

Our Ref: 01.01.01.01-5218U
UKOP Doc Ref:1234416



Offshore Petroleum Regulator
for Environment & Decommissioning

EQUINOR UK LIMITED
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Registered No.: 01285743

Date: 1st November 2022

Department for Business, Energy
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Dear Sir / Madam

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

MARINER FIELD, WATER INJECTION WELL: 9/11a-A30 AMID

I refer to your amended application dated 20th September 2022, reference DR/2271/1 (Version 2).

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**

MARINER FIELD, WATER INJECTION WELL: 9/11a-A30 AMID

DR/2271/1 (Version 2)

Whereas EQUINOR UK LIMITED has made an application dated 20th September 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 application, WONS/14485/1 and WONS/14884.

Effective Date: 1st 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 9 August 2022 until 31 December 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:

The Department has no comments.

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 following provides a summary of the assessments undertaken by OPRED to determine whether an Environmental Impact Assessment is required for this project. This document 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 the 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

The drilling of the 9/11a-A30 (AMID) water injection well from the Mariner A Production Drilling Quarters Platform (PDQ). In addition to the previously agreed drilling of the top-hole 34" section with seawater and Water Based Mud (WBM) (BEIS Ref: DR/2271/0) this screening direction now also includes: -

- Drilling of 24" section with Water Based Mud (WBM).
- Drilling of 17.5" and 12.25" sections using Low Toxicity Oil Based Mud (LTOBM).
- Drilling of 8.5" section using WBM
- Well Clean up and Completion

as detailed in WONS/14485, WONS/14884 and associated applications.

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.

A screening direction (DR/2271) was issued on 18th August 2022 to drill the 34" conductor section of the well, setting the conductor. This project is to drill the remaining sections, 24" using water-based mud (WBM), 17.5" and 12.25" using Low Toxicity Oil Based Mud (LTOBM), and 8.5" section using WBM from the Mariner PDQ platform. Cuttings from the WBM sections will be treated by shale shakers before being discharged overboard, including minimal (0.5%) reservoir hydrocarbon from the lowest section. Cuttings from the LTOBM sections will be thermally treated and discharged. Should thermal treatment facilities become unavailable cuttings will be skipped and shipped to shore for disposal. Casings and liner will be cemented in place, the wellbore cleaned, lower completion and packer run, cleaned to brine and upper completion run.

No cumulative impacts are expected to occur with any other existing or approved Projects. It is not considered to be likely that the 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 drilling project is located in the Mariner field in the Northern North Sea, in UKCS Block 9/11, approximately 134 km southeast of the Shetland Isles coastline, and 45 km west of the UK/Norway Median Line, in a depth of 94 metres (m).

The seabed in the area of the Mariner A (PDQ) is described as flat with a gentle downward slope to the west with a seabed gradient of < 13.3 degrees across the survey area. Sediments in the area are predominantly sand and muddy sand, although the deeper areas within the Fladen Ground consist of mud or sandy mud. Site specific surveys identified the seabed sediments to comprise a veneer, <0.2 m in thickness of 'clayey sand' with occasional shell fragments, but overall dominated by sand sediments. The annual mean significant wave height ranges from 2.41 to 2.7 m.

Benthic surveys observed dense populations of sea urchin Echinoidea. The dominant fauna also included sea urchins *Gracilechinus acutus*, star fish *Asterias rubens*, *Hippasteria phrygiana* and *Astropecten irregularis* and hermit crabs Paguridae. Faunal burrows, tubes and tracks were visible on the sediment surface; however, these were small, and no burrowing megafauna were observed. Sessile fauna was also observed such as anemones *Actiniaria*, common whelk *Buccinum undatum*



and turf forming genera such as Hydrozoans and Bryozoans.

There was evidence of ocean quahog (OSPAR threatened and/or declining habitats and species and Scottish Priority Marine Feature (PMF)) in the vicinity of the Mariner field and additionally, one sea pen, *Virgularia mirabilis* was observed. No other Annex I habitats have been recorded within the area. There are no protected sites within 40km of the Mariner field. The project is in the Scottish Marine plan area.

