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Offshore Petroleum Regulator
for Environment & Decommissioning

SPIRIT ENERGY RESOURCES LIMITED
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Registered No.: 02855151

Date: 8th July 2021

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**

**GROVE, Grove Wellhead Platform, Maersk Resolve DRILLING PRODUCER
WELL 49/10a-G3X**

I refer to your amended application dated 29th June 2021, reference DR/2087/1 (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**

**GROVE, Grove Wellhead Platform, Maersk Resolve DRILLING PRODUCER
WELL 49/10a-G3X**

DR/2087/1 (Version 2)

Whereas SPIRIT ENERGY RESOURCES LIMITED has made an application dated 29th June 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: 8th July 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 8 July 2021 until 31 August 2021.

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.



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. 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:

the information provided by the developer.

the matters listed in Schedule 5 of The Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Regulations 2020) (the Regulations).

the results of any developer assessments of the effects on the environment of the project; and

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 (ref: DR/2087/1) relates to a change to the project for which a screening direction was previously issued.

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:

A contingency well test will be undertaken if the well (Grove NE) cannot be handed over to the operator due to the risk of flowback of lost drilling mud. Atmospheric emissions have been assessed in the case of a well test. If the well is not deemed viable to complete, the well will be plugged and abandoned.

Description of project:

The original screening direction (DR/2087/0) related to a sidetrack of the G3X well (49/10a-G3X) which will be drilled from the Maersk Revolver (MSK) jack up rig



located over the Grove Platform, with operations expected to last 130 days. The G3X well has been plugged and abandoned and the Grove NE well will be side-track drilled from the 20 inch section. The side-track section (Grove NE well) will be drilled with a combination of WBM and OBM. The OBM and cuttings will be retained and returned to shore for treatment and disposal.

This screening direction relates to a wellbore clean up of Grove NE well, which will be undertaken following cementing of the 4 " liner, with fluids retained in the pits for onshore disposal. The well may also be tested in the event that the well cannot be handed back to the operator (due to the risk of flowback of lost drilling mud). In that case, a well clean up operation will involve flowing back the base oil completion fluid from the well and bringing gas to the surface. The well test will include flaring of condensate, base oil and gas and the flaring period will be less than 96 hours. In the event that the sidetrack of well Grove NE well is not deemed viable, the well will be Phase 2 abandoned which is classed as an 'intermediate abandonment'. Additional atmospheric emissions have been assessed due to the addition of the contingency well testing.

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.

Oher 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 Grove Platform is located approximately 6km from the UK/Netherlands median line and 134km from the nearest English coastline. The project is in an area characterised by sand, sandy gravel, muddy sand and slightly gravelly sand and a mean water depth of 38m. The wave height within the Grove field ranges from 1.51 - 1.8m. Surveys indicate that sediments in the area consist of muddy sand. Seabed sampling showed that fauna was relatively diverse, including polychaetes, molluscs, echinoderms, and crustaceans. Juveniles contributed 19% of taxa and 69% of recorded individuals. No Annex I habitats or species or priority habitats were present in the either of the surveys conducted in the Grove area.

The waters of the proposed Grove development well location act as a nursery area for anglerfish (monkfish), blue whiting, cod, herring, lemon sole, mackerel, Norway lobster sandeel, spurdog, tope and whiting. In addition to being a spawning ground



for cod, Norway lobster, plaice, lemon sole, sandeel, sole, herring, sprat and whiting. Of these species Norway lobster, plaice, herring and sandeel use the seabed for spawning.

The following seabird species have been recorded within the Grove area during the proposed period of operations; northern fulmar, sooty shearwater, Manx shearwater, northern gannet, Arctic skua, great skua, black-legged kittiwake, black-headed gull, great black-backed gull, common gull, lesser black-backed gull, herring gull, Arctic tern, common guillemot, razorbill, little auk, and Atlantic puffin.

The seabird oil sensitivity index (SOSI) identifies the area around the Grove well development as being low for the majority of the year with medium sensitivity identified in August.

Harbour porpoise, minke whale and white-beaked dolphin have been recorded in the vicinity of the Grove NE development area in low to moderate densities.

The proposed Grove NE well is located in ICES rectangle 36F2 which primarily targeted for demersal and shellfish species and represents a UK landing contribution of 0.04% of live-weight and 0.06% of value which is low.

There are a number of oil and gas installations within a 40km range of the Grove platform, the closest being J6A-CT at 13 km and Windermere and ST-1 at 14 km. Shipping density in the area is considered moderate. All activities are occurring within the existing 500 m zone therefore operations are not considered to have a significant impact on other oil and gas or shipping users.

