Our Ref: 01.01.01.01-6385U
UKOP Doc Ref:1390910

Offshore Petroleum Regulator for Environment & Decommissioning

EQUINOR UK LIMITED
1 KINGDOM STREET
LONDON
W2 6BD

Registered No.: 01285743

Date: 7th April 2025

Department for Energy Security & Net Zero

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

**Tel** [redacted]
**Fax**

www.gov.uk/desnz
opred@energysecurity.gov.uk

Dear Sir / Madam

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2020**
**MARINER, Mariner PDQ Platform, DRILLING PRODUCER WELL 9/11a-A42 (AAEPM).**

I refer to your amended application dated 3rd April 2025, reference DR/2509/1 (Version 3).

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

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**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, Mariner PDQ Platform, DRILLING PRODUCER WELL 9/11a-A42 (AAEPM).**

**DR/2509/1 (Version 3)**

Whereas EQUINOR UK LIMITED has made an application dated 3rd April 2025, 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/16811/0/IDA/1.

Effective Date: 7th April 2025

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# 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 31 October 2024 until 28 February 2026.

### 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 at this time.

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
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AB10 1BJ

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## 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

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

DR/2509/0

The initial project screening direction application covered the drilling of 9/11a-A36 (AAEPM) Development production well conductor section that is located on the Mariner A PDQ platform. This operation involved the following steps;

Drilling of the top-hole riserless 34" section with WBM and inhibited seawater
A 28" conductor casing set in the formation.

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The post screening direction addendum application covers the drilling to target depth of the 9/11a- AAEPM development well. This operation covers the following steps:

Drilling of a 24" section with WBM, with a 20" casing set in the formation
The upper completion will locate and seal into the lower completion. The upper completion contains a section of larger diameter tubing into which the electric submersible pump (ESP) has been installed. There is no well test planned during these operations.
Drilling of 17 1/2 " section using Low Toxicity Oil Based Mud (LTOBM) with a 13 3/8" casing cemented in place
Drilling of 12 1/4 " section using Low Toxicity Oil Based Mud (LTOBM) with a 9 5/8" casing cemented in place
Drilling of a final 8 1/2 " section will be drilled to target depth with WBM of 3,690m Measured Depth (MD) into the Heimdal Reservoir
The AAEPM well completion consists of a mix of 5 " AICD and SAS screens which will be run in the reservoir section. The lower completion will include open hole packers for zonal isolation. After the screens have been run, the reservoir will be isolated by closing the isolation valve prior to carrying out a casing clean-up run.

**Description of the project**

DR/2509/0

The project involved the drilling of the top hole conductor section of the production development well 9/11a-AAEPM. The project falls under the Environmental Statement for the Mariner project (D/4145/2012).

The 34" conductor section was drilled from the Drilling Equipment Set (DES) that is located on the Mariner A PDQ. Drilling of the conductor section was expected to take 1 day with the well being suspended upon successful drilling. The well is expected to be fully completed to target depth with completions installed at a later date with a subsequent application made to the Department to add the remaining sections of the well along with the completion activities.

The top-hole, riserless section (34" diameter) of the well was drilled with inhibited seawater / spud mud; a Water Based Mud (WBM). A 28" conductor was cemented in place to provide structural integrity. As this section is riserless and using seawater sweeps, the mud and cuttings were discharged directly on to the seabed, so there was no re-use of mud between wells on these sections.

The 34" conductor section was drilled to allow the conductor to be set within a competent formation. Once the section was drilled to target Depth (TD), the wellbore was displaced to a high viscosity mud system prior to run the conductor. The conductor string was cemented to the seabed. The start head will then be installed on the top of the conductor.

The well was then suspended after the conductor was run and cemented to allow

further time for the cement to cure prior to drilling ahead.

The potential for cumulative impacts to occur from any other existing or approved projects is considered to be low.

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.

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Upon completion of the project described previously, the operations will continue with the drilling of the 24" section which will have a length of 407m. This section will be drilled using Water based mud (WBM) which will be processed topsides with the returns being discharged overboard. The following 17 " section will be drilled using Low Toxicity Oil-Based Mud (LTOBM) for a section length of 1497m. The LTOBM and cuttings returns will be processed topsides via a Thermo-Mechanical Cuttings cleaner (TCC) prior to discharged. The 12 " section will have a length of 860m and will also be drilled with LTOBM. The associated mud and cuttings will also be processed via TCC prior to discharge.

Prior to drilling the final 8 " section, the well will be circulated from LTOBM to WBM before continuing with drilling operations. The circulated fluid will be treated prior to discharge. The final 8 " section which has a length of 1791m will be drilled using WBM to reach the target Measured Depth (MD) of ~4855m into the Heimdal reservoir.

The operation includes a contingency sidetrack of the final 8 " section. This will be managed to the same standards as stated above.

The conductor will be cemented into place with cement returns occurring at the seabed.

Once Mariner AAEPM is drilled to TD, A mix of 5 " AICD and SAS screens will be run in the reservoir section. The lower completion will include open hole packers for zonal isolation. After the screens have been run, the reservoir will be isolated by closing the isolation valve prior to carrying out a casing clean-up run.

The upper completion will locate and seal into the lower completion. The upper completion contains a section of larger diameter tubing into which the electric submersible pump (ESP) has been installed. There is no well test planned during these operations.

The potential for cumulative impacts to occur from any other existing or approved

projects is considered to be low.

