Exola DAC

Application for Approval to Conduct a Seabed Geophysical, Environmental Baseline and Habitat Assessment Site Survey

Document Number: BAR-PGE-K100

Introduction

Exola DAC, a wholly owned subsidiary of Providence Resources P.l.c. (hereafter referred to as 'Exola') is proposing to conduct a site survey within the Barryroe licence area (SEL 1/11); situated in the North Celtic Sea Basin approximately 43 kilometres (km) south east of the closest coastline at Ballymacshoneen, Butlerstown North, County Cork on the south coast of Ireland (the 'Barryroe K site').

The site survey will comprise a seabed and shallow geophysical survey and an environmental baseline and habitat assessment survey at the Barryroe K site, as illustrated in Figure 1, together with a single environmental control point approximately 10 kilometers to the east-southeast. Data acquisition in the area will cover an area of approximately 9 km^2 with a 1 km buffer around the survey area where the survey vessel may manoeuvre during line turns and during equipment deployment and recovery.

The key aims of the survey are 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 seabed and sub seabed conditions to ensure the safe emplacement and operation of a semi-submersible drilling rig at the 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 1 habitats (as defined in the EC Habitats Directive 92/43/EC);
- Obtain environmental baseline samples across the survey area to establish a benchmark for ongoing environmental monitoring as per OSPAR guidelines.

A pre-survey Fishery Assessment, an Environmental Risk Assessment (EIA Screening), an Appropriate Assessment Screening Statement and a Natura Impact Statement will accompany this application.