The well is located in ICES rectangle 48F1. Norway lobster and sandeel use the seabed directly to spawn during the drilling period. Norway lobster is unlikely due to the sandy substrate, sandeel spawning is likely but none were observed during previous survey and occasional cod spawning is noted in the area. There are several nursery species likely to be present including blue whiting in high intensity. PMF species present include anglerfish, blue whiting, cod, herring, ling, mackerel, Norway pout, saith, sandeel and whiting.

Seabird vulnerability in the vicinity of the Mariner field is medium in May and low throughout the year, with no data being available for April and October - December.

Five species of cetaceans have been spotted in the waters around the Mariner field: Atlantic white-sided dolphin, harbour porpoise (moderate density in December), killer whale, minke whale, and white-beaked dolphin, all species of national importance. Grey and harbour seals may be encountered in the area; however, are not expected to be found in significant densities, and both they and harbour porpoise are Annex II listed species

The project area is primarily used for demersal fishing and the fishing effort in the area is rated low. There are several oil and gas fields nearby. The nearest marine cable is connected to the Mariner PDQ with another located approximately 1.5 km away. There are no nearby Military or Defence practice areas. There are no operational renewable energy sites, nor any under construction in the vicinity. Shipping density in the area is low. There are no protected wrecks or sites, or objects of archaeological importance identified in the area.

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.



There is a 500 m radius safety zone around the Mariner A PDQ excluding unauthorised access of vessels and prohibiting access to fishing vessels. During the drilling of the 24" and 8.5" sections (and previously top-hole section) WBM cuttings will be discharged to the water column with minimal reservoir hydrocarbon from the lower section. WBM is mostly composed of natural constituents, water soluble and will dissolve, dissociate and disperse during settlement, the residual current in the area is approximately 0.25 m/s therefore recovery is expected. Cuttings may smother benthic and spawning species, but this will be highly localised within 100m of the well with potential recovery. It is therefore not anticipated that there will be a likely significant impact on the environment.

The LTOBM cuttings generated will be thermally treated and the resultant fine powder mixed with water and discharged to sea with <1% oil on cuttings. These are likely to remain in suspension in the water column and be widely dispersed and readily assimilated into the natural sediments and therefore not likely to cause any significant impacts.

The wellbore clean-up operations may result in the discharge of wastewater containing residual base oil from the LTOBM. While discharge following mechanical treatment has been assessed, the developer plans to trial a mechanical and chemical treatment technology. Wastewater discharge has been assessed and is not considered to have a likely significant effect on the environment. Discharge of offshore chemicals associated with the drilling of the well, cementing and completion operations have been assessed as not likely to have a significant effect on the environment.

There is evidence of ocean quahog in the vicinity of the Mariner field, however, this species is not expected to be significantly impacted at a population level by the proposed operations. Additionally, one sea pen was observed, however at an insufficient abundance to constitute the OSPAR habitat 'Sea pens and burrowing megafauna communities.' No other Annex I habitats have been recorded within the area. Therefore, there are not likely to be any significant effects.

Although Norway lobster and sandeels are benthic spawners, they are unlikely to be present within the vicinity of the operations but where sandeel are present they are unlikely to be impacted at a significant population level due to the nature of the operations.

There are no expected transboundary effects from the drilling operations at the Mariner A PDQ. The nearest boundary (UK/Norway Median Line) is located approximately 18 km northwest of the operations. It is not considered likely that any planned operational discharge (chemicals) will be detectable at this distance from the well location.

Although not a planned activity, a worst-case major accident scenario resulting from a potential well blow-out was modelled and assessed. The probability of a large oil spill from the proposed operations is low. Therefore, it is considered that the control



measures in place to prevent loss of well control minimise the risk of an oil spill which could have a significant impact and the proposed operations carried out as planned are not likely to have a significant effect on the environment. The risk of a diesel release from Mariner A PDQ was assessed and is expected to evaporate quickly due to a high level of light ends, low asphaltene content prevents emulsification, therefore reducing its persistence in the environment. A diesel spill is not expected to present a significant risk.

The emissions associated with the project result from power demand for the proposed operations. It is expected the emissions will be rapidly dispersed and are not likely to have a significant impact.

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 Mariner well is not likely to have a significant impact on other offshore activities or other users of the sea and no 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

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