

Mr Price

Mr Nugent

Rúnaí Aire

Decision Sought:

That the Minister:

- **Grant approval for Exola DAC to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, within Standard Exploration Licence 1/11 (“SEL1/11”)**

Background:

1. The Programme for Government – Our Shared Future – contains a commitment to end the issuing of new licences for the exploration and extraction of gas on the same basis as the decision taken in 2019 by the previous Government in relation to oil exploration and extraction. This follows on from the *Policy Statement on Petroleum Exploration and Production Activities as part of Ireland’s Transition to a Low Carbon Economy*, which sets out that all applications and authorisations in place before the Taoiseach’s announcement in September 2019 can continue towards exploration and production for both oil and/or gas as per their existing terms. All applications for activities under any existing lease or licences are considered in this policy context.
2. SEL 1/11 is held by Exola DAC (80%) (Operator) and Lansdowne Celtic Sea Limited (20%). Exola DAC is a wholly owned subsidiary of Providence Resources Plc. The licence, which includes the Barryroe Field, comprises an area of 613.9969 km² covered by part blocks 48/22, 48/23, 48/24, 48/27, 48/28, 48/29 and 48/30 in the North Celtic Sea. The licence period is from 14 July 2011 to 13 July 2021. As SEL1/11 was issued before 23 September 2019, it can progress through the standard lifecycle stages for exploration, extraction and production of natural gas and/or oil.
3. The proposed 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 10km to the east-southeast. The Barryroe K site is located approximately 43km south-east of the closest coastline at Ballymacshoneen, Butlerstown North, County Cork on the south coast of Ireland. Data

acquisition in the area will cover an area of approximately 9 km² with a 1km buffer around the survey area where the survey vessel may manoeuvre during line turns and during equipment deployment and recovery. Operations will be undertaken over approximately 3 survey working days (excluding transit and weather downtime) with the geophysical survey taking approximately 1.5 days to complete. The remaining time will be spent collecting environmental data.