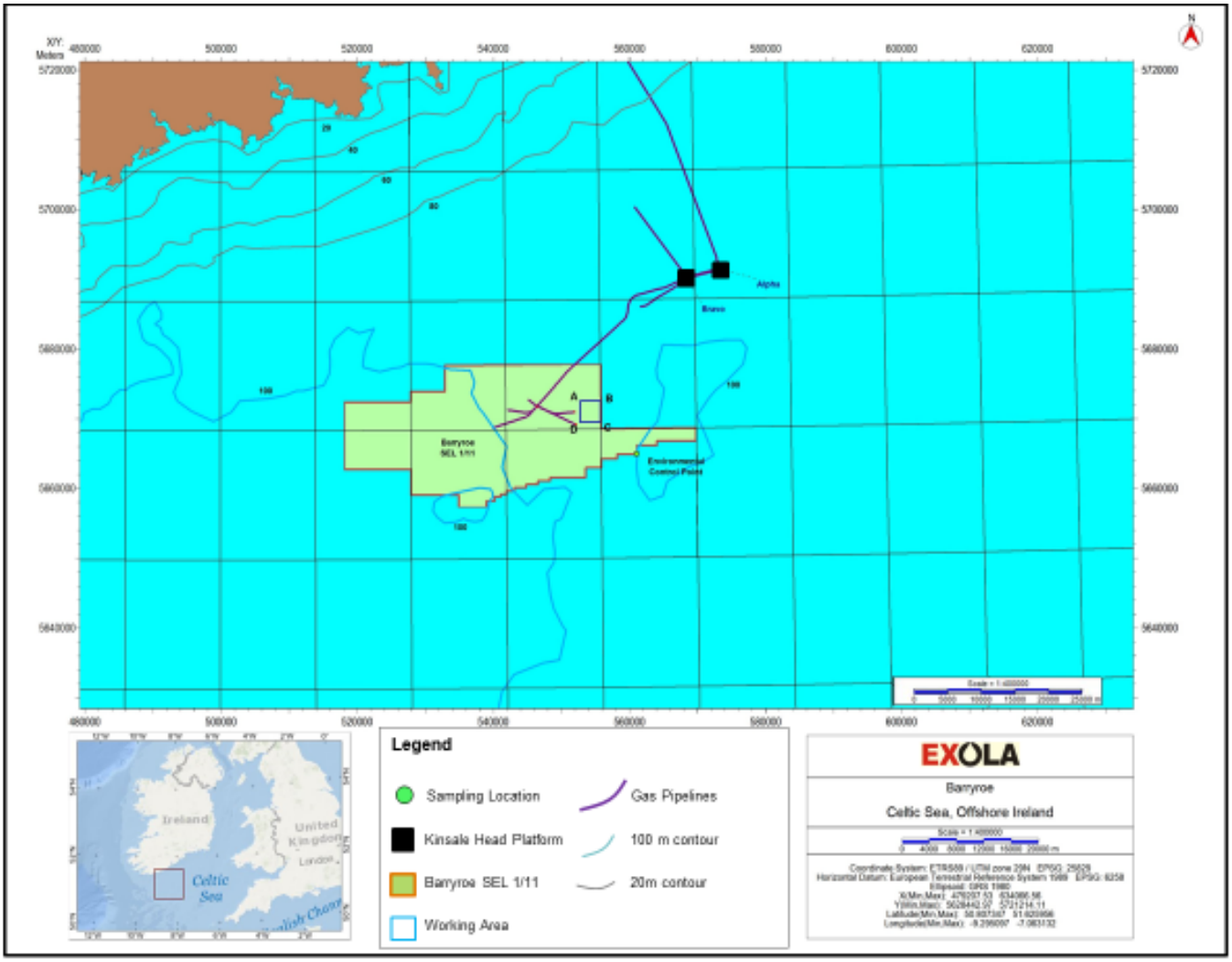

Figure 1: Proposed survey area within licence SEL 1/11, denoted by box labelled A,B,C,D.

Application Information

Ref.	Information Required		Survey Information
A	Name of Operator		Exola DAC, a wholly owned subsidiary of Providence Resources Plc.
B	Identification of the authorisation under which the survey is being conducted.		Petroleum Prospecting Licence 3/16 (PPL 3/16) Standard Exploration Licence 1/11 (SEL 1/11)
C	Type of survey and details of work to be undertaken.		1. A geophysical acoustic survey will be conducted using the following geophysical tools: • side scan sonar • single-beam echosounder, • multi-beam echosounder • pinger sub-bottom profiler • USBL • magnetometer 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. 2. A habitats assessment and environmental baseline survey will be conducted at the site survey area. Any potentially sensitive habitats identified from anomalies on the geophysical survey data will be investigated using high-resolution video or camera stills. Seabed samples will also be taken using a day corer, box corer or dual Van Veen grab, as appropriate, 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. The provisional well location is

			identified as Well K on Figure 2 in Appendix A but is subject to change. 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 taken outside of the primary site survey area, up to 10km to the ESE, to be used as a control point.
D	Planned date of start of survey and estimated duration.		Operations are proposed to take place at some point between the 1st April 2020 and 30th November 2020, subject to regulatory approval and vessel availability. If the survey has not commenced within this timeframe, the operations will be undertaken sometime between 1st February 2021 and 30th November 2021, again subject to regulatory approval and vessel availability The anticipated duration of the site survey is approximately 3 days (approximately 1.5 days for the geophysical survey and approximately 1.5 days for the environmental survey). These estimates exclude port calls, transit and potential weather delays.
E	Location of Survey (Lat, Long & Maps)		Refer to Appendix A for Map and Tables of the proposed line layout and sample locations. Please note, the environmental and habitat assessment locations provided are schematic – based on a standard cruciform pattern centred on a potential future well location. This is likely to be updated during the survey to sample habitats delineated from the geophysical data. Please note, the line plans are provisional and subject to change for operational reasons.
F	The positioning systems to be used for the survey.		All records obtained will use the ETRS89 co-ordinate system for reporting. Positioning systems will include- Differential Global Positioning System (DGPS) Dynamic Positioning (DP) system

			Integrated Automation System (IAS). Utilising Starfix HP / XP & Starpack (primary & secondary) ; Seapath 200; Kongsberg SDP-21 (DP Class II). Equipment includes: 2 x Furuno FAR series, Robertson AP9 MkIII autopilot, SG Brown meridian gyrocompass
G	Name and address of contractor performing the survey		Gardline Limited, Endeavour House, Admiralty Road, Great Yarmouth, Norfolk, NR30 3NG, UK.
H	Data and records expected to be obtained from the survey		Marine Mammal Observer Report High resolution bathymetry Side Scan Sonar Single and Multi-beam Echosounder Pinger Sub-bottom profiler Seabed sediment samples Magnetic response High Resolution Video and Camera stills
I	In the case of seismic operations: i. Type of energy source(s) to be used.		Seismic data will <u>not</u> be acquired. For the geophysical survey the energy sources that will be used are: • Side Scan Sonar • Single-Beam Echosounder • Multi-Beam Echosounder • Pinger Sub-Bottom Profiler • USBL
	ii. Length and configuration of seismic cable(s), depth at which cable(s) are maintained, speed when towing and what radar-reflector-		Not applicable - Seismic Cable not required.