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 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 110 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. Sea pen ( *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 *Ophiocten affinis* , horseshoe worm *Phoronis spp* and tube dwelling anemone *Cerianthus lloydii* . 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, European Hake, Haddock, herring, ling, mackerel, Norway Lobster, 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.

The proposed project is not located within a designated site. The Braemar pockmarks SAC is closest located approximately 69km southeast of Mariner A PDQ. Its designated features are Annex I habitat of 'Submarine structures made by leaking gases' as designated under the EC Habitats Directive. The next closest protected area to the proposed project is the Central Fladen NCMPA, 79 km away. It is designated features are burrowed mud (characterised by sea pens and burrowing megafauna), as well as the presence of sub-glacial tunnel valley representative of the Fladen Deeps Key Geodiversity area.

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.

The proposed project is located in Scottish waters and therefore the Scotland's National Marine Plan applies.

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 primarily demersal and pelagic species which accounted for almost 67% and 32% of the liveweight in 2023.

Shipping density in the proposed project area is considered to be very 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 which is connected to the Mariner A PDQ. The other closest cable is the TAMPNET 4 trunk which is located 1.5 km southwest.

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.

WBM cuttings with a weight of 509,800kg from the 24" section will be discharged overboard. The impacts of this are not considered to be significant given the low toxicity of the product. The chemical additives in the WBM are generally water-soluble and are expected to dissolve, dissociate and disperse during settlement through the water column. The discharge of drill cuttings and spent WBM will cause a temporary increase in suspended sediment levels and turbidity within the water column, which could potentially affect primary production locally through reduction of light levels. Dispersion of cuttings is influenced by various factors, including particle size distribution and density, vertical and horizontal turbulence, current flows, and water depth. The direction of currents within the Mariner area is predominantly to the southeast suggesting that the cuttings from the well will be distributed to the south. Due to the localised area of impact associated with the cuttings, habitats and benthic species are not considered to be impacted on a large scale. Similarly, given that spawning grounds occur over large regions of the North Sea, demersal spawning species, including sandeels are not considered to be significantly impacted by cuttings deposition.

The estimated cuttings weight from the 17 " and the 12 " is 1,230,300kg. Post TCC treatment, the mass of recovered solids from the heat treatment process represents approximately 65% of the total mass of LTOBM cuttings and mud produced from the well. This equates to 799,695kg of 'dry cuttings'. The treated cuttings are rehydrated with water to make a slurry for pumping overboard. The planned discharges of drill cuttings may result in some localised impacts to benthic marine organisms close to the drill site location, resulting primarily from oxygen depletion and smothering. However, most of the TCC treated cuttings are expected to disperse through the water column rather than settling on the seabed. Cuttings deposition will reduce with distance from the drill site with the residual oil content degrading further over time and potential impacts are considered unlikely to have a significant effect on sediments and benthic species.

WBM drill fluids and cuttings from the 8 " drilling section, including the sidetrack, may contain some reservoir hydrocarbons as the well is drilled to the reservoir section. The WBM cuttings from this section are passed over the shale shakers in the mudcube units. This process recovers WBM from the mix of WBM drill fluids and cuttings returned from the well. The recovered WBM may contain reservoir hydrocarbons and is transferred to skips for transportation onshore for re-conditioning and subsequent re-use in WBM drill fluids. The cuttings from the reservoir section and remaining WBM drill fluids (mud) entrained on the cuttings are discharged overboard to the marine environment after passing over the shale shakers in the mudcube units. Prior to discharge, samples are collected and analysed for their crude oil content according to the requirements contained in the ODP SAT for the well operation.

Thirty three wells have been drilled and completed at Mariner within the 500m exclusion zone. According to studies, the drill cuttings generated from the intensive drilling at Mariner fall well below the OSPAR thresholds for these categories. It is also evidenced that wells with treated cuttings such as those at Mariner will have lower persistence and rates of oil lost to the water column. Therefore the potential cumulative impacts due to drilling discharges around Mariner is expected to be low.

The cementing operations will impact a small area of the seabed when cementing the conductor back to the seabed, however, this is very small in comparison to the surrounding available seabed. The operator does not expect any significant cement patio issue at the seabed based upon the 2017 experiences, where no cement patio formed when drilling adjacent well slots on previous conductors. There will be small volumes of cement discharged overboard during the cleaning of the cementing equipment. The operator has applied for an 'aborted cement' operation. This quantity is limited to a single batch from the onboard pit, 40m3 for cement slurry and 50m3 for the cement spacer fluids. The cement fines will disperse quickly through the water column and are unlikely to cause a significant effect the chemicals within the spacer are soluble and will disperse. In the last 5 years of drilling operations at Mariner, the operator has had a single instance where a small portion of a cement batch had to be aborted. 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 proposes project is not located in 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 owing to the localised nature of the operations.

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 MEI assessment indicates that a worst case (uncontrolled and unmitigated) well blowout scenario from Mariner PDQ has the potential to cause significant damage, as

defined by the Environmental Liability Directive, to protected species or habitats (listed under the Annex I of the Birds Directive and/or Annex I, II and IV species listed under the Habitats Directive) and coastal economies and could constitute an MEI as defined in the Offshore Safety Directive. The spill prevention and mitigation measures detailed in the application and in supporting documentation including the OPEP makes such an event extremely unlikely.

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. As such, a diesel release is not expected to present a significant risk. There is no potential for Major Environmental Incident resulting from a Major Accidental Hazard associated with this project.

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-AAEPM Mariner development 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**

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.