

Our Ref: 01.01.01.01-5545U
UKOP Doc Ref:1296484



Offshore Petroleum Regulator
for Environment & Decommissioning

EQUINOR UK LIMITED
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Registered No.: 01285743

Date: 18th September 2023

Department for Energy Security &
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Dear Sir / Madam

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020
MARINER - WELL 9/11a-AIPE**

I refer to your amended application dated 3rd July 2023, reference DR/2357/1 (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 OPRED@energysecurity.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**

MARINER - WELL 9/11a-AIPE

DR/2357/1 (Version 1)

Whereas EQUINOR UK LIMITED has made an application dated 3rd July 2023, 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/15145/0/IDA/1 , WONS/15145/1/C/1 and WONS/15562/0/GS/1.

Effective Date: 18th September 2023



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 16 June 2023 until 31 December 2024.

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 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:

The Department has no comments.

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

This post screening direction amendment (PDA) DR/2357/1 relates to a change to a project (add in remaining well sections and extend end date) for which a screening direction was previously issued (DR/2357/0).

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

Under DR/2357/0

Drilling of a 34" top-hole section (riserless) with seawater and water-based mud (WBM)

28" conductor will be cemented to the seabed

Well will be temporarily suspended



Debris cap will be installed on top of the conductor (under NSTA consent Reference WONS/15145/0/IDA/1 Version 1)

Under DR/2357/1

Drilling of 24" section with seawater and Water Based Mud (WBM).

Drilling of 17 1/2" section with Low Toxicity Oil-Based Mud (LTOBM) with cuttings to be treated using Thermo-Mechanical Cuttings Cleaner (TCC).

Drilling of the 8 1/2" section using WBM.

Drilling a contingency sidetrack of 8 1/2" section (change under

WONS/15562/0/GS/1)

Run completions (change under WONS/15145/1/C/1)

Description of the project

The drilling of the wells at the Mariner project area was assessed in Environmental Statement D/4145/2012 and approved on 31st January 2013. The initial screening direction (DR/2357/0) related to the drilling of the top-hole section of the 9/11a-AIPE Mariner production well and the cementing of a 28" conductor located at the Mariner A Production Drilling Quarters (PDQ) platform

The top-hole, riserless section (34" diameter) of the well will be drilled with seawater sweeps; a Water Based Mud (WBM). The 34" section length is 104 m and a 28"conductor was run and cemented in place to provide structural integrity. As this section was drilled riserless and using seawater sweeps, the mud and cuttings discharges will be directly on to the seabed and there will be no re-use of mud between wells on these sections. The well has been suspended and for later completion.

This post screening direction amendment included drilling of a 24" section with seawater and WBM with cuttings discharged directly to the seabed. The following 17 " section will be drilled using LTOBM, with cuttings returned for treatment using Thermo-Mechanical Cuttings Cleaner (TCC) prior to discharge overboard. The well will be circulated from LTOBM to WBM prior to drilling the 8 " section which will be discharged to sea along with the drill cuttings. There is a contingency to drill a sidetrack to the 8 1/2"section if the original wellbore does not meet specified sand criteria. Drilling of the lower well sections is anticipated to take 50 days to complete.

It has been concluded that there will be no additional cumulative impacts expected to occur from the change proposed to this project. It is not considered to be likely that the change to project will be affected by natural disasters. 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. Other than the matters considered further below, there is not likely to be any significant impact of the project on population and human health.

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 project is located in block 9/11a. It is located 134 km to the southwest of UK shorelines and 45 km from the UK/Norway median line. The depth at the proposed project location is approximately 94 m. The seabed at the proposed project location comprises mainly sandy sediment (92.5-95.0%) with fines (4.88-7.48%) and limited gravel (0.01-0.16%). The EUNIS classification of the benthos is deep circalittoral sand. There are no Annex I habitats identified in the proposed project area. Seapen (*Funiculina quadrangularis*) were identified in a survey, however, the species was not spotted at an abundance sufficient to constitute the OSPAR habitat 'Sea pens and burrowing megafauna communities'. No OSPAR habitats have been identified in the proposed project area. Ocean quahog (*Arctica islandica*), a Priority Marine Features (PMF), has been identified in the proposed project area.

Benthic survey samples were dominated by newly settled juveniles of sea urchins (Echionidea/Spatangoida). Other benthic species identified in surveys of the area include polychaete *Spiophanes bombyx* , brittle star *Ophioctenaffinis*, horseshoe worm *Phoronis spp* and tube dwelling anemone *Cerianthuslloydii*. Fish species identified in surveys of the area include cod *Gadus morhua* , pollock *Pollachius pollachius* , turbot *Scophthalmus maximus* and hagfish *Myxine glutinosa* . The following PMF fish species have been identified in the proposed project area: angler fish, blue whiting, cod, herring, ling, mackerel, Norway pout, saith, sandeel and whiting. The following cetacean species have been identified in the proposed project area: Atlantic white-sided dolphin, Harbour porpoise, Killer whale, Minke whale, White-beaked dolphin. Seal species have been identified in the proposed project area. Harbour seal and Grey seal have been found to be present in the proposed project area at low densities.