	supporting tail buoys are to be used.		
	iii. An Environmental Risk Assessment (EIA Screening) of the proposed activity in relation to the sensitivities of marine mammals in the area of the proposed operations outlining specific impact mitigation and monitoring practices that will be applied during the survey in relation to marine mammals.		See separate document Ref: P1250-04-01
	iv. Appropriate assessment (Natura Impact Statement Screening Report) of the likely significant effects of a planned seismic survey on Natura 2000 sites within the survey area.		See separate document Ref: P1250-04-02
	v. An underwater Archaeological Assessment and interpretation of the marine geophysical survey data acquired		An underwater Archaeological Assessment will be conducted using the geophysical data acquired.
J	In the case of shallow borehole or seabed sampling operations		
	i. Sample identification – quadrant, block and chronological number.		No shallow boreholes are being acquired. Seabed sampling for environmental baseline will follow guidelines on sample identification.

	ii. Water Depth at location; proposed total depth; drilling programme; anticipated drilling problems.		Water depth over the survey area is predicted to be 100 metres. No shallow boreholes are being acquired; therefore, no drilling/drilling programme is taking place and consequently, anticipated drilling problems are not applicable.
	iii. Geological objectives; depths and Two-Way-Times; evaluation and analytical programme.		Seabed sampling will be conducted at various locations within the survey and analysed for environmental baseline and habitat assessment. Locations will be dependent upon geophysical data and video/camera.
	iv. Other specific information as may be requested by DCCAE.		N/A
K	Details of the marine vessel being used in the survey		**MV Kommandor** Multi-role Survey Vessel IMO No. 8517205 Call Sign MCJO2 MMSI No. 232013164 Full details are provided on the "Marine Vessel Details" table below.
L	The names of the persons under whose direct supervision survey operations are to be carried out:		
	i. In the Operator's office.		John Conroy, Barryroe Project Manager, Providence Resources Plc., The Chase, Carmanhall Road, Sandyford Industrial Estate, Dublin, D18Y3X2 Tel: +353 (0)1 536 3086 E-mail: jconroy@providenceresources.com
	ii. In the Contractor's office.		Gardline Project Manager Tel: +44 1493 845 600 (Office)

	iii. On the survey vessel		Gardline Party Chief Tel: +44 1493 236 049 (V-Sat)

MARINE VESSEL DETAILS			
(i)	Name of vessel		MV Kommandor*
(ii)	Radio Call Sign		MCJO2 (IMO No. 8517205)
(iii)	General description of the survey vessel		MV Kommandor is a multi-role survey DP Class II vessel, under Lloyd's Register classification. She has berths for 44 crew and has labs, offices, mess, lounge, media room facilities and a hospital.
(iv)	Flag, port of registry and owner's name and address		Flag: UK Port: Lowestoft Owner: Gardline Shipping Limited, Endeavour House, Admiralty Road, Great Yarmouth, Norfolk, NR30 3NG, UK.
(v)	Length and usual maximum draught		Length: 68.5m / Beam: 11.5m / Draught: 4.1m / GRT: 1,573
(vi)	Main engine I.H.P. and normal maximum		2 x Cummins KTA19-D(M1) 2 x Cummins KTA38-G3
(vii)	Type and power of bow thruster units, if fitted		2 x Brunvoll 368 kW tunnel thrusters
(viii)	Name of the Society under which the vessel is classed		Lloyd's Register
(ix)	Description of radio communication equipment		V-Sat KU Band, Iridium Pilot, Fleet 250, Emergency GMDSS Handhelds (A1-A3), Sat-C Telex.

* EXOLA reserves the right to seek approval for an alternative equivalent vessel should this become necessary as a result of scheduling requirements.

