be clear we are not asserting that anything is untrue merely that we would expect more independence. Exola and Providence Resource's very survival as companies may depend on their ability to develop the Barryroe site. We would request that the information put forward should be independently verified.	Energy Limited. The reports submitted by the applicant are independently reviewed in this report, which has been prepared by Ramboll UK Limited to provide assistance to DCCAE in relation to the EIA Screening. This independent review carried out by Ramboll UK Limited allows the Environmental Assessment Unit in DCCAE to make the necessary determinations.
Not Here Not Anywhere	At one point (page 10) it is suggested that sound leaks to the side of the boat will be less powerful than that directly below the boat. This is not in of itself an unreasonable assertion but could (and should) be looked at in more detail. Here are some of the factors that occur to us: How tight are the beams that are emitted (and how can anybody not involved determine this)? What is the impact of reflection from the sea floor? This will surely depend on the make up of the sea floor which is one of the items of information that the survey is trying to determine. What effects would there potentially be from wave interference? There could be interference from the base waves emitted, diffusion at the edges and reflection. Could this be constructive interference leading to localised spots of high amplitude? The paper states a conservative assumption has been made. What assumption is this? How can anyone know whether the assumption is conservative or not without knowing its value?	It has been deemed that this additional information requested is not required in order to assess the potential effects of the proposed site survey. The conservative approach undertaken in the modelling is considered the worst-case scenario, which in reality is unlikely to be reached.
Not Here Not Anywhere	We believe that the permission from PSE Kinsale to approach with 500 m of the existing infrastructure should have been sought before the application was made. Therefore we believe that permission should not be granted (even if there were no other issues which obviously we believe there are).	The applicant is responsible for obtaining all necessary permissions for the site survey.
Not Here Not Anywhere	We note that there are referenced on page 36 to events due to take place in 2019. This is curious for a document being submitted in 2020. We suggest that Exola should be asked to confirm that this document has been drawn up in 2020 (or shortly before) explicitly for this submission and	The updated information provided by the applicant has corrected this and reflects projects that

Consultee	Project specific comments	Response
	with current state of knowledge of all issues considered. Were this to be an older document simply resubmitted (or based substantially on one such), we would submit that it was not a valid support of the submission and that a new submission should be required.	may occur during 2020 and 2021.
An Taisce	An Taisce has concerns about the timing of this EIA screening assessment decision-making process. The challenges of requiring the public to engage in a statutory consultation process for a development consent have been recognised and addressed separately in planning legislation.	An initial 30-day public consultation was carried out on the application between 22 January 2020 and 21 February 2020, and the subsequent consultation from 01 to 15 April 2020 was a supplemental consultation on the further information received from the applicant for the purposes of EIA screening assessment. Further, all those who previously made observations on the application were notified that additional material had been received and of the supplemental public consultation period.
An Taisce	An Taisce question the accuracy of the developer's interpretation of Annex IIA as set out in Section 1.2 of the report and respectfully suggests that the decision maker must rely on the true meaning of the Directive when making any determination.	The information provided by the applicant is independently reviewed and a recommendation is made to the DCCAE in order for it to make a screening determination. This report documents this review of information provided and the process undertaken.
An Taisce	The possibility that the survey may be undertaken before pandemic restrictions are lifted must also be considered in any environmental assessment. The developer proposes to discharge to the marine environment the grey water and sewage for 40 persons onboard the survey vessel, without any assessment of the implications of this in the context of Covid-19.	It will be the responsibility of the applicant and their contractor to ensure that Government requirements and guidelines are met in relation to Covid-19. A mitigation measure