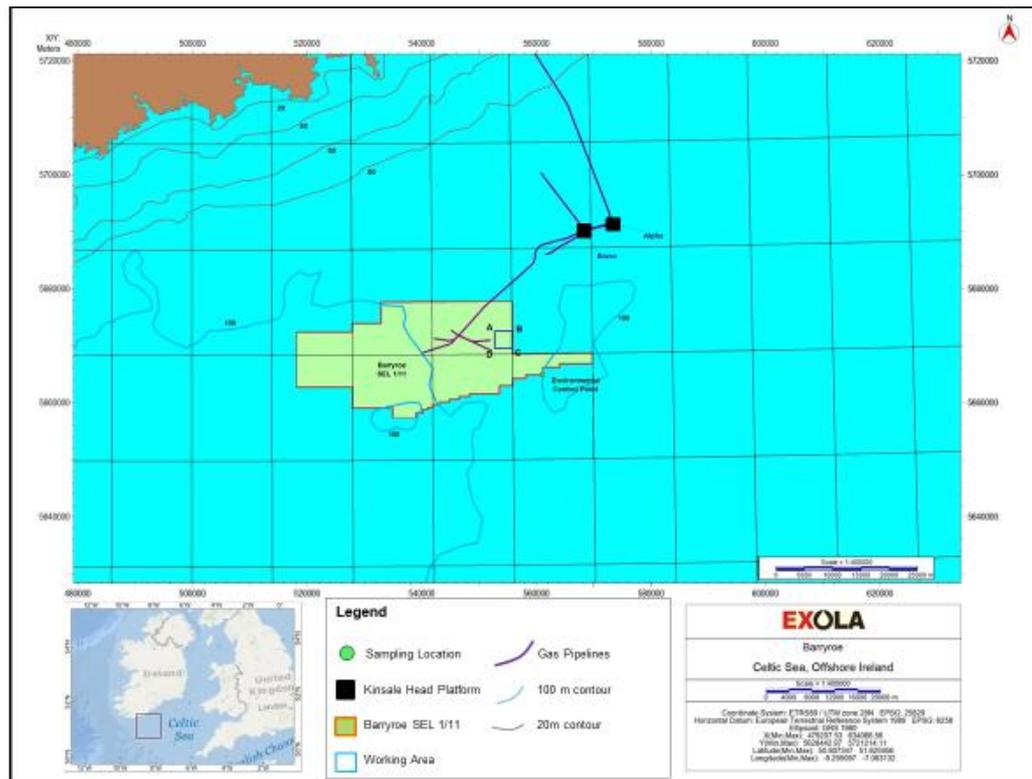


Figure 1: The location map for the proposed Barryroe K Site Survey

4. Geophysical site survey data will be acquired using single-beam echosounder, multi-beam echosounder and pinger sub-bottom profiler equipment on a survey vessel plus towed equipment such as a magnetometer and side scan sonar. Environmental seabed samples will be retrieved using a day corer, box corer or dual Van Veen grab, and will be analysed to provide information on benthic faunal community composition and physico-chemical characteristics of the sediments.

Application:

5. An application for consent to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, was received by the Petroleum Affairs Division (PAD) of the Department from Exola DAC on 20 January 2020. The application proposed that the survey be conducted between 1 April 2020 and 30 November 2020, or if that was not possible, between 1 February 2021 and 30 November 2021. If consent is granted, the activities would be being carried out under Standard Exploration Licence 1/11 (SEL1/11). The following documents (**Tab A1-A5**) were received as part of the application:
- Application letter seeking consent for site survey (**Tab A1**);
 - Application for approval to Conduct a Seabed Geophysical, Environmental Baseline and Habitat Assessment Site Survey (**Tab A2**);
 - Environmental Impact Assessment (EIA) Screening Report (**Tab A3**);
 - Appropriate Assessment Screening and Natura Impact Statement (**Tab A4**);
 - Pre-survey Fishery Assessment (**Tab A5**)
6. The application for consent to carry out the proposed activity was received by PAD, who held a public consultation on the documents received as part of Exola's application. However, the environmental assessments required on the application were carried out by the Environmental Advisory Unit (EAU), which is a unit independent from PAD within the Department. In the course of its assessment processes, further information was sought from the applicant by the EAU on two separate occasions, with public consultations held by the EAU on the additional information received in both cases. Further information on the consultation periods is provided at paragraphs 18-29.

Regulatory Context:

7. **Relevant Petroleum Regulatory Regime**

SEL1/11 was granted under Section 8(1) of the Petroleum and Other Minerals Development Act 1960 ('POMDA'). Section 8(2) of the POMDA provides that every Exploration Licence shall be granted upon such terms and conditions as the Minister thinks fit and specifies therein. Paragraph 4 of SEL 1/11 requires adherence to the [Licensing Terms for Offshore Oil and Gas Exploration, Development and Production 2007](#) ("Licensing Terms"). Section 53 of the said Licensing Terms provides that applications for activities under a licence shall be in the form described in the Rules and Procedures Manual for Offshore Petroleum Exploration and Appraisal Operations ('Rules and Procedures'). The European Union (Environmental

Impact Assessment) (Petroleum Exploration) Regulations 2013 (S.I. No 134/2013), as amended by the European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (S.I. No 124/2019) provides for applications to the Minister for permission to undertake activities under an Exploration Licence.

8. The application has therefore been considered in accordance with the above legislation, Licensing Terms and Rules and Procedures, and in accordance with the following European and Irish legislation pertaining to environmental assessments:

9. **Relevant Environmental Impact Assessment Regulatory Regime**

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

10. **Relevant Appropriate Assessment Regulatory Regime**

- Directive 2009/147/EC on the conservation of wild birds (commonly referred to as the Birds Directive);
- Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (commonly referred to as the Habitats Directives);
- European Communities (Birds and Natural Habitats) Regulations 2011-15 as amended.

Ministerial considerations in assessing the application:

11. Paragraphs 12 to 15 below summarise the Ministerial considerations in assessing this application, with further detail provided in the following sections.