APPENDIX A

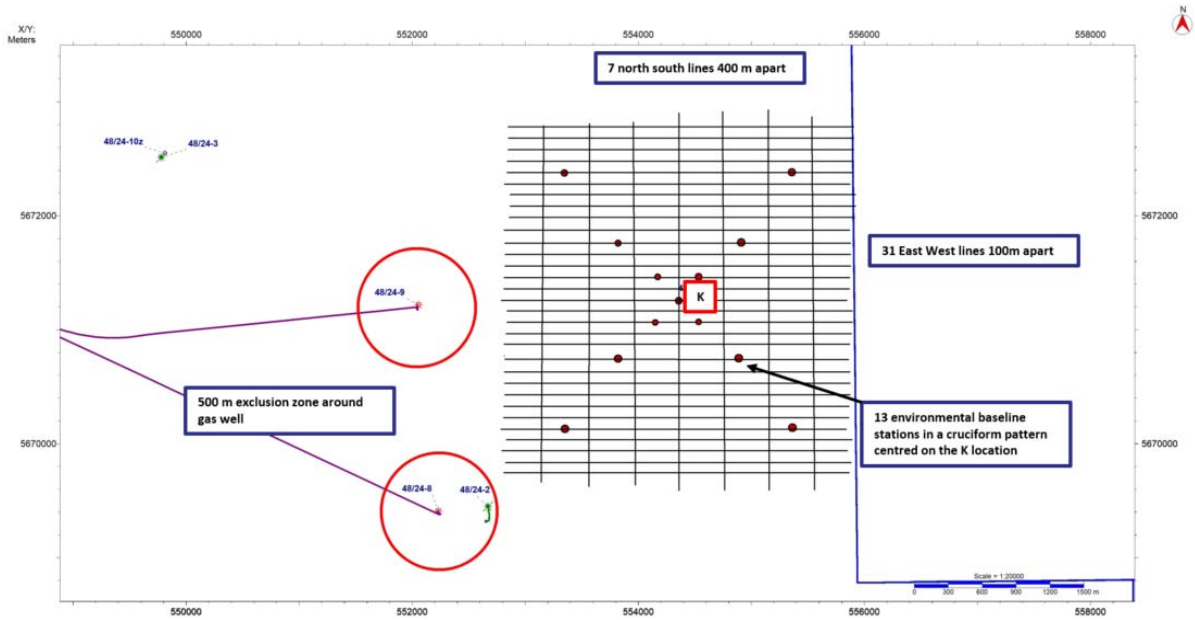

Figure 2: Provisional location of proposed survey lines and seabed samples for proposed future well location K.

Table 1: Provisional location of proposed seabed samples.

Site	Sample Name	Easting (m)	Northing (m)	Longitude (DD)	Latitude (DD)	CRS
K	K01	554249.25	5671023.56	-8.22374	51.18805	ETRS89 / UTM zone 29N
K	K02	554046	5671223.56	-8.22661	51.18987	ETRS89 / UTM zone 29N
K	K03	554442.6	5671223.56	-8.22094	51.18983	ETRS89 / UTM zone 29N
K	K04	554447.16	5670823.56	-8.22094	51.18623	ETRS89 / UTM zone 29N
K	K05	554046	5670823.56	-8.22667	51.18627	ETRS89 / UTM zone 29N
K	K06	553638.01	5671523.56	-8.23241	51.1926	ETRS89 / UTM zone 29N
K	K07	554852.88	5671523.56	-8.21502	51.19249	ETRS89 / UTM zone 29N
K	K08	554850.6	5670523.56	-8.21521	51.1835	ETRS89 / UTM zone 29N
K	K09	553638.01	5670523.56	-8.23256	51.18361	ETRS89 / UTM zone 29N
K	K10	553243.69	5669923.56	-8.23829	51.17825	ETRS89 / UTM zone 29N
K	K11	555251.76	5669923.56	-8.20956	51.17806	ETRS89 / UTM zone 29N
K	K12	553243.69	5672123.56	-8.23796	51.19804	ETRS89 / UTM zone 29N
K	K13	555251.76	5672123.56	-8.20922	51.19785	ETRS89 / UTM zone 29N
	Control Point	561062.76	5664934.33	-8.127286	51.132614	ETRS89 / UTM zone 29N

Table 2: Provisional location of proposed survey lines.

Line ID	Start of Line Easting (m)	Start of Line Northing (m)	End of Line Easting (m)	End of Line Northing (m)	Start of Line Lon (DD)	Start of Line Lat (DD)	End of Line Lon (DD)	End of Line Lat (DD)	CRS
1	555749.25	5672523.56	552749.25	5672523.56	-8.20204	51.20139	-8.24498	51.20168	ETRS89 / UTM Zone 29N
2	555749.25	5672423.56	552749.25	5672423.56	-8.20206	51.20049	-8.24499	51.20078	ETRS89 / UTM Zone 29N
3	555749.25	5672323.56	552749.25	5672323.56	-8.20207	51.1996	-8.24501	51.19988	ETRS89 / UTM Zone 29N
4	555749.25	5672223.56	552749.25	5672223.56	-8.20209	51.1987	-8.24502	51.19898	ETRS89 / UTM Zone 29N
5	555749.25	5672123.56	552749.25	5672123.56	-8.2021	51.1978	-8.24504	51.19808	ETRS89 / UTM Zone 29N
6	555749.25	5672023.56	552749.25	5672023.56	-8.20212	51.1969	-8.24505	51.19718	ETRS89 / UTM Zone 29N
7	555749.25	5671923.56	552749.25	5671923.56	-8.20214	51.196	-8.24507	51.19628	ETRS89 / UTM Zone 29N
8	555749.25	5671823.56	552749.25	5671823.56	-8.20215	51.1951	-8.24508	51.19538	ETRS89 / UTM Zone 29N
9	555749.25	5671723.56	552749.25	5671723.56	-8.20217	51.1942	-8.2451	51.19449	ETRS89 / UTM Zone 29N
10	555749.25	5671623.56	552749.25	5671623.56	-8.20218	51.1933	-8.24511	51.19359	ETRS89 / UTM Zone 29N
11	555749.25	5671523.56	552749.25	5671523.56	-8.2022	51.1924	-8.24513	51.19269	ETRS89 / UTM Zone 29N
12	555749.25	5671423.56	552749.25	5671423.56	-8.20221	51.1915	-8.24514	51.19179	ETRS89 / UTM Zone 29N
13	555749.25	5671323.56	552749.25	5671323.56	-8.20223	51.1906	-8.24515	51.19089	ETRS89 / UTM Zone 29N
14	555749.25	5671223.56	552749.25	5671223.56	-8.20224	51.1897	-8.24517	51.18999	ETRS89 / UTM Zone 29N
15	555749.25	5671123.56	552749.25	5671123.56	-8.20226	51.18881	-8.24518	51.18909	ETRS89 / UTM Zone 29N
16	555749.25	5671023.56	552749.25	5671023.56	-8.20228	51.18791	-8.2452	51.18819	ETRS89 / UTM Zone 29N
17	555749.25	5670923.56	552749.25	5670923.56	-8.20229	51.18701	-8.24521	51.18729	ETRS89 / UTM Zone 29N
18	555749.25	5670823.56	552749.25	5670823.56	-8.20231	51.18611	-8.24523	51.18639	ETRS89 / UTM Zone 29N
19	555749.25	5670723.56	552749.25	5670723.56	-8.20232	51.18521	-8.24524	51.18549	ETRS89 / UTM Zone 29N