Consultee	Project specific comments	Response
		to this effect should be added to any consent determined by the DCCAE.
An Taisce	We also believe that this EIA Screening process is premature when the outcome of the Appropriate Assessment under the Habitats Directive has yet to be determined.	The outcome of the Appropriate Assessment under the Habitats Directive is a separate process and is reported separately to the EIA Screening decision.
An Taisce	The documentation supplied states that the proposed Barryroe K site survey area overlaps spawning and nursery grounds of 15 commercially important fish species and that the following bird species from the SPAs located around the Irish and UK coastlines may forage at the proposed Barryroe K site survey area: guillemot, kittiwake, lesser black-backed gull, fulmar, storm petrel, gannet, puffin, manx shearwater and razorbill. An Taisce believes that species other than those having conservation objectives should be considered in the process leading to any determination.	Whilst it is acknowledged that other species of fish and birds may utilise the area of the proposed Barryroe K site survey, it is considered that the species assessed by the applicant and any mitigation measures to be implemented would be a proxy for any additional species present within the area.
An Taisce	Marine mammals have been recorded in the region including harbour porpoise, common dolphin and minke whale. The documentation expressed a level of uncertainty around the presence of marine mammals including bottlenose dolphin, harbour seal and grey seal and marine reptiles such as leatherback turtle. The likely effects of the proposed marine survey work on marine mammals and reptiles has not been appropriately considered in the documentation provided and the proposed mitigation measures lack the necessary level of certainty and are inadequate.	The likely effects on marine mammals recorded in the region are considered to be a proxy assessment for other species of marine mammals and reptiles that may or may not be present. The mitigation measures proposed by the applicant include adherence to the relevant government guidance on managing the risk to marine mammals from man-made sound sources in Irish waters (DAHG, 2014[3]).
An Taisce	There is an absence of clarity around the specific equipment to be used in the proposed survey, the	The applicant is required by condition

[3] DAHG (2014) Guidance to Manage the Risk to Marine Mammals from Man-made Sound in Irish Waters. Department of Arts, Heritage and the Gaeltacht. 59 pp (URL: https://www.npws.ie/sites/default/files/general/Underwater%20sound%20guidance_Jan%202014.pdf)

Consultee	Project specific comments	Response
	developer presenting details on only "the typical characteristics of geophysical survey equipment, which are representative of the equipment to be used during the proposed Barryroe K site survey operations". An Taisce submits that this level of uncertainty around the technology and methodologies has resulted in gaps in information before the decision maker which can only be addressed through the application of the precautionary principle.	to provide confirmation to the DCCAE that the conclusions of the EIA Screening report remain valid once the final survey equipment has been selected.
An Taisce	Discussion of cumulative impacts has not included any detail on the likely impacts of previous surveys on species. An Taisce notes that a single environmental control station is to be established at a distance of 7 km from the survey site. We submit that this is inadequate in the circumstances.	The applicant is considered to have identified the other nearby existing and proposed developments which are relevant to the assessment of cumulative effects on species. While the applicant has not included consideration of in combination or synergistic effects interactions with past surveys, Ramboll does not consider that this is required. Significant cumulative effects with past surveys are not considered likely given that the characteristics of impact would have been short term/temporary in nature. Effects associated with past surveys are considered to have been of small area/ extent and/or low magnitude such that permanent injury would not be caused. The use of one reference station is considered adequate since it is located in an area of seabed/sediment that is of similar composition to that of

Consultee	Project specific comments	Response
		the seabed within the development area.
An Taisce	It is considered opinion of An Taisce that development consent cannot be given for this proposal in the absence of a full EIA.	This report enables the DCCAE to determine whether an EIA is required to support the development consent application. This report concludes that an EIA is not required.

3. PROJECT DETAILS

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

Table 3.1: Application Details

Project Title:	Barryroe K Site Survey
Applicant:	Exola DAC
Exploration Licence Reference:	SEL 1/11
Date EIA Screening Request Received (Respond within 90 days):	20 January 2020

Brief Project Description:

The site survey will comprise a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey at the Barryroe K site, together with a single environmental control point approximately 7 km east-southeast. The survey area is approximately 9 km^2 and the greater working area, within which the survey vessel may manoeuvre during line turns and during equipment deployment and recovery, is approximately 22 km^2. The anticipated total line kilometres to be surveyed is 115 km.

A geophysical acoustic survey will be conducted using the following equipment. It is expected that the geophysical equipment will provide the required data for habitat assessment, an archaeological assessment of the site as well as confirming the site does not have non-archaeological debris or hazards. The side scan sonar and magnetometer will be towed behind the survey vessel. The echosounders and pinger will be hull mounted. The USBL will be utilised to confirm the precise location of underwater equipment. No seismic activity will be conducted and airguns are not proposed.

- Side scan sonar (expected to be a dual frequency Edgetech 4200 operating at 120 kHz and 410 kHz with an expected pulse interval of approximately 200 ms);
- Single beam echosounder (expected to be a Kongsbery EA400 operating at 200 kHz with an expected pulse interval of approximately 200 ms);
- Multi beam echosounder (expected to be a Kong;
- Pinger sub-bottom profiler;
- USBL; and
- Magnetometer.