12. The EIA Screening Determination (**Tab B1-B2**) of 22 June 2020, made by the EAU, has concluded that the application to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, within SEL1/11 can be completed without significant effects on the environment, subject to attachment of specified conditions.

13. The AA Screening Determination (**Tab C1-C2**) of 7 April 2020 and the AA Determination (**Tab D1-D2**) of 23 June 2020, made by the EAU, have concluded that the seabed and shallow

geophysical survey and environmental baseline and habitat assessment survey within SEL 1/11 can be completed without adverse effects on the integrity of Natura 2000 sites with respect to Articles 6(3) and 12 of the Habitats Directive (specifically Regulation 42 of the European Communities (Bird and Habitats) Regulations 2011), subject to attachment of specified conditions.

14. The Programme for Government – Our Shared Future – contains a commitment to end the issuing of new licences for the exploration and extraction of gas on the same basis as the decision taken in 2019 by the previous Government in relation to oil exploration and extraction. This follows on from the *Policy Statement on Petroleum Exploration and Production Activities as part of Ireland’s Transition to a Low Carbon Economy*, which sets out that all applications and authorisations in place before the Taoiseach’s announcement in September 2019 can continue towards exploration and production for both oil and/or gas as per their existing terms. SEL1/11 falls into the latter category, having commenced in July 2011.
15. The technical assessment of the application was undertaken by Petroleum Affairs Division Technical Section, who indicated that technical elements of the proposed activities are acceptable and that the proposals by Exola DAC meets the Department’s requirements, subject to conditions (**Tab E**).

Environment Assessment Review

Considerations of the Environment Advisory Unit (‘EAU’) regarding environmental impacts of the proposed activity under the EIA and Birds and Habitats Directives:

16. Article 9a of the EIA Directive provides as follows:

“Member States shall ensure that the competent authority or authorities perform the duties arising from this Directive in an objective manner and do not find themselves in a situation giving rise to a conflict of interest.

Where the competent authority is also the developer, Member States shall at least implement, within their organisation of administrative competences, an appropriate separation between conflicting functions when performing the duties arising from this Directive.”

17. The European Union (Environmental Impact Assessment) (Petroleum Exploration) (Amendment) Regulations 2019 (S.I. No 124/2019) amended the European Union (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 (S.I. No

134/2013), so that environmental assessment functions have been delegated to the Environment Advisory Unit of the Department.

PAD Public Consultation:

18. Although public participation is not required during the screening process under either the EIA Directive or Birds and Habitats Directives, the Department, mindful of the requirements of the Aarhus Convention and the public participation requirements in Article 6 of the EIA Directive, conducted a thirty day public consultation period, on receipt of the application.
19. The application and associated environmental documentation were published on the Department's website on the homepage (under 'Latest Consultations') on 22 January 2020 and 13 submissions were received by the final date for submissions on 21 February 2020.
20. Submissions (**Tab F1-F2**) were received from:
 - Not Here Not Anywhere group; and
 - 11 private individuals
21. These submissions were then forwarded to the EAU, and were considered by independent expert advisor to the EAU, Ramboll Environment and Health UK Limited (Ramboll), and by the EAU in their screening determinations.

Consultation with State Bodies:

22. The following bodies have been notified of the proposed seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey activities on the Barryroe K Site by Exola DAC in accordance with the Rules and Procedures;
 - National Parks and Wildlife Service;
 - Irish Maritime Administration, Department of Transport, Tourism and Sport;
 - Ship Source Pollution Prevention Unit 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;
- Commissioner of Irish Lights

23. One response was received in relation to this application, from the Irish Coast Guard (Irish Maritime Administration) in the Department of Transport, Tourism and Sport on the 4 February 2020 (**Tab F3**). This was considered by Ramboll and the EAU in its EIA and AA Determinations.

