

Our Ref: 01.01.01.01-6333U
UKOP Doc Ref:1365218



Offshore Petroleum Regulator
for Environment & Decommissioning

PETROGAS NORTH SEA LIMITED
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LONDON
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Registered No.: 05470844

Date: 8th October 2024

Department for Energy Security &
Net Zero

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]

Fax

www.gov.uk/desnz
opred@energysecurity.gov.uk

Dear Sir / Madam

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020**

**Abbey, Noble Resilient DRILLING APPRAISAL WELL 47/03i- Abbey 02 planned
well**

A screening direction for the project detailed in your application, reference DR/2494/0 (Version 4), dated 2nd October 2024 has been issued under regulation 6 of the above Regulations. The screening direction notice, and any relevant conditions and comments are attached. A copy of this screening direction will be forwarded to the application consultees, the Oil and Gas Authority and published on the gov.uk website.

If you have any queries in relation to this screening direction or the attachments, please do not hesitate to contact [REDACTED] on [REDACTED] or email the Environmental Management Team at opred@energysecurity.gov.uk.

Yours faithfully

Validity unknown

Digitally signed by Department for Energy Security
and Net Zero
Date: 2024.10.08 12:45:58 BST
Reason: On behalf of the Secretary of State
Location: Offshore Petroleum Regulator for
Environment and Decommissioning



**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020**

**SCREENING DIRECTION CONFIRMING THAT AN ENVIRONMENTAL IMPACT
ASSESSMENT IS NOT REQUIRED**

**Abbey, Noble Resilient DRILLING APPRAISAL WELL 47/03i- Abbey 02 planned
well**

DR/2494/0 (Version 4)

Whereas PETROGAS NORTH SEA LIMITED has made an application dated 2nd October 2024, under The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020, and whereas the Secretary of State has considered the application and is satisfied that the project is not likely to have a significant effect on the environment; in exercise of the powers available under regulation 6, the Secretary of State hereby directs that the application for consent in respect of the project need not be accompanied by an Environmental Impact Assessment, provided that the project is carried out as described in the application for the screening direction and in accordance with the conditions specified in the attached schedule.

In giving a screening direction under regulation 6 of the above Regulations, the Secretary of State accordingly gives agreement to the Oil and Gas Authority to the grant of consent for the project as detailed in the application, WONS/16493/0/IDA/1 Version 4 and WONS/16493/0/GS/1 Version 4.

Effective Date: 8th October 2024

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THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2020

SCHEDULE OF SCREENING DIRECTION CONDITIONS

The grant of this screening direction is conditional upon the screening direction holder complying with the following conditions.

1 Screening direction validity

The screening direction shall be valid from 20 October 2024 until 31 January 2025.

2 Commencement and completion of the project

The holder of the screening direction must notify the Department for Energy Security & Net Zero (hereinafter called the 'Department') of commencement and completion of the project within two days:

- a) of commencement of the project and
- b) of completion of the project.

Notification should be sent by email to the Environmental Management Team Mailbox: opred@energysecurity.gov.uk

3 Extended well tests

- a) Production levels

The holder of the screening direction shall ensure that the production of hydrocarbons during the well test does not exceed the level(s) detailed in the application for the screening direction.

- b) Associated flaring and venting

The holder of the screening direction shall, ensure that any associated flaring of hydrocarbons during the well test does not exceed the level(s) detailed in the application for the screening direction and/or that any associated venting of gas during the well test does not exceed the level(s) detailed in the application for the screening direction.

4 Prevention of pollution

The holder of the screening direction must ensure that appropriate measures are taken to minimise discharges, emissions and waste, in particular through the appropriate use of technology; and to ensure that necessary measures are taken to

prevent incidents affecting the environment or, where they occur, to limit their consequences in relation to the environment.

5 Inspections

Should the Department consider it necessary or expedient for an inspector appointed by the Secretary of State to investigate whether the conditions of the screening direction are being complied with, the holder of the screening direction shall afford the inspector with such facilities and assistance as the inspector considers necessary to exercise the powers conferred by the regulations. The holder of the screening direction shall additionally ensure that copies (electronic or paper) of the screening direction and any other relevant documents are available for inspection by the inspector at:

- a) the premises of the holder of the screening direction; and
- b) the facilities undertaking the project covered by the screening direction.