A habitats assessment and environmental baseline survey will be conducted at the survey area. Any potentially sensitive habitats identified from anomalies in the geophysical survey data will be investigated using high-resolution video or camera stills. Seabed samples will also be taken at approximately 13 seabed sample locations using a modified 0.1 m^2 Day corer (a box corer or dual Van Veen grab will be used as a back-up), with sampling stations defined by the number of habitats delineated from the geophysical data, or in the absence of different habitats, a standard cruciform pattern centred on a potential future well location. It is estimated that approximately 1 m^2 of seabed will be disturbed at each location. These samples will be analysed to provide information on benthic faunal community composition and physico-chemical characteristics of the sediments. A habitat assessment and environmental baseline sampling location will also be undertaken outside of the survey area, up to 7 km east-southeast to be used as a control point. One seabed sample location will be used within the control

Operations are proposed to take place between 01 April 2020 and 30 November 2020 subject to regulatory approval and vessel availability. If the survey has not commenced within this timeframe, the operations will be undertaken between 01 February 2021 and 30 November 2021, again subject to regulatory approval and vessel availability. The anticipated duration of the survey is approximately three days, excluding port calls, transit and potential weather delays.

This survey follows on from the site survey operations undertaken in the Barryroe licence area at the proposed A and B well locations during September 2019. Obtaining data for the Barryroe K site location allows for the potential future emplacement of an additional well to the east of the previously

surveyed A and B well locations (which would be subject to further EIA and consents), in order to further appraise the eastern panel of the Barryroe field.

The vessel proposed to be used for the survey is the Gardline vessel MV Kommander. Prior to the commencement of the proposed site survey operations, the applicant may seek approval from the DCCAE to use an alternative equivalent survey vessel. In this event, the DCCAE should expect to see confirmation that the survey equipment and methodology on any replacement vessel are equivalent to that described in the EIA Screening Report and that the description of the development used to inform the EIA Screening Report is still valid.

4. SCREENING CHECKLIST

4.1 Determining whether a Project should be subject to an EIA

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

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

In Ireland, for oil and gas exploration activities, the EIA Directive is implemented through the European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013, as amended by the European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (the 'EIA Regulations'). Regulation 3(1) of the EIA Regulations requires that where a licence holder proposes to undertake "activities" under the licence, the holder shall apply to the Minister for permission to undertake the activities. Regulation 3(1B) provides, inter alia, that where such an application is made, the Environmental Assessment Unit in DCCAE (EAU) shall 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.

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

Table 4.1 Checklist – EIA Screening for Geophysical Survey Project

a) Is the project listed on Annex I of the EIA Directive? • If Yes, EIA is required for the project. • If No, EIA may be required for the project - Proceed to Section b)	No
b) If No - Is the project listed on Annex II of the EIA Directive? • If Yes, EIA may be required for the project - proceed to Sections 4.2 and 4.3. • If No, EIA is not required for the project.	No, however, the European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 require that holders of petroleum exploration licences or petroleum prospecting licences apply to the Minister for permission to undertaken "activities" under the licence to establish whether the activities are likely to have significant effects on the environment by virtue, inter alia, of their nature, size and location.

4.2 Information to be provided by the Developer on the projects listed in Annex IIA of the EIA Directive

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

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

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

Table 4.2: 'Information to be provided' criteria, as set out in Annex IIA of the EIA Directive, meet the minimum requirements.

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the minimum requirements:**
a) A description of the project including in particular: (a) A description of the physical characteristics of the whole project and, where relevant, the demolition works. (b) A description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.	Yes	An adequate description is provided on the physical characteristics of the project and its location, with particular regard to the environmental sensitivities likely to be affected. A separate Appropriate Assessment Screening Report and Natura Impact Statement has been submitted by the applicant and this has been reviewed and reported on separately. The description of the existing baseline of the area is detailed and refers to results obtained from the previous survey in the area, including the survey conducted in 2019. It is additionally acknowledged that one of the objectives of the proposed survey is to undertake a benthic survey which will improve the level of information available.
b) A description of the aspects of the environment likely to be significantly affected by the project.	Yes	An adequate description is given to the aspects of the environment that are likely to be affected by the project. The applicant has included: • Spawning and nursery grounds; • Foraging seabirds; and • Marine mammals (the harbour porpoise, common dolphin, bottlenose dolphin, harbour seal and grey seal). Potential impacts of the site survey on Annex I habitats and Annex II species are assessed in the separate Appropriate Assessment Screening Report. Biodiversity is focussed on Annex IV species. The applicant has produced a standalone fisheries assessment in order to ascertain any impacts on commercial fisheries.
c) A description of any likely significant effects, to the extent of the information	Yes	An adequate description is given of the likely effects on the environment in sufficient detail on the expected residues and emissions and

