



**Roinn Cumarsáide, Gníomhaithe
ar son na hAeráide & Comhshaoil**
Department of Communications,
Climate Action & Environment

Application for approval to conduct an

Rig-Site Geophysical Survey

Offshore Petroleum Lease (OPL) 1 & Seven Heads Petroleum Lease

in the North Celtic Sea Basin

by

PSE Kinsale Energy Limited

Application Date: 6th March 2020

PAD Technical Evaluation & Recommendations

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Roinn Cumarsáide, Gníomhaithe ar son na hAeráide & Comhshaoil

Department of Communications, Climate Action & Environment

14th July 2020

Executive Summary

PSE Kinsale Energy Limited (Kinsale Energy) is preparing for the decommissioning of the Kinsale Area gas fields and facilities. On 6th March, 2020 Kinsale Energy submitted an application to the Department to conduct a rig site geophysical survey in the North Celtic Sea Basin at the Ballycotton and Southwest Kinsale fields (Offshore Petroleum Lease No.1 (OPL1)) and the Seven Heads field (Seven Heads Petroleum Lease) in order to understand the anchoring conditions and to ensure there are no obstructions around each of the fields.

The following documents were provided to the Department:

- Application to Conduct an Offshore Survey (Rig Site Geophysical Survey)
- Environmental Impact Assessment
- Appropriate Assessment Screening Report
- Pre-Survey Fishery Assessment

Location, Timeline and Survey Logistics

The survey is to be carried out in the North Celtic Sea Basin between 26 and 40km off the coast of Co. Cork (Figure 1). Water depths in the survey area range from approximately 90 m to 100 m. Operations are proposed to take place at some point between 1st April 2020 and 31st October 2020 subject to Ministerial consent. The estimated duration of the survey operations, excluding possible weather standby is 7.5 days;

- Seven Heads Area – 4.5 days
- Southwest Kinsale Area – 1.5 days
- Ballycotton Area – 1.5 days

Final details, timing and duration of the survey will be communicated to the Department in advance of operations commencing.

Aims of the Survey

A semi-submersible drilling rig (or Mobile Offshore Drilling Unit (MODU)) will be required to decommission the subsea wells in the Ballycotton, Southwest Kinsale and Seven Heads areas. A survey is required around each of the well sites in order to understand the anchoring conditions and to ensure there are no obstructions around each of the fields.

Therefore the aims of the survey are as follows:

- Establish and confirm water depths and seabed conditions
- Identify any seabed obstructions and confirm the location of any existing infrastructure such as pipelines and wellheads.

- Investigate immediate sub-seabed geological conditions for the assessment of anchoring conditions.
- Provide information on any cultural heritage features, including the location of any shipwrecks or other underwater cultural heritage features.

Vessel information

The vessel to complete the survey programme has not yet been contracted. A Marine Vessel such as the RV Celtic Explorer, RV Ocean Researcher or equivalent will likely be contracted for the survey programme. When the vessel is contracted, Kinsale Energy will submit a document to the Department with details of the vessel. In accordance with Departmental compliance, a Fisheries Liaison Officer (FLO) and Marine Mammal Observer (MMO) will be on board the vessel for the duration of the survey. The FLO is to maintain good communication with local fisheries and coordinate activities. The MMO's role is to monitor marine mammals, to log all data according to the standardised forms provided in the DAHG Guidance document and to provide an MMO report to the Regulatory Authorities.

Survey Operations

This offshore survey will acquire geophysical data to ensure there are no obstructions and to inform the mooring assessment for anchoring conditions at Seven Heads, Southwest Kinsale and Ballycotton. Rig site Geophysical survey data will be acquired using:

- Singlebeam echo sounder (SBES),
- Multibeam echo sounder (MBES),
- Sidescan sonar (SSS),
- Magnetometer
- Pinger/Chirp sub-bottom profiler (SBP).
- Ultra-short Baseline (USBL)