6 Check monitoring

Should the Department consider it necessary or expedient to undertake an independent monitoring programme to assess the impact of the project covered by the screening direction, the screening direction holder shall afford the Department with such facilities and assistance as the Department considers necessary to undertake the work.

7 Atmospheric emissions returns

Following completion of the project covered by the screening direction, the holder of the screening direction shall report all relevant atmospheric emissions, such as combustion emissions, extended well test emissions or flaring and venting emissions relating to a well test, using the appropriate Environmental Emissions Monitoring System (EEMS) reporting forms. In the case of atmospheric emissions relating to drilling projects undertaken from a fixed installation, they should be included in the annual EEMS reporting forms for the fixed installation.

8 Unauthorised deposits

Following completion of the project covered by the screening direction, the holder of the screening direction shall recover any materials accidentally or temporarily deposited on the seabed, such as debris, temporary containers, structures or deposits, or scientific instruments, and shall return the materials to land. If it is not possible to recover any of these deposits, full details of the materials remaining on the seabed must be reported to the Department in accordance with the requirements of Petroleum Operations Notice No.2 (PON2).

9 Screening direction variation

In the event that the holder of the screening direction proposes changes to any of the

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particulars detailed in the application for a screening direction, the holder must notify the Department immediately and submit an application for a post screening direction amendment. The post screening direction must be in place prior to the amended proposals taking effect.

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COMMENTS ON THE APPLICATION FOR SCREENING DIRECTION

Section 1

The attention of screening direction holders is drawn to the following provisions regarding The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020.

1) You are deemed to have satisfied yourself that there are no barriers, legal or otherwise, to the carrying out of the project covered by the screening direction. The issue of a screening direction does not absolve the screening direction holder from obtaining such authorisations, consents etc that may be required under any other legislation.

2) The Department would draw your attention to the following comments:

There are no comments at this time.

3) All communications relating to the screening direction should be addressed to:

opred@energysecurity.gov.uk

or

Offshore Petroleum Regulator for Environment & Decommissioning
Department for Energy Security & Net Zero
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]

SCHEDULE OF SCREENING DIRECTION DECISION REASONS

The Secretary of State has decided that, based on the information provided, the project is not likely to have a significant effect on the environment. The main reasons for this decision are:

1) Decision reasons

The following provides a summary of the assessment undertaken to determine whether an Environmental Impact Assessment is required for this project, summarises the information considered, the potential impacts and sets out the main reasons for the decision made. In considering whether an Environmental Impact Assessment is required or not, the following have been taken into account:

- a) the information provided by the developer;
- b) the matters listed in Schedule 5 of The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Regulations 2020) (the Regulations);
- c) the results of any preliminary verifications or assessments of the effects on the environment of the project; and
- d) any conditions that the Secretary of State may attach to the agreement to the grant of consent.

Characteristics of the Project

Having regard, in particular, to the matters identified at paragraphs 1(a) to (g) of Schedule 5 to the Regulations, the characteristics of the project include the following:

-

Summary of the project

Drilling of an appraisal well Abbey 47/03i (Abbey 02) from the Noble Resilient Mobile Drilling Unit (MoDU) under NSTA WONS reference WONS/16493/0/IDA/1 Version 4 and WONS/16493/0/GS/1 Version 4. The works will involve:

- Drilling of the 36" section with Water Based Mud (WBM) riserless;
- Drilling of the 17.5" section with riser in place with WBM
- Running and cementing the casings
- Drilling of the 12.25" and 8.5", pilot hole sections with riser and Low Toxicity Oil Based Mud (LTOBM);
- Abandoning the pilot hole in the 8.5" section at the reservoir.
- Kick-off from the cement plugs to drill the geological side track 9.5" and 6" sections with LTOBM
- Running and cementing casings.
- Stimulation by hydraulic fracture
- Running the completions
- Wellbore clean-out
- An extended well test of 192 hours to ensure successful clean-up of the well
- Suspend the sidetrack.