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the minimum requirements:**
available on such effects, of the project on the environment resulting from: (a) The expected residues and emissions and the production of waste, where relevant; (b) The use of natural resources, in particular soil, land, water and biodiversity.		production of waste (where relevant). Mitigation measures are also detailed (where relevant).
d) The criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3.	N/A	The assessment of whether the criteria of Annex III were taken into account is described in Section 4.3 below.

4.3 Criteria to determine whether a project listed on Annex II of the EIA Directive is likely to have a Significant Effect on the Environment

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

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

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

4.3.1 Characteristics of Project

Table 4.3 summarises the consideration given by the applicant to the 'Characteristics of the Projects' in the screening report.

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

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements:**
a) The size and design of the whole development;	Yes	Detailed information is presented regarding the locations (in terms of different survey areas), nature, duration and survey methodology (geophysical and environmental) for the activity being assessed. It is noted that prior to the commencement of the proposed site survey operations, the applicant may seek approval from the DCCAE to use an alternative equivalent survey vessel from that described in the EIA Screening Report. In this event, the DCCAE should seek confirmation that the survey equipment and methodology on any replacement vessel are equivalent to that described in the EIA Screening Report and that the description of the development used to inform the EIA Screening Report is still valid. With regard to the environmental sampling equipment, the applicant has stated that a modified 0.1 m^2 Day grab will be used as the primary sampling tool. A box core and a Van veen are to be back-up.
b) Cumulation with other existing or approved developments;	Yes	Other nearby existing and proposed developments are identified by the applicant including: • PSE Kinsale Energy Limited: Kinsale Area Decommissioning Project; • EXOLA DAC: Barryroe C and D site surveys; • Europa: Kiely East Prospect and Edgeworth Prospect site surveys; • CNOOC Petroleum (Europe) Limited: Edge 2D HR seismic survey; • Vermilion E&P Ireland Limited plan to undertake geophysical and visual surveys of offshore facilities in the Corrib field; • Europa: Inishkea site survey; • Marine Institute: hydrographic and geophysical surveys as part of the INFOMAR Programme; and • Woodside Energy Limited: Geotechnical investigation in Irish Atlantic Margin.
c) The use of natural resources, particularly land, soil, water and biodiversity;	Yes	An adequate description of the use of natural resources has been provided by the applicant.
d) The production of waste;	Yes	An adequate description of the production of waste has been provided by the applicant. An estimate of

Does the request for screening determination provide sufficient information, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements:**
		waste volumes and approach to waste management has been provided.
e) Pollution and nuisances;	Yes	An adequate description of pollution and nuisances has been provided by the applicant.
f) The risk of major accidents and / or disasters, which are relevant to the project concerned (including those caused by climate change);	Yes	Given the nature of the proposed operations there is limited risk of major accidents and/or disasters (principally the risk of fuel/chemical leaks). Unplanned events (principally the risk of injury to marine mammals due to collision and accidental fuel discharge) are considered in the EIA Screening Report at a level of detail appropriate to the proposed development and mitigation measures are identified to reduce the risk of such events. The significance of these unplanned events is calculated using an oil and gas industry standard risk assessment approach. The applicant has discussed climate change in Section 4 (point 5) and also within Section 6.4 Cumulative Impacts.
g) Risks to human health (e.g. due to water contamination or air pollution).	Yes	Given the nature of the offshore location of the proposed survey there is limited risk to human health (principally related to the handling of fuel/chemicals on the survey vessel and any leak/spill of these materials as a result of unplanned events). The EIA Screening Report identifies mitigation measures to control these risks and concludes that there are no residual significant effects. Therefore, it is considered that adequate information has been provided by the applicant.

