

Our Ref: 01.01.01.01-3562U
UKOP Doc Ref:1175657



Offshore Petroleum Regulator
for Environment & Decommissioning

SHELL U.K. LIMITED
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Registered No.: 00140141

Date: 30th November 2021

Department for Business, Energy
& Industrial Strategy

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]

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
PENGUIN EAST, Ocean Endeavor DRILLING PRODUCER WELL 211/08- 6
(TYBALT)**

I refer to your amended application dated 29th November 2021, reference DR/2142/3 (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**

**PENGUIN EAST, Ocean Endeavor DRILLING PRODUCER WELL 211/08- 6
(TYBALT)**

DR/2142/3 (Version 1)

Whereas SHELL U.K. LIMITED has made an application dated 29th November 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: 30th November 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 3 September 2021 until 31 March 2022.

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.

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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:

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]



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 of Tybalt side-track production well (consisting of 12.25-, and 8.5-inch sections);
- Completion of well;
- Well clean-up (96 hr flow);
- Contingent side-track option (mechanical or geological on any of the 12.25, and 8.5 inch sections but not more than two of the sections in total);
- Contingent re-drill option (12.25 and 8.5-inch sections only); and
- Suspension of the well.

Variation 2 amendments

This variation amends the duration of well test from 72 hours to 96 hours with no increase in quantity of hydrocarbons flared. The assessment of impact as described below therefore remains valid.

Variation 3 amendments



This variation amends the direction expiry date to 31 March 2022 further to adverse weather which has delayed the project. The quantity of carbon dioxide equivalent from the vessel use amounts to 0.082% of the 2018 total emissions from offshore oil and gas activity, an increase from the original project which was 0.062%. The previous impact assessment remains valid.

The project works and timing will take place at a time when a number of fish species may be found to using the area for spawning as well as juvenile or nursery locations. The previous impact assessment remains valid.

Description of the Project

The drilling of the production well will be facilitated by the anchored semi-submersible drill rig Ocean Endeavour and may take up to 79 days to complete. The rig will be held on location by 18 anchors (inclusive of six contingent anchors) which will be pre-laid prior to rig arrival. The project will be supported by four anchor handling vessels, a supply vessel, an emergency support vessel and helicopter trips. The well will be suspended on completion of the drilling. The well will be drilled in two sections, using low toxicity oil-based mud (LTOBM). The oil-based mud will be thermally treated and cuttings discharged if within oil on cuttings specification. The well will be cleaned-up prior to production phase. Non-routine flaring of hydrocarbons is proposed during clean-up of the well as no pipeline infrastructure exists to produce the fluids back to a processing facility. Drilling is planned to begin in September 2021, and the screening direction covers the period September to 31 December 2021.

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 pollution or nuisances are foreseen from the project. There are five synthetic oil in water waste streams resulting from the project which will be treated and analysed before discharge. Where specification for discharge can't be met, the waste will be returned to shore for treatment and disposal.

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 Penguins field redevelopment location lies within a seaward licenced area, which has been licenced for the exploration and extraction of hydrocarbons. The project is located 160 km east from the Shetland coastline in Scotland and adjacent to the



UK/Norwegian median line, in an area where water depth is approximately 152 m at its shallowest location to 301 m at its deepest. The predominant current in the location is dominated by two Atlantic flows, with circulation variable in the centre. The project location is not within any protected areas, with the closest being 110 km away.

Site-specific surveys identified the seabed as comprising of gravelly sand with varying proportions of shell accumulations, pebbles, cobbles, and boulders. The sediment type is described as circalittoral coarse sediment. The project location has been identified (from generic baseline information) as an area containing potential protected stony reef habitats, however such areas were not identified during site surveys. The benthic species identified, correlated with expected assumptions and were more prevalent near or on cobbled and stony areas. The most commonly observed benthic fauna included sea urchins, starfish, anemones, hermit crabs, squat lobsters, shrimps, sponges, and sea cucumbers.

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 juvenile or nursery locations. Sightings of cetaceans are most common during the months of July and August. Seals are not expected to be seen at the remote location. Seabirds are most common in the area during the late summer months of August and September when expected density is 10-20 individuals per square km. The project area is primarily used for demersal fishing, but with a very low historical effort. Shipping intensity at the project location is also very low. The surrounding area comprises other oil and gas infrastructure within 10 km, but is not within a military activity zone, with no telecommunications cables, marine aggregate sites or renewable energy locations in proximity. An unknown wreck was identified approximately 2km northwest of the 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 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 discharges, and accidental events such as an oil spill.

The drill rig has 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. Its presence within the safety zone means only authorised vessels would be allowed within the 500 m radius of the well, therefore excluding 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. A support vessel will be on site continually to monitor for vessel traffic and provide alerts.

The area of temporary seabed disturbance resulting from rig positioning and discharge of drill cuttings is 0.08 km². 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. Based on cuttings discharge modelling, deposition of cuttings with a thickness > 6.5 mm is not expected beyond 215 m from the drilling location. The temporary installation of the drill rig anchors is not expected to result in significant changes to sediment properties and 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 spud-cans are removed. Therefore, based on the above, impacts on benthic communities from the spud-cans will be temporary and 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. To conclude, the discharge of treated LTOBM cuttings will result in some impacts to marine organisms resulting primarily from smothering and grain size change. The impacts of drilling discharges on water quality and benthic fauna is 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 cuttings, within the impacted area, can be considered insignificant.

Emissions to air are possible from three main sources, (1) combustion plant used temporarily on the rig and vessels and (2) any flaring activity. The quantity of carbon dioxide equivalent from the vessel use amounts to 0.062% of the 2018 total emissions from offshore oil and gas activity. Flaring from the project for a worst-case 96 hr flow period, results in a carbon dioxide equivalent of 0.213% of UK offshore oil and gas flaring emissions based on 2018 data.

The non-routine flaring 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. The estimated emissions for flaring are those for the maximum volume of hydrocarbons anticipated to be flared. Flaring duration will be determined by the well clean up objectives. Solids will be monitored continuously and should an opportunity to shut-in the well early arise, flaring will cease to help reduce emissions.



If an unlikely and unplanned accidental spill scenario from a well blow-out was realised, the expectation is that it could take 17 days before it is brought under control via self-kill (i.e. unable to sustain flow). The total volume of oil that would be released from the Tybalt well has been estimated at 81,017 m³ (66,839 tonnes) - significantly less than the worst-case modelling of the Rockhopper well (a different well in the Penguins drilling campaign). The proxy modelling of the Rockhopper well suggests substantial differences in expected results from a spill with that of Tybalt, given that the Tybalt well will cease flow after 17 days. The proxy modelling suggests that beaching of oil would occur and that a major environmental incident would be likely, the effects of a Tybalt spill would be markedly less, but a major environmental incident couldn't be ruled out. All activities will be carried out by trained and competent offshore crews and supervisory teams. An approved spill management plan to manage potential hydrocarbon releases will be in place (prior to activities being undertaken) and all vessel activities will be planned, managed and implemented in such a way that vessel durations in the field are minimised.

There are no planned expected transboundary impacts as a result of the project.

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.