- The addition of the wellhead and wellhead protection structure;
- This includes the re-spud of the 36" and 17.5" sections.

Description of the Project

The project is to drill an appraisal well at the Abbey gas field using the Mobile drilling unit Noble resilient, the well 47/3i-known as the Abbey 02 well. The well is to be drilled in an area which currently does not have associated oil and gas infrastructure or production facilities.

The upper 36" section will be drilled riserless using seawater and sweeps with the upper 15 meters further opened to 42" to accommodate a high pressure well head housing, the cuttings will be discharged directly onto the seabed.

The 17.5" section will be drilled using seawater and sweeps. The cuttings will be returned to the MODU where they will be discharged to sea. The casings will be run and cemented in place.

The 12.25 and 8.5 pilot-hole sections will be drilled with low toxicity oil-based mud (LTOBM), cuttings will be returned to the MODU and cuttings will be separated from the LTOBM (which is reused) and skipped and then shipped to shore for treatment at a licensed facility. There will be no discharge of fluids or chemicals used during the drilling of these sections. After completion of drilling the casings will be cemented in place. The pilot hole will then be abandoned at the reservoir to allow a kick-off to the geological sidetrack. The side track 9.5" section and 6" section will be drilled using LTOBM, mud and cuttings returned to the MoDU as with the pilot hole sections.

Following the running and cementing of the casings, well stimulation by hydraulic fracturing will be undertaken. This will be from a vessel hooked up to the MoDU within the 500m zone, there is not expected to be any discharge of chemicals during this operation, with any chemicals returned to the vessel skipped and shipped to shore for disposal. Following running of the completions the well is to be cleaned up with chemicals and seawater. An extended well test will be carried out to ensure clean-up of the well, it is expected to take 8 days (192 hours) to complete where the flaring of 5504.58 tonnes of gas and 171.72 tonnes of condensate will be flared.

Following the extended well test, the sidetracked well is to be suspended and the wellhead protection structure installed prior to the MoDU leaving the Abbey location. Consent to locate reference - CL/1496/0.

The operations will take 84 days to complete but due to potential delays or pauses in operation the project end date is 31st January 2025.

Location of the Project

Having regard, in particular, to the matters identified at paragraphs 2(a) to (c) of Schedule 5 to the Regulations, the environmental sensitivity of geographical areas likely to be affected by the project has been considered as follows: -



The proposed drilling project is in the Southern North Sea in the Abbey gas field in block 47/3i. It is 40km from the English coastline at Yorkshire and 152km from the UK-Netherlands median line in a water depth of approximately 41m. The seabed in the vicinity of the well is sand with various proportions of gravels, with extensive areas of mega ripples. There are also higher densities of boulders within the Abbey Field area. Annual mean significant wave height is 0.91 m to 1.50 m and modelled data indicates maximum tidal rates are 0.073 metres per second (m/s) and 0.593 m/s for neap and spring peak flows respectively

Benthic surveys carried out in 2023 identified habitats corresponding to the classification under EUNIS as offshore circalittoral sand (MD5) and offshore circalittoral coarse sediment (MD3). As well as *Flustra foliacea* and *Hydrallmania falcata* on tide-swept circalittoral mixed sediment' (MC4213) at the Abbey Well site. Epi-fauna were observed in seabed photographs and video, with a number of species such as common and squat lobsters (*H. Gammarus*, *Munida* spp.), topshells (*Calliostoma zizyphinum*), hydroids (*Nemertesia antennina*, *Tubularia* spp.), starfish (*A. rubens*), brittlestars (*Ophiuroidea* spp.), and crabs (*Pagurus*, *Necora puber*, *L. depurator*, *C. Pagurus*). In areas of hard substrate there were a greater abundance of dead man's fingers (*A. digitatum*), Serpulidae tubes, hornwrack (*Flustra foliacea*), and dahlia anemones (*U. felina*).

The presence of stoney reefs from boulders and cobbles was assessed and only low reef was identified in single occurrences on each of the eight transects during the survey concentrated around the previously proposed drill centre. The drill centre has been subsequently relocated away from these reef areas. The presence of small aggregations of ross worm (*Sabellaria spinulosa*) was identified across the survey area, however, the assessment shows that the aggregations do not constitute Annex I reef habitat.