4.3.2 Location of Project

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

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

Table 4.4: Checklist to determine whether 'Location of the Projects' criteria, as set out in Annex III of the EIA Directive, meet the minimum requirements to determine a Screening Opinion.

The environmental sensitivity of geographical areas likely to be affected by the project are considered in the Screening Report, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements for a screening opinion:**
a) The existing and approved land use;	Yes	The existing seabed is described in such detail as is available at present (e.g. water depths) including the details collected during recent survey work. It is noted that an objective of the geophysical survey and benthic sampling is to improve the available baseline data. The occurrence of shipping and fishing activity as well as existing oil and gas infrastructure including planned decommissioning works are identified within the EIA Screening Report.
b) The relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the areas and its underground;	Yes	The EIA Screening Report details that although the fishery resources in the area have been identified as high quality, they are of medium sensitivity to the proposed survey. The proposed survey is on a small temporal and spatial scale which means it is avoidable by fishermen. Mitigation measures to avoid impact have been identified. The relative abundance, availability, quality and regenerative capacity were adequately described where applicable in the baseline and assessment of environmental risks.
c) The absorption capacity of wetlands, riparian areas & river mouths;	N/A	The project location as well as the proposed activities mean that this criterion is not applicable.
d) The absorption capacity of coastal zones and marine areas;	Yes	The absorption capacity of the marine environment (and coastal where applicable) were adequately described.
e) The adsorption capacity of mountain and forest areas;	N/A	The project location as well as the proposed activities means that this criterion is not applicable.
f) The absorption capacity of nature reserves and parks;	N/A	The project location as well as the proposed activities means that this criterion is not applicable. Natura 2000 sites are considered separately.
g) The absorption capacity of areas classified under national legislation (e.g. Natura 2000 area);	Yes	The applicant has provided information on the Natura 2000 sites and also OSPAR MPAs. Further information is provided by the applicant in an Appropriate Assessment Screening Report and this has been assessed separately.

The environmental sensitivity of geographical areas likely to be affected by the project are considered in the Screening Report, with particular regard to:	**Yes / No**	**Briefly summarise whether the applicant meets the requirements for a screening opinion:**
h) The absorption capacity of areas in which there has already been a failure to meet the environmental quality standards, laid down by legislation and relevant to the development or in which it is considered that there is such a failure;	N/A	There are no known areas nearby where there has already been a failure to meet the environmental quality standards.
i) The absorption capacity of densely populated areas;	N/A	The project location as well as the proposed activities means that this criterion is not applicable.
j) The absorption capacity of landscapes and sites of historical, cultural or archaeological significance.	Yes	The assessment identifies potential disturbance to cultural heritage features and proposes mitigation described below to avoid effects. There are no known features within the survey area and the applicant has stated that the benthic sample locations will be investigated using video/photos prior to grab samples being taken to ensure that no features of historic or cultural importance are impacted.