The SBES, MBES and SBP will be hull-mounted. The SSS and magnetometer will be towed behind the vessel. USBL positioning will be used to confirm the position of the towed equipment. The survey line plans for each survey element are shown in Figure 2 (Ballycotton), Figure 3 (Southwest Kinsale) and Figure 4 (Seven Heads), which includes a working area allowing for line turns when using towed equipment. The line plans provided are provisional and are subject to change. Final survey lines and transects will be confirmed to the Department prior to survey commencement. No seabed sampling will be undertaken. The Geophysical data will be used to establish and confirm bathymetry of the area and provide information on seabed conditions, Investigate immediate sub-seabed geological

conditions for the assessment of anchoring conditions, identify any seabed obstructions and confirm the location of any existing infrastructure such as pipelines and wellheads and provide information on any cultural heritage features, including the location of any shipwrecks or other underwater cultural heritage features.

PAD Technical Recommendation

The application from Kinsale Energy for an offshore geophysical survey has been technically evaluated by PAD Geoscientists. Sufficient information was supplied by the operator for the Department to conduct an evaluation.

Information expected to be obtained from the survey are:

- Observer Logs
- Navigation (ED50 / WGS84)
- Bathymetry (Processed reduced XYZ Grid, Geotiff)
- Marine Mammal Observer (MMO) Daily Reports
- MMO Weekly Summary
- Side Scan Sonar (eXtended Triton Format (XTF) files, Geotiff)
- Sub-bottom Profiler (SEG Y Files)
- Magnetic data (txt)
- Survey Outputs - AutoCAD DWG Charts, subbottom profile mapping, Geodatabase/Shapefiles (Seabed Features, Sediments / Isopachs)

PAD Technical has considered all the technical elements of the offshore survey application in order to establish the validity of the survey, and have concluded that the geophysical data obtained will highlight if there are obstructions and will inform the mooring assessment for anchoring conditions at Seven Heads, Southwest Kinsale and Ballycotton.

Based on a technical review of the survey programme, it is recommended that approval to conduct the offshore survey at the Ballycotton and Southwest Kinsale fields (Offshore Petroleum Lease No.1 (OPL1)) and the Seven Heads field (Seven Heads Petroleum Lease) be granted, subject 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 October 2020.

2. The operator/contractor 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 Communications, Climate Action & Environment (DCCAIE) 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 DCCAIE 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 DCCAIE before noon each day for the duration of the survey. The final progress report should be sent to the DCCAIE.
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 working areas as delineated by the light blue outlines in Figure 1 and described in the documents submitted by PSE Kinsale Energy Limited in March 2020.