No adult specimens of ocean quahog, which are classed as an OSPAR threatened or declining species, were identified, however, 4 sample stations across the survey area identified a single juvenile.

A survey of the habitat for potential herring spawning was carried out at the Abbey site, due to its location as potential spawning grounds. The assessment concluded that the area could not be classified as high potential spawning grounds.

The well site is within the Southern North SAC which protects harbour porpoise and 29km to the west of the Greater Wash Special Protection Area (SPA) for the foraging areas of the little tern, sandwich tern and common tern. Flamborough and Filey Coast SPA located 42 km northwest of Abbey. Seabird species originating from these SPAs may therefore also forage within the offshore waters of the proposed Abbey development area during the breeding bird season. The well site is 2.5km from the Holderness offshore marine conservation zone (MCZ), protected for various seabed habitat features and ocean quahog.

The Abbey location is within an area which is important for seabirds for feeding purposes. However, the density of seabirds in the location during the operational



window of October to January is relatively low. The seabird sensitivity to oiling in the vicinity of the Abbey well is medium to high during the proposed operational window.

Five species of cetaceans have been spotted in the waters around the Abbey well which is situated within SCANS IV Block NS-C in which harbour porpoise, bottlenose dolphin, common dolphin, minke whale and white-beaked dolphin have been recorded. Harbour porpoise is the only cetacean species expected to be found in relatively high numbers in the vicinity of the proposed well. Grey and harbour seals may be encountered in the area with high densities of grey and low densities of harbour seal. However, the densities at sea are lower for grey seals from November and April for pupping, breeding and moulting seasons.

The proposed operations lie within the ICES rectangle 36F0 and the project will coincide with fish spawning and/or nursery activity for a number of species including cod (*Gadus morhua*), herring (*Clupea harengus*), lemon sole (*Microstomus kitt*), plaice (*Pleuronectes platessa*) (high intensity), sandeels (*Ammodytidae* sp.), sandeels (*Ammodytidae* sp.), (sole (*Solea solea*) and sprat (*Sprattus sprattus*). The most frequently used fishing gear in this ICES rectangle is pots and traps, followed by dredges, drift and fixed nets, with the most common species caught being crabs, lobsters and scallops. The 36F0 rectangle experiences a high intensity of fishing activity during the months when drilling is proposed, mainly by vessels over 10m in length. In 2022, a total of 3,204 days were spent fishing in ICES Rectangle 36F0 with a peak in effort recorded in August (370 days).

There are 3 wrecks within 5km of the proposed well, but none are capable of being impacted. There are no submarine cables within block 47/3. The area is within an Air Force Department Danger Area and block 47/3 has conditions that the MOD must be notified before locating any structure on the surface. There are four aggregate sites within 40 km of the proposed well operated by CEMEX UK Marine Ltd; the Humber 1, Humber 2, Humber 3 and Humber 4 aggregate production agreement areas. The closest is 33km to the south. The density of shipping traffic in the well location is relatively high due to the presence of fishing vessels, ferries between the UK and the rest of Europe, cargo and offshore support vessels.

There are three offshore windfarm projects within 40 km of the proposed well. These are the proposed Hornsea Project Four cable corridor (Orsted Power UK Limited) approximately 10 km to the north. The active Westermost Rough wind farm (operated by Orsted Power (UK) Limited) approximately 25 km southwest and the active Humber Gateway wind farm (operated by E.ON Climate and Renewables) approximately 31 km to the southwest.

There is some oil and gas infrastructure nearby, namely the Minerva platform, operated by Perenco, approximately 5 km east northeast and the York platform, operated by Spirit Energy approximately 8 km south west of the proposed well location. There are also several pipelines in the vicinity, namely the active Cleeton CP to Dimlington gas pipeline (PL447) operated by Perenco, the Tolmount gas and methanol pipelines (PL4849 and PL4850 respectively) and the Apollo to Minerva gas pipeline (PL1937) operated by Perenco.