4.3.3 Type and characteristics of the Potential Impact

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

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

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

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely? (Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Population and human health	The applicant's EIA Screening Report gives a description of human health risk, with the principal potential interaction being the risks to health from storage, handling and use of hazardous materials on board (e.g. fuel and chemicals) and the effects of any unplanned events (e.g. leaks and spills). It is concluded by the applicant that population and human health risk to the wider public from hazardous materials is not relevant given the project location 49 km offshore. Other potential interactions are emissions to air from vessel engines and emissions to sea from vessel wastes discharged overboard. It is concluded by the applicant that the quantity of emissions released will be relatively small due to the short duration of the proposed operations (three days) and that emissions are likely to rapidly disperse offshore. Emissions to sea will be treated in accordance with	The magnitude and spatial extent of the impact;	Yes	No significant effects are considered likely by the applicant. The applicant has provided adequate evidence to conclude that no significant effects are likely during routine operations, assuming the effective implementation of industry standard health and safety practices. The applicant has concluded that non-routine events are not considered likely to result in significant effects on population and human health.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
	MARPOL standards (i.e. sewage water treated or held on board for onshore disposal, and food waste macerated). The applicant additional concludes that the appointment of an experienced Fisheries Liaison Officer who will maintain communication with local fishing vessels will mitigate the risk of any collisions with fishing vessels.	The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	
Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and	The applicants report has considered the potential effects on biodiversity from the following receptor/activity interactions: • Seabed (from sampling); • Marine species and sites from underwater noise and light emissions; • Marine environment from accidental oil spill;	The magnitude and spatial extent of the impact;	Yes	The applicant has stated no significant effect with respect to: • Underwater noise on Annex IV species and fish; • Seabirds from nearby SPAs who forage within the survey area; and • Benthic species and sensitive seabed habitats.
		The nature of the impact;	Yes	
		The transboundary	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Directive 2009/147/EC;	• Collision with marine species; and • Effects on fisheries, specifically the nephrops fishery.	nature of the impact;		It has been noted that the applicant has used the recently published paper on bird foraging distances (Woodward et al., 2019). Due to the short duration of the proposed survey the applicant concludes that there is unlikely to be a cumulative impact due the presence of the survey vessel and the other known projects which are scheduled to take place in the area. It is stated clearly that if there is a break in sound producing activities during the hours of darkness that a re-start will not occur until daylight when the Marine Mammal Observer can conduct the relevant watches. It has been confirmed that this will be clearly stated in the Scope of Work for the project.
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
Land, soil, water, air and climate;	The applicants report considers the potential sources of impact are limited to discharges to water from the survey vessel/equipment, air emissions from the survey vessel, waste disposal offshore and onshore, and direct physical impacts to benthic habitats as a result of seabed sampling. Potential effects from these sources are considered and, in most cases, appropriate mitigation measures are identified to seek to ensure that effects are not significant.	The magnitude and spatial extent of the impact;	Yes	No significant effects are considered likely by the applicant. The applicant has provided adequate evidence to conclude that no significant effects are likely during routine operations, assuming the effective implementation of identified mitigation measures. The applicant has concluded that non-routine events are not considered likely to result in significant effects on land, soil, water, air or climate. In regard to cumulative effects, the applicant has detailed all potential simultaneous operations in the area.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and reversibility of the impact;	Yes	
		The cumulation of the impact with the impact of	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
		other existing or approved developments;		
		The possibility of effectively reducing the impact.	Yes	
Material assets, cultural heritage and the landscape	The applicants report has described the location of the proposed activities 49 km offshore, the assessments identify that the only potential adverse effect is the potential for effects on cultural heritage assets. There are no known sites of historical, cultural or archaeological significance within the proposed survey area. However, the applicant states that all benthic sample locations will be investigated using video/photos prior to grab samples being taken to insure there is accidental damage to material assets or cultural heritage. Effects on other material assets are considered by the applicants report in the context of other sea users (e.g. shipping and fisheries). The assessment of effects on both shipping and fisheries are considered competent and relevant.	The magnitude and spatial extent of the impact;	Yes	No significant effect is concluded, however: The applicant has committed to investigate all benthic sampling stations with camera prior to sampling and this is stated within the EIA Screening Report. In the applicant's Fishery Assessment it is noted that the use of data by ICES rectangle has allowed for an accurate assessment of the fishing in the specific area. The importance of a good communications strategy including a multi-lingual notification campaign, is noted with specific importance to the nephrops fishery.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and complexity of the impact;	Yes	
		The probability of the impact;	Yes	
		The expected onset, duration, frequency and	Yes	

Factor (as specified in Article 3(1) of the EIA Directive)	**Briefly summarise the environmental receptor / activity interactions considered:**	**Character of impact**		**Does applicant conclude a Significant Effect is likely?** **(Yes/No/ Unknown?)**
		Description of character of impact	**Does the screening report provide information on character of impact?**	
		reversibility of the impact;		
		The cumulation of the impact with the impact of other existing or approved developments;	Yes	
		The possibility of effectively reducing the impact.	Yes	
The interaction between the factors	The applicant identifies potential cumulative projects and discusses the potential interaction of those project with the proposed development. In-combination effects (i.e. the combination of more than one source of effect on the same receptor) have also been considered by the applicant and these effects are considered to be short term and temporary in nature.	The magnitude and spatial extent of the impact;	Yes	No significant effect is concluded Due to the short duration of the proposed survey the applicant concludes that there is unlikely to be a cumulative impact due the presence of the survey vessel and the known projects which are scheduled to take place in the area.
		The nature of the impact;	Yes	
		The transboundary nature of the impact;	Yes	
		The intensity and	Yes	

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

5. MITIGATION AND MANAGEMENT COMMITMENTS

The following table summarises the mitigation and management commitments made by the applicant in the documentation reviewed, along with additional measures required to address the issues raised in observations following the consultation with prescribed bodies and the general public. Table 5.1 documents the commitments made and whether these would be considered industry best practice or whether a condition is recommended to be included should permission be granted.