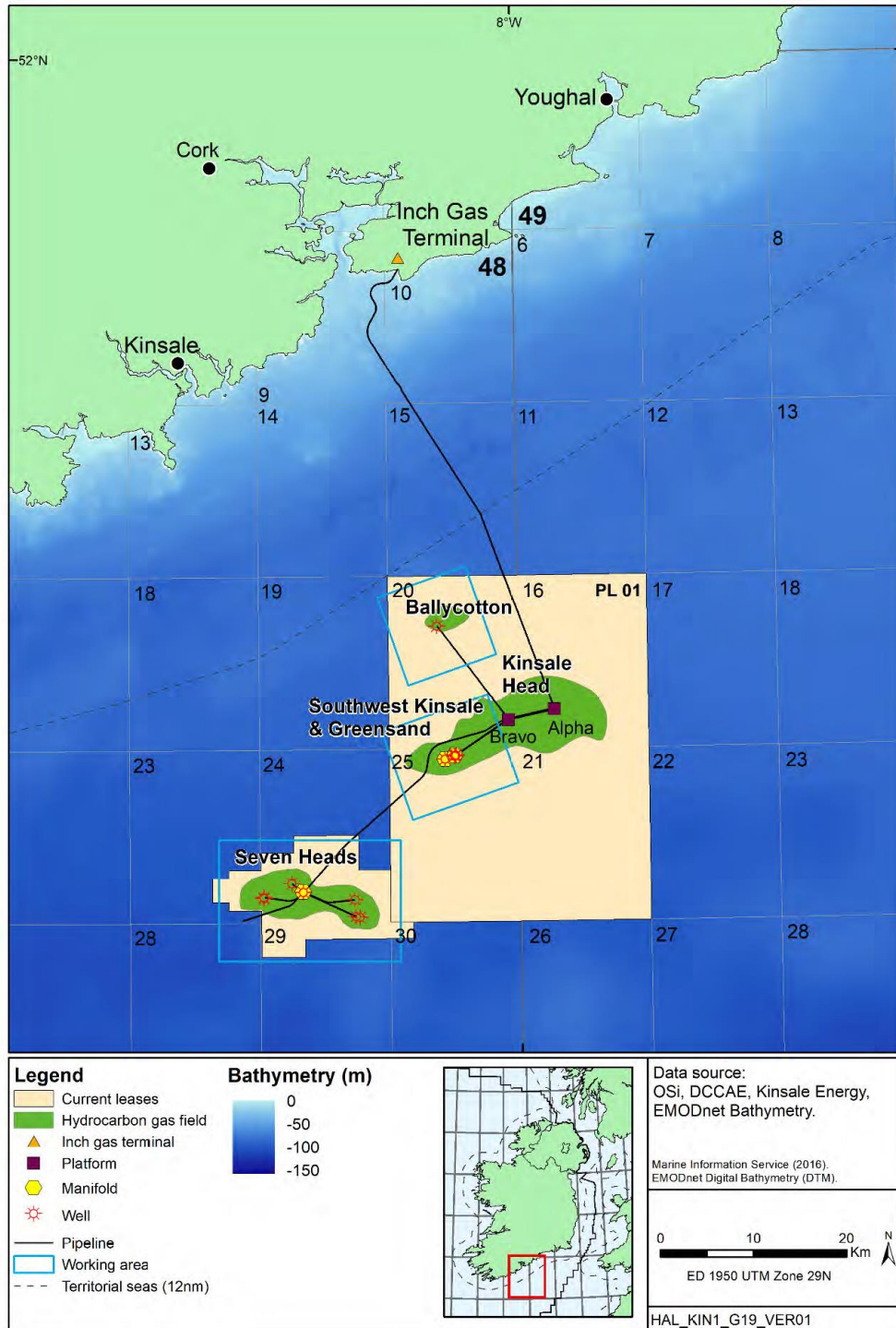


Figure 1: The location map for the proposed Kinsale area offshore survey.