EAU Public Consultation:

24. During the EIA and AA processes two further public consultation processes were undertaken at the request of the EAU.

Environmental Impact Assessment

25. On 10 March 2020, Exola DAC was directed by the EAU to provide further information to enable an EIA screening assessment and determination. Exola DAC submitted further information on 24 March 2020, and a 14-day period of public consultation on the additional information received was held between 1 April 2020 and 15 April 2020. One response was received, from

- An Taisce

This submission was considered by the EAU and Ramboll in making its EIA Determination. Further detail on the response is included at section 2.3 of Ramboll's *Statutory Environmental Assessment EIA Screening Determination for Offshore Geophysical and Environmental Surveys for Barryroe K Site Survey Report (Tab B2)*.

26. On 22 June 2020, the EAU made its EIA Screening Determination (**Tab B1-B2**), which concluded that the request by Exola DAC to conduct a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey within SEL 1/11 at the Barryroe K Site, offshore Ireland is not likely to have a significant effect on the environment and, consequently, an Environmental Impact Assessment was not required in respect of the application. This decision is contingent on the inclusion of mitigation measures in any consent granted in respect of the application. Notice of this determination was published on the Department's website and in the *Irish Independent* newspaper on 26 June 2020 (**Tab G2**)

Appropriate Assessment

27. On 7 April 2020, the EAU made an AA Screening Determination (**Tab C1-C2**) that a Stage 2 Appropriate Assessment was required in respect of Exola DAC's Application. Notice of this determination was published on the Department's website and in the *Irish Independent* newspaper on 9 April 2020 (**Tab G1**).

28. By further notice on 7 April 2020, the EAU directed Exola DAC to provide further information considered necessary for the purposes of carrying out a Stage 2 Appropriate Assessment. Further information was provided by Exola DAC on 21 April 2020, which was published on the Department's website on 23 April 2020. A 21-day period of public consultation concluded on 14 May 2020. One response was received, from

- Not Here Not Anywhere

This submission was considered by the EAU and Ramboll in making its AA Determination. Further detail on the response is included at section 2.3 of Ramboll's *Statutory Environmental Assessment Appropriate Assessment Screening Determination and NIS Review for Barryroe K Site Survey* (**Tab D2**)

29. On 23 June 2020, the EAU made an AA Determination (**Tab D1-D2**) under the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011), as amended, which concluded that the application by Exola DAC to conduct a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey within SEL 1/11 at the Barryroe K Site, offshore Ireland would not adversely affect the integrity of a European site (whether individually or in combination with other plans or projects), subject to the inclusion of mitigation measures in any consent granted in respect of the application. Notice of this determination was published on the Department's website and in the *Irish Independent* newspaper on 9 April 2020 (**Tab G2**).

Technical Review in accordance with Rules and Procedures:

30. The application submitted (as outlined in paragraph 5) has been reviewed by PAD Technical. It has considered all the technical elements of the application on order to establish the validity of the survey. In its report dated 7 July 2020 (**Tab E**) it has concluded that this survey will provide an improved image of the seabed and shallow subsurface over the survey area. The contractor, Gardline Shipping Ltd is a reputable contractor and will utilise industry standard equipment and accurate positioning for this survey. Gardline Shipping Ltd has been active in the Irish offshore in the past and has conducted operations to the satisfaction of the Department.

31. PAD Technical has recommended that approval to conduct the survey at the Barryroe K site, subject to the inclusion of seven stated conditions in any consent granted.

Reasoned Recommendation:

32. A comprehensive due diligence exercise has been carried out by the Department on the application including environmental and technical assessments and the carrying out of public consultation, as described above. Taking account of all such considerations, it is recommended that the Minister grant the consent sought, subject to the applicant's compliance with the ten conditions, for the following reasons:

- As set out in detail in the EIA Screening Determination of 22 June 2020, the application to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, within SEL 1/11 can be completed without significant effects on the environment, subject to attachment of specified conditions.
- As set out in detail in the AA Determination of 23 June 2020, the application to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, within SEL 1/11, would not adversely affect the integrity of a European site (whether individually or in combination with other plans or projects), subject to attachment of specified conditions.
- The technical elements of the proposals are acceptable and meet the Department's requirements. It is considered that information delivered from such activity will underpin greater geological understanding by providing an improved image of the seabed and shallow subsurface over the survey area.
- The proposed work is in line with the Programme for Government commitment that authorisations in place prior to 23 September 2019 can continue through the standard authorisation lifecycle, given SEL1/11 came into effect on 14 July 2011.