Table 5.1: Checklist to identify Mitigation Measures committed to by the applicant.

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Physical Presence	Risk of collision with vessels reduced through the use of positioning and automatic identification systems, notice to mariners also. Contractors with good HSE performance will be used.		X
	Benthic sample stations will be investigated prior to sampling using high-resolution video or stills photography.		X
Interactions with Other Sea Users	For interactions with fishermen, the project proposes the use of a FLO, submitting a notification to "regular runners" and local fisheries organisations via Notice to Mariners through the Irish Coast Guard and notifications made to Government departments and agencies as stipulated in the DCCAE Exploration and Appraisal Rules and Procedures Manual (DCENR, 2014).		X
	In the Fishery Assessment it is recommended that an experienced Irish Marine Mammal Observer will be appointed for the duration of the survey and a multi-lingual notification campaign will proceed the survey as well as a French speaking person ashore with a working knowledge of both the fishing industry and offshore operations should be available is liaison with foreign vessel owners is required. It would be envisioned that this person would work in conjunction with the FLO.		X
Underwater Noise	Exola and its survey contractor will adhere to the DAHG Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (DAHG, 2014), which provides mitigation measures for the protection of Annex IV species from geophysical acoustic surveys as well as a number of other offshore operations. Of note is that these measures apply specifically to marine mammals, however, observations shall also be undertaken for marine reptiles and the same procedures applied	X	
	Two qualified MMOs will be appointed to monitor marine mammals and log all data according to the standardised forms provided in the DAHG Guidance and provide an MMO report to the regulatory authorities.	X	
	Acoustic surveying will not commence if marine mammals are detected within a 500 m radius around the acoustic sources (referred to as the Monitored Zone).	X	
	Sound-producing survey activities will only be commenced in daylight hours where effective visual monitoring, as determined by the MMO, can be achieved.	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	For sound-producing activities, as water depths across the proposed survey area are less than 200 m, pre-start-up monitoring will be conducted by the MMO at least 30 minutes before any activity using the acoustic sources is due to commence. Sound-producing survey activity using the acoustic sound sources will not commence until at least 30 minutes have elapsed with no marine mammals detected within the Monitored Zone by the MMO. This pre-start monitoring will be followed by the soft-start 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 equipment where the output peak SPL exceeds 170 dB re 1µPa at 1 metre. The build-up of acoustic energy output will occur in consistent stages to provide a steady gradual increase in power (over a period of 20 minutes). 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 a period of 20 minutes prior to commencement of the full necessary output.	X	
	Where a soft-start procedure has commenced, there is no requirement to halt or discontinue the procedure at night or in poor weather or visibility conditions or if marine mammals are sighted within the Monitored Zone.	X	
	Where there is a break in sound output (e.g. in the event of equipment failure, shut-down etc.) from the acoustic sources for more than 30 minutes, all soft-start procedures must be undertaken before activity can recommence.	X	
	If a break in sound output occurs during the hours of darkness, the survey will be suspended until daylight when effective visual monitoring, as determined by the MMO, can be completed before start-up.	X	
	Full reporting on MMO operations and mitigation measures undertaken must be provided to the relevant regulatory authorities.	X	
Atmospheric Emissions	Compliance with the Merchant Shipping (Prevention of Air Pollution from Ship) (Amendment) Regulations 2014 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	
Discharges to the Sea	Solid waste stored onboard and handled with the Waste Management Hierarchy, MARPOL and the Sea Pollution (Prevention of Pollution by Garbage from Ships) Regulations 2012. Garbage Management Plan will be developed in accordance with MARPOL Annex V. Contractors must use authorised waste contractors.	X	
	Adherence to IMO and Irish Regulations and guidance on ballast water management.	X	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	All discharges will be treated and discharged according to the MARPOL Convention and any additional IMO requirements.	X	
	Survey vessel will have a Shipboard Oil Pollution Emergency Plan (SOPEP) in place in accordance with Annex I of MARPOL.	X	
	Small 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	
	As per Sea Pollution (Miscellaneous Provisions) Act 2006 Part 3 Para 20 and 21 the operator will provide: • A risk assessment re hydrocarbon discharge; and • A plan for the prevention and minimisation of any accidental discharge. Operations such as the "ship to ship" transfer of fuels or other HNS substances which present a hazard to the marine environment are prescribed operations within the Irish EEZ and as such require a permit for operations from the Irish Coast Guard (DTTAS). The Operator should update and advise the IRCG of the commencement and suspension or termination of survey operations offshore via the Marine Rescue Coordination Centre (MRCC) Dublin and a Radio Navigational Warning (RNW) should be promulgated via the same.	X	
Archaeology	Geophysical data will be used to ensure no marine archaeology sites are disturbed and to provide information on the cultural potential of the survey area.		X
	Investigation of benthic grab sample sites using video/photos will be undertaken in order to confirm the absence of features of cultural heritage sensitivity.		X
	The services of a suitably qualified and suitably experienced marine archaeologist, to include experience in the interpretation of marine geophysical data, shall be engaged in advance of any such survey to undertake the Underwater Archaeology Impact Assessment so as to inform on the cultural potential of the area and advise on the known or potential location of any shipwrecks of other underwater cultural heritage sites within the specified survey area. This is particularly relevant where environmental surveying is proposed to be carried out.		X
	The UAIA should comprise a desktop study and archaeo-geophysical interpretation of all geophysical survey results as well as assessment of the results of all sampling.		X
	The UAIA shall be licensed by DAHG and a detailed method statement shall accompany the licence application by the archaeologist.		X
	The archaeologist should ideally be on board the survey vessel to view the geophysical data in real time and identify		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	known and potential underwater cultural heritage as it is encountered. If it 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.		
	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
General	Prior to the commencement of the proposed site survey operations, the applicant may seek approval from DCCAE to use an alternative equivalent survey vessel.		X
	Appropriate steps will be taken regarding the use and handling of substances that could be harmful to human health or the environment, in accordance with Regulations and best practice.	X	
	Solid waste will be stored appropriately on the vessel and returned to shore for handling in accordance with the Sea Pollution (Prevention of Pollution by Garbage from Ships) Regulations 2012.	X	
	Garbage Management Plan will be in place in accordance with MARPOL Annex V.	X	
	The applicant must seek approval from the DCCAE to use an alternative equivalent survey vessel or equipment from that described in the EIA Screening Report. In this event, the DCCAE would seek confirmation that the survey equipment and methodology on any replacement vessel are equivalent to that described in the EIA Screening Report and that the description of the development used to inform the EIA Screening Report is still valid. With regard to the environmental sampling equipment, the applicant must update the proposed equipment to be used prior to commencement.		X
	With regard to the avoidance/prevention of significant effects on population and human health, it will be the responsibility of the applicant and their contractor to ensure that Government requirements and guidelines are met in relation to Covid-19.		X