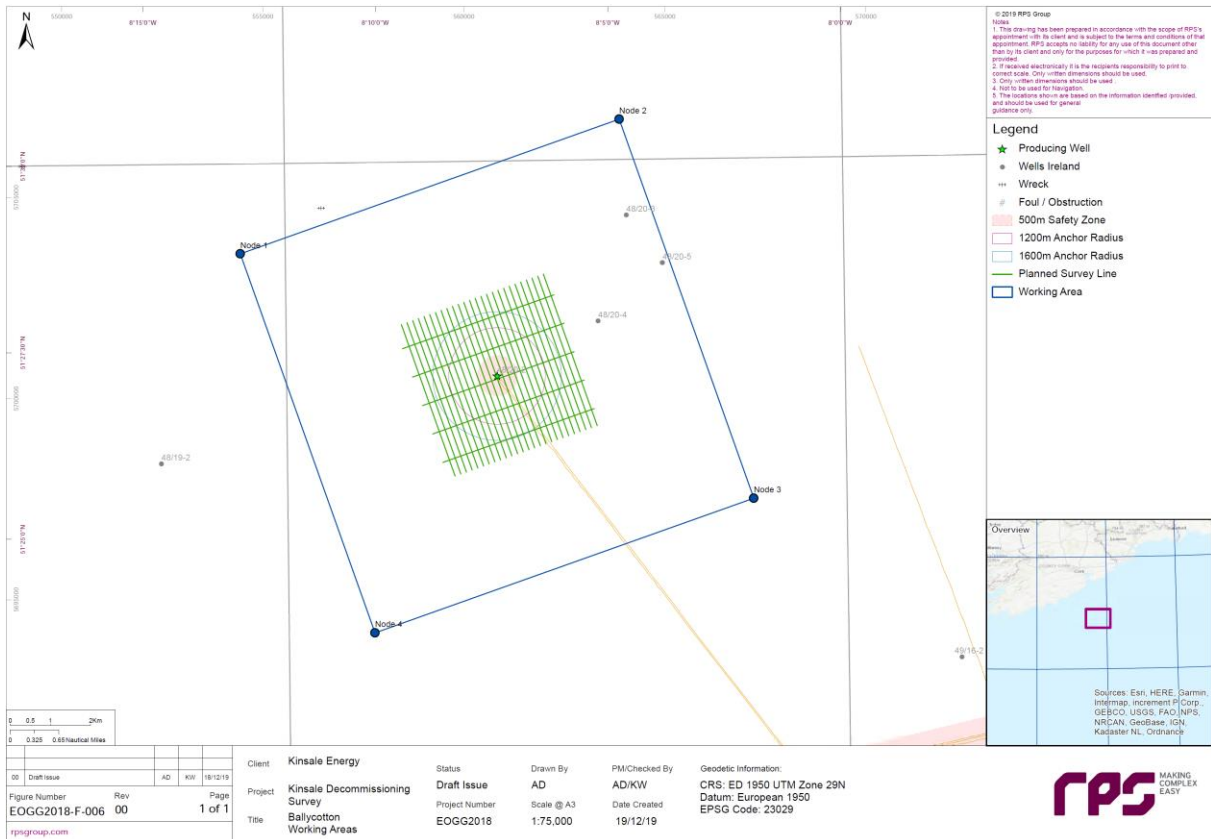


Figure 2: Provisional vessel survey lines at Ballycotton relative to the proposed working area.