Given the location of the project, it is not likely that the areas identified at paragraphs 2(c)(i), (iii), (iv), (vi), (vii) of Schedule 5 to the Regulations will be affected by the project.

Type and characteristics of the potential impact

In accordance with paragraph 3 of Schedule 5 to the Regulations, the likely significant effects of the project on the environment have been considered. Potential effects on the environment from the activities associated with the project were assessed, including impacts arising from atmospheric emissions, seabed disturbance, physical presence, planned discharges and accidental spills. Other than the matters considered further below, there is not likely to be any significant impact of the project on population and human health.

The well will be drilled from the Noble Resilient MODU. There is currently no existing 500m safety zone in place as there is currently no infrastructure at the Abbey Well. A 500m safety zone will be in place once the MODU arrives on location, which will exclude unauthorised access of vessels and prohibits access to fishing vessels.

An Emergency Response Rescue Vessel (ERRV) will be on site and in addition to providing emergency support to the Noble Resilient, it will also act as a guard vessel advising other users of the presence of the drilling operations. The conductor/well head will sit proud of the seabed, consequently a fishing friendly protection structure will be placed over the conductor, which will protect the well from fishing interaction. A Consent to locate will be in place for the well and its protection structure. All appropriate notifications to mariners will be made prior to drilling activities commencing.

There are high levels of fishing activity and vessel traffic in block 47/3 so there will be some displacement of vessels from the 500m zone established around the MODU. This displacement will not cause a significant impact on sea users as the total area effected is small and the 500m zone will only be in place while the MODU is on location until 31st January 2025.

In summary it is considered that the drilling of the Abbey well is not likely to have a significant impact on other offshore activities or other users of the sea either alone or in combination with other projects or activities.

Seabed disturbance from the presence of the MODU from the placement of spud cans, without anchors or chains is approximately 603m², with a further 603m² of disturbance if a rig move is required to re-spud the well. Further seabed disturbance will occur from the discharge of WBM, drill cuttings, cement and the wellhead protection structure. Cuttings dispersion modelling at the well was undertaken which showed cuttings will form a shallow layer on the seabed, with a cuttings thickness of >10mm reaching no further than 0.18km from the well and a thickness of 0.1mm out to a maximum of 1.56km. The cuttings layer is not expected to significantly alter seabed composition or impact benthic fauna. The currents in the well area are

expected to aid quick dispersal of the cuttings which are not expected to form a persistent layer. The total area of disturbance including the drill cuttings depositing to 1mm thickness, rig placement, cement patio and wellhead protection structure is 0.3513km².

Discharge of offshore chemicals associated with the drilling of the well, cementing and completion operations have been assessed as being unlikely to have a significant effect on the environment.

Noise generated from the project activities will not be significant, and it is concluded that the project is not likely to have a significant effect on the Southern North Sea SAC in relation to the site's Harbour porpoise population, its supporting processes or prey. The seabed disturbance associated with the drilling of the well represents 0.000095% of the SAC.

The proposed operation will utilise an emergency rescue and response vessel (ERRV), supply vessels, helicopters and a MODU. There will also be atmospheric emissions from the extended well test which will occur over 8 days. Atmospheric emissions have been assessed from the gas and condensate flared during the well test operations as well as the diesel used for each vessel and the time spent on location. The emissions may result in a short-term deterioration of the local air quality, but due to the relatively short duration of the work, and that the exposed conditions in the area will rapidly disperse the emissions, it is not anticipated that there will be a significant impact. The impact of emissions on climate is not expected to be significant.

An assessment has been included within the project proposal to assess as a worst case, an uncontrolled well blow out, and the subsequent potential for a Major Environmental Incident (MEI). The assessment concluded that there was no potential for an MEI to occur, as the risk of a significant oil spill event is minimal, and the developer has suitable mitigation in place to prevent such an occurrence.

The drilling operations are in accordance with the East offshore marine plan objectives and policies.

It is not considered to be likely that the project will be affected by natural disasters.

There are no expected transboundary effects from the proposal to drill the Abbey well.

2) Mitigation of significant effects

The following are features of the project or measures envisaged that the developer has proposed to avoid or prevent what might otherwise have been significant adverse effects on the environment:

N/A