6. CONCLUSIONS

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

Table 6.1: Conclusions of screening assessment, based on checklists provided in Table 4.3-4.5, for projects listed on Annex II of the EIA Directive

Summary of features of project and of its location indicating the need for EIA: To be determined following receipt of additional information from the applicant.	
Do you agree with the applicant's screening assessment? If no, why?	Yes. It is prepared by competent experts and is supported by appropriate scientific and other evidence.
Is the project likely to have significant residual effects on the environment?	No. Subject to the mitigation commitments detailed in Section 5 of this report, the assessment concludes that there would be no likely significant effects associated with the proposed survey. The nature and extent of the proposed activities are not likely to cause significant effects.
Is EIA required? (Yes / No / More Information Required?)	No. The nature and extent of the proposed activities are not likely to result in significant effects on the environment from this project alone or in combination with other plans or projects and because adequate and effective mitigation measures will be used to prevent likely significant effects.
What further information is required to inform decision (if any)?	None, however the DCCAE should note the following: • Prior to the commencement of the proposed survey operations, the applicant should seek approval from the DCCAE to use an alternative survey vessel or equipment. In this event, the DCCAE should expect to see confirmation that the survey equipment and methodology on any replacement vessel are equivalent to that described in the EIA Screening Report and that the proposed development described in the EIA Screening Report has not changed. • The decision should state that no EIA is required for the proposed development as described in the application, including all proposed mitigation measures as detailed in Section 5 of this report.

Table 6.2: Summary of screening assessment for projects listed on Annex II of the EIA Directive

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