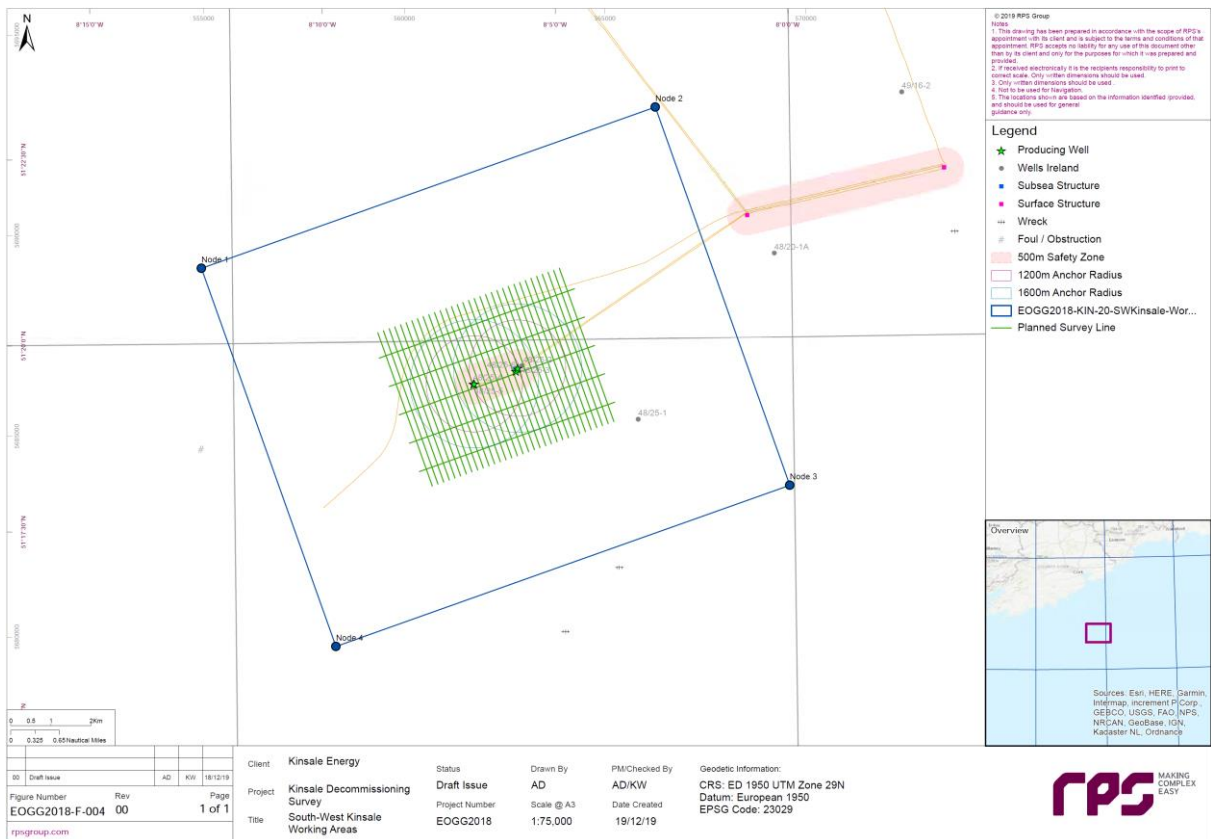


Figure 3: Provisional vessel survey lines at Southwest Kinsale relative to the proposed working area.

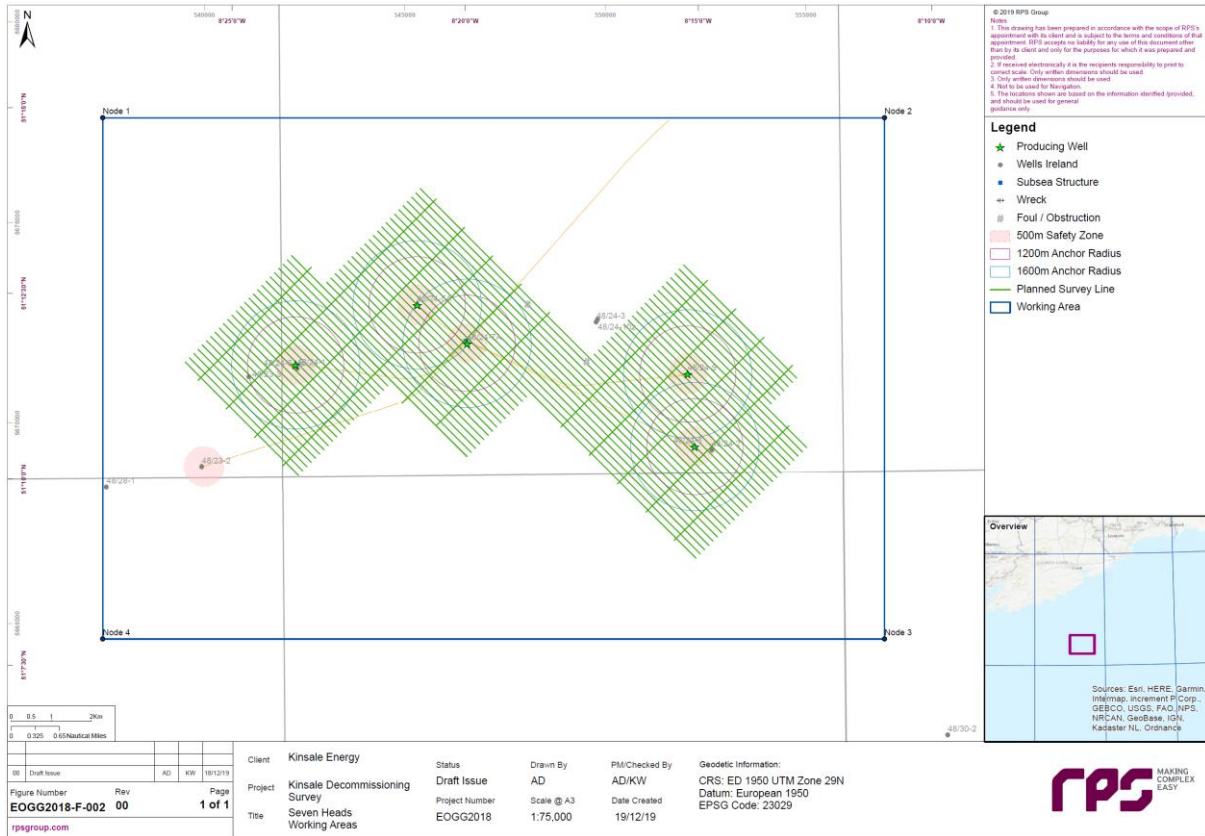


Figure 4: Provisional vessel survey lines at Seven Heads relative to the proposed working area.

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