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Offshore Petroleum Regulator
for Environment & Decommissioning

SHELL U.K. LIMITED
SHELL CENTRE
LONDON
SE1 7NA

Registered No.: 00140141

Date: 7th April 2021

Department for Business, Energy
& Industrial Strategy

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]

Fax [REDACTED]

www.gov.uk/beis
bst@beis.gov.uk

Dear Sir / Madam

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

Arran Field, Ocean Endeavor DRILLING PRODUCER WELL 23/16b- 15

A screening direction for the project detailed in your application, reference DR/2104/0 (Version 1), dated 30th March 2021 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 bst@beis.gov.uk.

Yours faithfully



**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**

Arran Field, Ocean Endeavor DRILLING PRODUCER WELL 23/16b- 15

DR/2104/0 (Version 1)

Whereas SHELL U.K. LIMITED has made an application dated 30th March 2021, 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 his agreement to the Oil and Gas Authority to the grant of consent for the project as detailed in the application.

Effective Date: 7th April 2021



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 7 April 2021 until 31 August 2021.

2 Commencement and completion of the project

The holder of the screening direction must notify the Department for Business, Energy & Industrial Strategy (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: bst@beis.gov.uk

3 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.

4 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.



5 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.

6 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.

7 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).

8 Screening direction variation

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



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:

No comments.

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

Out-of-hours emergency screening direction variations:

Telephone Met Office out-of-hours service (0330 135 0010) and ask to be connected to the Department's On-call Response Officer (Offshore Environmental Inspectorate).

Routine communications

bst@beis.gov.uk

or

Offshore Petroleum Regulator for Environment & Decommissioning
Department for Business, Energy & Industrial Strategy
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]
Fax



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 assessments undertaken by OPRED 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 the 8.5 inch Low Toxicity Oil Based Mud side-track section of the Arran AN1 Well.

Description of the Project

The drilling of the 8.5 inch side-track section of the Arran AN1 well represents a change to the drilling project which was subject of a direction given previously (ref: DR/1966). The original project size and design consisted of drilling a four section well (composing 36 inch, 17.5 inch, 12.25 inch, and 8.5 inch sections) to be cemented into place. The well sections will be drilled using a combination of water based and oil-based drilling muds, both will be discharged to sea, but the latter will be treated through thermo-mechanical cuttings cleaner technology before being discharged to sea. The rig carrying out the work is an anchored semi-submersible type aided in



position by support vessels. The well will be completed and cleaned-up with associated flaring required. The original direction also included contingent elements such as re-spudding the well and inclusion of a ST option on the 12.25 inch section of the well.

The applicant has applied for a change to the project as described above to include a contingent requirement to side-track the 8.5 inch section of the well, in the same manner as the original 8.5 inch section. The section may be drilled during the months April to August of 2021.

No cumulative impacts are expected to occur with any other existing or approved projects. The risk of a major accident such as a well blowout has been assessed. The Developer has control measures in place to reduce the risk of a major accident occurring and the probability of such an event occurring is very low.

There is not likely to be any significant impact of the project on population and human health. It is not considered likely that the project will be affected by natural disasters. No pollution or nuisances are foreseen from the drilling of the side-track section. There are associated waste streams linked to the drilling of the side-track section in the form of treated oil-based mud cuttings and water.

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 project is in an offshore oil and gas licenced area, approximately 229 km east from the Aberdeenshire coastline in Scotland and 4 km west of the UK/Norwegian median line, in an area where water depth is approximately 80-90 m and the seabed type are characterised as sand with abundant shell fragments. The predominant current in the location originates from well mixed coastal water, Atlantic inflow from the north and the Fair Isle/Dooley current from the Orkney Islands. The expected wave heights for the project area are 2.1 to 2.4 m. The project is not located in or close to any protected areas. The closest protected area is the East of Gannet and Montrose Fields, 33 km west of the project location.

Site-specific surveys identified the seabed as consisting of a very similar, fine sand seabed across all sample stations located in the project area. The survey results revealed that there was a diverse faunal community which was moderately distributed. Ocean quahog were recorded during historic sampling analysis, with the majority consisting of juvenile specimens; however, no specimens were recorded in the most recent site survey.

The project works will take place during peak spawning of mackerel. The project location is also within an area of high intensity spawning for mackerel. Sightings of cetaceans have been recorded during the period for which the project works are planned. Seabird density is described as high for the period when project works are



planned. The project area is not within a commonly fished ground and fishing effort is predominantly focussed on demersal and shellfish species. The area is described as a low intensity fishing area. There is a large amount of other oil and gas infrastructure in the surrounding area. The project location is not within a military activity zone, aggregate extraction location, or near any renewable energy infrastructure projects. There is a fibre optic cable located relatively close to the drilling location.

Given the location of the project, the areas identified at paragraphs 2(c)(i), (iii), (iv),(vi), (vii) and (viii) of Schedule 5 are not likely to 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 to the environment from the activities associated with the change to the project were assessed, with particular focus on the predominant impacts resulting from seabed disturbance and discharges to sea from planned discharge of treated drill cuttings and water.

The treated cuttings will be discharged as a powder mixed with recovered water via a caisson below sea level. The dispersion caused by discharging higher in the water column will mean that cuttings will be spread over a wider area than those that were associated with the discharge of drill cuttings from the water-based mud sections of the well. Proxy modelling of cuttings discharge at another well with very similar characteristics was used to inform the assessment of potential impacts for the project. Thickness of drill cuttings over 6.5mm from discharges are expected over a small area (0.00331 square km) from the location and out to 215 m from the well location, and residence in the natural environment will be temporary.

Drill cuttings deposition and sediment re-suspension have the potential to physically disturb benthic fauna living on or in the seabed at the location of the operations. Drilling discharges may cause localised smothering of sessile organisms from cuttings deposition, and the finer particles may interfere with the breathing of others. Ocean quahog are highly resilient to smothering and siltation, however given the location of specimens were out with 215 m from the well location, the deposits of cuttings is not likely to have a significant impact. The impact from treated drill cuttings is also expected to be reduced as the discharge location is high up in the water column and therefore more likely to be dispersed. There is a potential for the project to interact with mackerel spawning, but the associated potential for impact is not significant given the section of the well to be drilled will not take place until near the end of the peak spawning period for the fish species.

The discharge of treated drill cuttings from the project and associated treated water has the potential to impact the environment, by way of effects to benthic fauna and benthic communities. The likely effects are not considered significant, given the temporary nature of the impact, the ability for the affected area to regenerate, the resilience of the fauna, and the further reduction in potential impact by ensuring only water with a synthetic oil content of less than 30ppm will be discharged. The



achievable concentration is likely to be 20ppm, thus further reducing the potential for impact. Seabirds, cetaceans, and commercial fisheries are not expected to be significantly impacted by the drilling of the 8.5 inch side-track section.

There are no expected transboundary impacts as a result of the project, and no cumulative impacts have been identified given the other known existing and approved projects in the wider area.

Decision

Taking the above considerations into account, the Secretary of State has concluded that the project is not likely to have a significant impact on the environment and that an environmental impact assessment is not required.

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:

Not applicable.