

Our Ref: 01.01.01.01-5149U
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Offshore Petroleum Regulator
for Environment & Decommissioning

SHELL U.K. LIMITED
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Registered No.: 00140141

Date: 8th November 2022

Department for Business, Energy
& Industrial Strategy

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Fax

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
ORLOV
22/08a-E PLANNED WELL**

I refer to your amended application dated 3rd November 2022, reference DR/2255/3 (Version 1).

It has been determined that the proposed changes to the project is not likely to result in a significant effect on the environment, and therefore an environmental impact assessment is not required.

A screening direction is therefore issued for the changes to the project. An amended schedule of conditions, comments, and main reasons for the decision on the amended application, 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**

**ORLOV
22/08a-E PLANNED WELL**

DR/2255/3 (Version 1)

Whereas SHELL U.K. LIMITED has made an application dated 3rd November 2022, 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 applications, WONS/13779/0/IDA/1, WONS/14974/0/EWT/1 Version 1 and WONS/14974/0/EWT/1 Version 2.

Effective Date: 8th November 2022



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 15 July 2022 until 31 March 2023.

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 Extended well tests

- a) 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 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:

N/A

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

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]



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 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

DR/2255/3 - This post direction amendment relates to the increase in hydrocarbons to be flared during the extended well test which have been assessed. All other aspects of the project remain the same and the decision reasons below remain valid.

DR/2255/2 - This post direction amendment relates to the undertaking of extended well testing. The duration of flaring has reduced slightly and quantity of hydrocarbons to be flared have increased over the original DR/2255/0 and have been assessed. All other aspects of the project remain the same and the decision reasons below remain valid.

- Drilling of the Orlov exploration well (consisting of 36-inch, 26-inch, 17.5-inch, 12.25-inch and 8.5-inch sections);
- Completion of well;



- Well test including flaring (95 hr flow);
- Contingent re-spud in the event of issues with the 36-inch and 26-inch sections;
- Contingent side-track of the 17.5-inch, 12.25-inch and 8.5-inch sections;
- Contingent drilling of 6-inch section in the event of issues at shallower well depths.

Description of the Project

The drilling of the exploration well will be facilitated by the jack up drill rig, Valaris 122 and may take up to 146 days to complete. The project will be supported by three tugs, a supply vessel, an emergency response and rescue vessel and helicopter trips.

The well will be drilled in five sections, using water-based mud (WBM) for the two upper sections and low toxicity oil-based mud (LTOBM) for the lower sections. The WBM will be discharged at the seabed and the LTOBM will be recovered to the drill rig and returned to shore for disposal. There will be no discharge of LTOBM. The well will be cleaned-up prior to well testing being conducted. Non-routine flaring of hydrocarbons is proposed during well testing as no pipeline infrastructure exists to produce the fluids back to a processing facility. Flaring will take place for a maximum of 95 hours with a maximum of 3,805 tonnes of liquid hydrocarbon equivalent being flared. Drilling is planned to begin in July 2022, and the screening direction covers the period 15 July 2022 to 31 December 2022. No cumulative impacts are expected to occur with any other existing or approved projects. The risk of a major accidents and environmental effects from major accidents, 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 nuisances are foreseen from the project. There is one synthetic oil in water waste stream resulting from the project which will be analysed before discharge. Where specification for discharge cannot be met, the waste will be returned to shore for treatment and disposal.

Location of the Project

Having regard 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 Orlov well location lies within a seaward licenced area, which has been licenced for the exploration and extraction of hydrocarbons. The project is located approximately 190 km east from the northeast coastline in Scotland and



approximately 38 km the UK/Norwegian median line, in an area where water depth is approximately 85 m. The predominant current in the location is dominated by the Norwegian Atlantic flow. The project location is not within any protected areas, with the closest being approximately 16 km distant.