Approval Sought

33. The Minister confirms that:

- a) Having considered this submission, including the Tabs attached to it;
- b) Having considered the EIA Screening Determination and the AA Determination made by the EAU with contingent conditions;

- c) Having considered the technical review by the Petroleum Affairs Division Technical Section;
- d) Having regard to observations made by State Body consultees;

That the Minister

- **Grant Approval for Exola DAC to undertake a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey on the Barryroe K Site, within SEL 1/11, situated approximately 43km south-east of the closest coastline at Ballymacshoneen, Butlerstown North, County Cork;**

In granting such consent it is recommended that the Minister require it to be contingent on adherence to the following conditions:

1. All operations shall be conducted in compliance with the provisions of the Rules & Procedures for Manual Offshore Petroleum Exploration Operations (RPM) and shall be carried out between early April and late November 2020 or sometime between 1 February 2021 and 30 November 2021.
2. The operator/contractors are required to avoid potential cumulative/in-combination effects arising from adjacent regional survey activity, i.e. a minimum of 100km will be maintained between current survey and any other surveys running concurrently. There is to be co-operation between survey activities in the area.
3. In accordance with Section 2.2.4 of the RPM a Fisheries Liaison Officer (FLO) and Marine Mammal Observer (MMO) must be on board the vessel for the duration of the survey.
4. The operator/contractor is required to arrange for a radio navigational warning to be broadcast and ensure that daily position reports are sent to the Irish Coast Guard, MRCC Dublin along with a notification of number of persons on board. The Irish Coast Guard, MRCC Dublin, the Marine Survey Office of the Department of Transport, Tourism and Sport and the Department of Environment, Climate and Communications must be notified on the start and completion of operations.
5. The Department is to be informed on the commencement and completion of the survey. Daily progress reports should be sent to DECC via secure website or by posting to a designated secure website or by emailing (addresses to be advised separately). The operator/contractor is required to make the daily progress reports available to DECC

before noon each day for the duration of the survey. The final progress report should be sent to the DECC.

6. The Department is to be provided with tabulated data on impulsive noise events to be added to the Department of Housing, Planning and Local Government (DHPLG) Impulsive Sound Register. Data to include;
 - Source properties (Hz; SPL, dB re 1 μ Pa @1m; SEL, dB re 1 μ Pa²s @1m);
 - Cumulative hours of active source;
 - Daily/weekly acquisition details (to include line number and date of acquisition);
 - Daily acquisition maps (to include line numbers).
7. All operations must only take place within the proposed greater working area as delineated by the green square on the map in Figure 1 and described in the documents submitted by Exola DAC Ltd in January 2020.
8. Compliance with the conditions outlined in the attached Table 1: Mitigation measures required to be specified in any Consent that may be granted, following the EAU's EIA Determination.
9. Compliance with the conditions outlined in the attached Table 2: Mitigation measures required to be specified in any Consent that may be granted, following the EAU's AA Determination.
10. The vessel proposed to be used for the proposed survey is the MV Kommandor. In line with the EAU's EIA Determination, the applicant must obtain prior approval from the Department should an alternative survey vessel be proposed, in which case confirmation will be required that the survey equipment and methodology on any replacement vessel are equivalent to that described in the updated EIA Screening Assessment Report (March 2020) submitted by Exola and its Appendix 1: Response From Exola to EAU Request for Clarification, and that the nature and extent of the proposed activities described in these documents has not materially changed.