Seabird oil sensitivity in block 9/11 is low throughout the year, except in May when it is medium. There is no data on seabird oil sensitivity for April, October, November or December.

There are no protected sites within 40km of the Mariner field. The proposed project is within the Scottish National Marine Plan area. The proposed project area is located in International Council for the Exploration of the Sea (ICES) rectangle 48F1. The fishing effort in the rectangle is considered to be low. The target species in the area were demersal and the most utilised gear type in the area was trawls, accounting for 92% of effort in 2021. Shipping density in the proposed project area is considered to be low.



The following oil and gas installations are within 40 km of the proposed project area: Mariner B, Beryl B, Beryl A, Beryl SPM2/3, Gryphon Alpha, Bruce and Kraken. The proposed project is not located within military training areas. The closest cable to the proposed project area is the TAMPNET 4 Bu4 and is 1.5 km away. The proposed project is within the Innovation and Targeted Oil and Gas (INTOG) NE-c area. There are no wrecks in the vicinity of the proposed project. There are no aquaculture sites within 40 km of the proposed project area.

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 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. During the drilling of the top-hole sections, WBM cuttings will be discharged to the water column. The bottom-hole sections will be drilled using a combination of LTOBM and WBM. The cuttings from LTOBM will be treated using Thermo-Mechanical Cuttings Cleaner (TCC) prior to discharge. TCC uses the thermal phase separation principle to remove oil and water from LTOBM contaminated cuttings prior to discharge of the treated powder mixed with water. However, the impacts of this are not considered to be significant given the low toxicity and high water-solubility of WBM. WBM will dissolve and disperse in the water column. Smothering by drill cuttings will, locally, change median grain size, and affect local benthic communities. Given the limited findings of protected species and features in the vicinity of the well it is not expected this will cause a significant impact.

The conductor will be cemented in place downhole up to the seabed. When the conductor is cemented to the seabed some cement may consolidate at the seabed. The formation of a significant cement patio is not expected these operations.

However, sufficient cement at this stage is required to provide structural support to the well. Most of the cement will remain downhole with discharge to the environment only occurring when the conductor is cemented back to the seabed and when the cement unit is cleaned at the end of the cementing operation. Any increased sediment-loading and increased turbidity of the water column would therefore be localised, short-lived and of minor consequence. Impacts on protected species and fish species are not expected given the localised nature of the operation and the low sensitivity of the area. The impacts of the chemicals that will be used have been considered to not pose a risk to the marine environment as detailed in the chemical risk assessment submitted for this operation.



Drilling operations will be undertaken from the Mariner A PDQ and no additional equipment will be required for the drilling activities. Atmospheric emissions associated with the project will result from power demand for the proposed operations. Therefore, significantly increased emissions resulting from drilling operations are not expected. Consequently, the impacts arising from these emissions on climate change and local air quality are not expected to be significant.

No impulsive noise sources are being used and the proposed project is not located in an area where marine mammals have been identified as designated features. Therefore, no significant impacts on marine mammals as a result of noise from the proposed operations are expected.

Past discharge of WBM and drill cuttings were considered and given the benthic features of the area and the size of discharges. The impacts resulting from these were not considered to be significant.

The main risk associated with the drilling of the proposed Mariner well are from diesel during bunkering operations or as a worst-case scenario a large spill of Mariner crude oil could occur to loss of well control. The well blow out was modelled at 1,600 m³ per day of crude declining to 919 m³ per day (892 tonnes per day) over 76 days, followed by a further 20 days surface oil tracking. The modelling showed that Mariner had the potential to result in a major environmental incident (MEI) on protected sites, water column and sediments. In order to mitigate two well barriers are maintained at all times during the drilling operations. There is an approved Oil Pollution Emergency Plan (OPEP) in place for the Mariner Field to cover drilling operations. In the case of an accidental diesel release from the Mariner A PDQ, it is expected to evaporate quickly due to its very high level of light ends. The low asphaltene content prevents emulsification, therefore reducing its persistence in the marine environment.

The closest international boundary is 45 km away and therefore the risk of transboundary impacts as a result of the proposed operations is low. Drilling operations will be conducted from the existing Mariner A PDQ Installation such that there is no increase in the infrastructure footprint. The drilling operations are in accordance with the National Marine Plan for Scotland's objectives and policies. It is considered that the drilling of the 9/11a-AIPE Mariner well is not likely to have a significant impact on other offshore activities or other users of the sea and limited cumulative impacts are expected to occur.

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

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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.