The site-specific survey identified the seabed as comprising predominantly of circalittoral sand. The benthic fauna is dominated by annelids with lesser proportions of arthropods, echinoderms and molluscs,

The project works and timing will take place at a time when a number of fish species may be found to using the area as spawning, juvenile or nursery locations. Sightings of cetaceans are most common between the months of July and October. Seals are not expected to be seen at the remote location. Seabirds are common in the area during the whole year with an upper expected density of 5 to 10 individuals per square km. The project area is primarily used for demersal fishing, but with a low historical effort. Shipping intensity at the project location is also low. The surrounding area comprises other oil and gas infrastructure within 20 km and is an aggregate extraction area and subsea communication cable located in the same block but there are no military exercise areas or renewable energy locations in proximity.

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 focus on the predominant impacts resulting from physical presence from the rig / vessels, atmospheric emissions from vessel use, and flare activities, planned discharges to sea from chemical use, seabed disturbance from siting the rig and drilling discharges, and accidental events such as an oil spill.

The drill rig and support vessels have the potential to cause interference to other users of the sea, namely fishermen and vessel traffic, however the rig and support vessels will be located in a safety zone for the well. The rig presence within the safety zone means only authorised vessels would be allowed within the 500 m radius of the well, therefore excluding other users of the sea. Given the low importance of the fishing area and the low vessel traffic, and that the drilling project is a temporary activity - the impact is deemed insignificant. An emergency response and rescue vessel will be on site continually to monitor for vessel traffic and provide alerts to other users of the sea.

The main receptor impacted by seabed disturbance will be the benthic communities. Physical disturbance can cause mortality or displacement of benthic species in the impacted zone. The area of temporary seabed disturbance resulting from rig positioning is 0.0008 km². The temporary positioning of the rig is not expected to result in significant changes to sediment properties. Based on proxy cuttings



discharge modelling, deposition of cuttings with a thickness > 6.5 mm is not expected beyond 215 m from the drilling location with a maximum area of permanent seabed disturbance of 0.0331km². Rapid recovery of faunal communities within the disturbed area may be expected through a combination of larval settlement and immigration of animals from the adjacent seabed once the rig legs are removed and cuttings deposition ceases. Therefore, based on the above, impacts on benthic communities from the rig location and cuttings deposition will be localised and not significant.

Offshore registered chemicals will be used and discharged during the drilling of the well. The use and discharge of the chemicals have been risk assessed and modelled in accordance with other regulatory requirements. The use and discharge modelling shows a low risk to the environment from the chemicals. Use and discharge of chemicals is not expected to have a significant impact on the environment. The impacts of drilling discharges on water quality and benthic fauna are predicted to be minimal as affects will be localised and short-lived. Moreover, given that recovery of the seabed and the associated benthic communities is likely to begin once drilling has been completed, the environmental impact of the discharged chemicals within the impacted area is considered insignificant.

Emissions to air will occur from two main sources, (1) combustion plant used on the MODU, support vessels and helicopters and (2) the proposed flaring activity. The quantity of carbon dioxide equivalent from the MODU, support vessels and helicopter use amounts to 0.1% of the 2018 total emissions from offshore oil and gas activity. Flaring from the project for a worst-case 95 hr flow period, results in a carbon dioxide equivalent of 0.44% of UK offshore oil and gas flaring emissions based on 2018 data. The MODU, support vessel, helicopter and flaring emissions will not have a detrimental effect to local air quality over the long-term, nor will it inhibit the ability to reach wider climate change goals. The environmental effects from emissions to air are not expected to have a significant impact on the environment. The impact of the vessel emissions will be mitigated by optimising vessel efficiency (i.e. minimising the number of vessels used and vessel trips required to achieve the construction deliverables) and hence minimising fuel use and avoiding the unnecessary operation of power generation / combustion equipment.

There are no planned expected transboundary impacts because of the project.

In the event that an unlikely and unplanned accidental spill scenario from a well blow-out was realised, the total volume of oil that would be released from the well has been estimated at 1,919,046 m³. The modelling suggests that beaching of oil would occur and that a major environmental incident would be likely. All drilling activities will be carried out in accordance with the Offshore Safety Directive as per Shell's Well Examination Scheme and Guidance Document. An approved Oil Spill Emergency Plan to manage hydrocarbon releases will be in place prior to activities being undertaken.

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.