20	555749.25	5670623.56	552749.25	5670623.56	-8.20234	51.18431	-8.24526	51.18459	ETRS89 / UTM Zone 29N
21	555749.25	5670523.56	552749.25	5670523.56	-8.20235	51.18341	-8.24527	51.1837	ETRS89 / UTM Zone 29N
22	555749.25	5670423.56	552749.25	5670423.56	-8.20237	51.18251	-8.24529	51.1828	ETRS89 / UTM Zone 29N
23	555749.25	5670323.56	552749.25	5670323.56	-8.20238	51.18161	-8.2453	51.1819	ETRS89 / UTM Zone 29N
24	555749.25	5670223.56	552749.25	5670223.56	-8.2024	51.18071	-8.24532	51.181	ETRS89 / UTM Zone 29N
25	555749.25	5670123.56	552749.25	5670123.56	-8.20241	51.17981	-8.24533	51.1801	ETRS89 / UTM Zone 29N
26	555749.25	5670023.56	552749.25	5670023.56	-8.20243	51.17892	-8.24535	51.1792	ETRS89 / UTM Zone 29N
27	555749.25	5669923.56	552749.25	5669923.56	-8.20245	51.17802	-8.24536	51.1783	ETRS89 / UTM Zone 29N
28	555749.25	5669823.56	552749.25	5669823.56	-8.20246	51.17712	-8.24537	51.1774	ETRS89 / UTM Zone 29N
29	555749.25	5669723.56	552749.25	5669723.56	-8.20248	51.17622	-8.24539	51.1765	ETRS89 / UTM Zone 29N
30	555749.25	5669623.56	552749.25	5669623.56	-8.20249	51.17532	-8.2454	51.1756	ETRS89 / UTM Zone 29N
31	555749.25	5669523.56	552749.25	5669523.56	-8.20251	51.17442	-8.24542	51.1747	ETRS89 / UTM Zone 29N
32	553049.25	5669523.56	553049.25	5672523.56	-8.24113	51.17468	-8.24068	51.20165	ETRS89 / UTM Zone 29N
33	553449.25	5669523.56	553449.25	5672523.56	-8.23541	51.17464	-8.23496	51.20161	ETRS89 / UTM Zone 29N
34	553849.25	5669523.56	553849.25	5672523.56	-8.22968	51.1746	-8.22923	51.20158	ETRS89 / UTM Zone 29N
35	554249.25	5669523.56	554249.25	5672523.56	-8.22396	51.17456	-8.22351	51.20154	ETRS89 / UTM Zone 29N
36	554649.25	5669523.56	554649.25	5672523.56	-8.21824	51.17453	-8.21779	51.2015	ETRS89 / UTM Zone 29N
37	555049.25	5669523.56	555049.25	5672523.56	-8.21252	51.17449	-8.21206	51.20146	ETRS89 / UTM Zone 29N
38	555449.25	5669523.56	555449.25	5672523.56	-8.2068	51.17445	-8.20634	51.20142	ETRS89 / UTM Zone 29N