Emma Lanigan
Petroleum Affairs Division
26 January 2021

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

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Physical Presence	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 DECC 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 if 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	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
	Sound-producing survey activities will only be commenced in daylight hours where effective visual monitoring, as determined by the MMO, can be achieved.	X	
	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	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
Atmospheric Emissions	Compliance with the Merchant Shipping (Prevention of Air Pollution from Ship) Regulations 2010-2017 and the MAPROL Convention 73/78 Appendix VI on atmospheric emissions.	X	
	Operations will be planned to minimise duration, and vessel movements, and ensure efficient operations.	X	
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	
	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: <ul style="list-style-type: none"> • 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	

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
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 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.		X
	The UAIA report shall be forwarded to the Underwater Archaeology Unit of the Department of Culture, Heritage and the Gaeltacht for consideration and further comment in advance of any site investigation/sampling works taking place.		X

Discipline	Mitigation Measure Proposed	Industry Standard	Project Specific
General	Prior to the commencement of the proposed site survey operations, the applicant may seek approval from DECC 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 DECC to use an alternative equivalent survey vessel or equipment from that described in the EIA Screening Report. In this event, the DECC 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

Table 2: **Mitigation and Management Measures (additional to measures outlined in EIA Screening Determination)**

Discipline	Commitment proposed
General	<p>The applicant must seek approval from the DECC to use an alternative equivalent survey vessel or equipment from that described in the AA Screening and NIS report. In this event, the DECC would seek confirmation that the survey equipment and methodology on any replacement vessel are equivalent to that described in the AA Screening and NIS reports and that the description of the development used to inform the AA Screening and NIS is still valid.</p> <p>With regard to the environmental sampling equipment, the applicant must update the proposed equipment to be used prior to commencement.</p>
Underwater Noise	<p>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</p>
	<p>Two qualified Marine Mammal Observers (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.</p>
	<p>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).</p>
	<p>Sound-producing survey activities will only be commenced in daylight hours where effective visual monitoring, as determined by the MMO, can be achieved.</p>
	<p>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.</p>
	<p>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.</p>

Discipline	Commitment proposed
	<p>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.</p> <p>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.</p> <p>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.</p> <p>Full reporting on MMO operations and mitigation measures undertaken must be provided to the relevant regulatory authorities.</p>
Discharges to the Sea	<p>As per Sea Pollution (Miscellaneous Provisions) Act 2006 Part 3 Para 20 and 21 the operator will provide:</p> <ul style="list-style-type: none"> • A risk assessment re hydrocarbon discharge; and • A plan for the prevention and minimisation of any accidental discharge. <p>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).</p> <p>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.</p>

Annex 1: List of tabs

Tab A – Application Documents received from Exola DAC:

- A1 – Application letter seeking consent for site survey
- A2 – Application for approval to Conduct a Seabed Geophysical, Environmental Baseline and Habitat Assessment Site Survey
- A3 – Environmental Impact Assessment (EIA) Screening Report
- A4 – Appropriate Assessment Screening and Natura Impact Statement
- A5 – Pre-survey Fishery Assessment

Tab B – Environmental Impact Assessment Screening Determination:

- B1 – Environmental Impact Assessment Screening Determination from the Environment Advisory Unit.
- B2 – EIA Screening Determination for Exola DAC Barryroe K Site Survey – Ramboll UK

Tab C – Appropriate Assessment Screening Determination

- C1 – Appropriate Assessment Screening Determination from the Environment Advisory Unit
- C2 – Appropriate Assessment Screening Determination and NIS Review for Exola DAC Barryroe K Site Survey – Ramboll UK

Tab D – Appropriate Assessment Determination

- D1 – Appropriate Assessment Determination from the Environment Advisory Unit
- D2 – Appropriate Assessment Screening Determination and NIS Review for Exola DAC Barryroe K Site Survey – Ramboll UK

Tab E – PAD Technical Evaluation – Exola DAC Barryroe K Site Survey

Tab F – Consultation Responses

- F1 – Public consultation response (Not Here Not Anywhere group)
- F2 – Public consultation responses (11 private individuals)
- F3 – Irish Coast Guard, Department of Transport, Tourism and Sport

Tab G – Newspaper Notice –

- G1 – AA Screening Determination (*Irish Independent*, 9 April 2020)
- G2 – EIA Screening Determination and AA Determination (*Irish Independent*, 26 June 2020)