There are no wrecks within the vicinity of the Grove platform. The closest windfarm is Hornsea Project Three (HOW03) which is part of the TCE Wind Lease Area with the Grove platform at a distance of approximately 4.5 km from the wind lease area. As all operations will be taking place within the 500 m zone of the platform, it is not considered that the drilling activity will have an impact on the lease area. There are no active marine cables within the vicinity of the Grove field. However, one disused telecommunication cable is located 5 km south-west of the Grove field. It is not anticipated that the operations at Grove platform will have a significant impact on either the windfarms or cables.

The Grove field is located 9 km west of the Southern North Sea Special Area of Conservation (SAC) and 20 km west of the North Norfolk Sandbanks and Saturn Reef SAC. Operations are not considered to have any impact on the protected sites or Annex I or II species within them.

Given the location of the project, it is not likely that the areas identified at paragraphs 2(c)(i), (iii), (iv), (vi), (vii) or (viii) 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 Grove Platform excluding unauthorised access of vessels and prohibiting access to fishing vessels.

The well will be drilled as a side-track from the existing well. Cuttings from the WBM sections will be discharged into the water column, and it is anticipated that the WBM cuttings will dissolve and disperse through the water column resulting in a thin coating on the seabed. There will not be any direct discharge of cuttings at the seabed floor.

The dispersion of the cuttings pile and the effect of seabed disturbance on spawning periods was assessed. Cuttings deposition is likely to have minor impacts on individuals present, however it is concluded that the activity does not have a significant impact on habitat and benthic species. The impacts from seabed disturbance have therefore been assessed as not likely to have a significant effect.

The project is not anticipated to cause a significant impact on seabirds present within the area around the Grove field with SOSI index being low for the majority of the period when operations are occurring. Cetacean species in the area are considered to be low to medium density however the operations are not considered to cause significant disturbance effect to species within the area.

The area around the Grove field is an area of rich biodiversity of species from benthic to fish, seabirds and cetaceans. The drilling of the Grove well is not considered to cause significant impact to these species or biodiversity.

Discharge of offshore chemicals associated with the re-entry of the well, WBM, cementing and completion operations have been assessed as not likely to have a significant effect on the environment. Offshore chemicals associated with OBM will be returned to shore for treatment and disposal.

The wellbore clean-up operations may result in the discharge of wastewater containing residual base oil from the OBM. This discharge has been assessed and is not considered to have a likely significant effect on the environment.

The atmospheric emissions associated with the potential flaring from the well have been assessed, and the emissions are expected to rapidly disperse and are not likely to have a significant impact.

The Maersk Resolve will 'jack-up' onto the seabed, with each of its four legs



terminating in a spud that will be placed into the seabed with 4 anchors which will pull it into position. The contact area of spud cans is approximately 840 m² with anchor deployment and chain operations impacting 16,034 m². The maximum volume of seabed sediment to be disturbed is 17,714m². When the jack up leaves the Grove location it may leave seabed scars from the anchors and spud cans. However, noting the overall area (0.018 km²) and the movement of sediment in the area where the jack up rig will be located, this has been assessed as not having a significant impact on the seabed.

Due to the proximity of the Grove NE well to the UK/Netherlands boundary line (6 km), there is the potential for a large oil spill to enter the Dutch Sector. Given the emergency response procedures in place, it is expected that any spill will be dealt with immediately and that any transboundary impact is unlikely to be significant. The planned operations (cuttings and chemical discharges) are not considered to result in any transboundary effect.

The current Greater Markham Oil Pollution Emergency Plan (OPEP) was approved in 2017, which, in conjunction with a Communications and Interface Plan (CIP) (a bridging document to the Grove Platform and the MSK jack up) will cover the Grove NE drilling operations. The worst-case assessment of an oil spill from the Chiswick well was assessed as this is greater than the Grove well and is within the Greater Markham area. The OPEP contains proposed measures to prevent and respond to a worst-case hydrocarbon release and the Communications Interface Pan (CIP) addresses the offshore response to a hydrocarbon release from the MSK jack up.

A worst-case major accident scenario resulting from a potential well blow-out was modelled and assessed:

Modelling has been carried out to establish the potential impact of a worst case well blowout in the Greater Markham Area, of which Grove NE is a part, with the highest flow rate and most persistent hydrocarbons. The worst-case modelling undertaken was stochastic modelling of a well blow out release of 160 m³ per day of Chiswick condensate for 120 days. The worst-case flowrate for the Grove well is 86.5 m³ of condensate per day for 120 days which is less than the worst-case modelled in the OPEP

The modelling indicates that condensate has the potential to impact upon the UK coastline. The most likely beaching location is Yorkshire, the Humber and East Midlands, with a maximum 5-10% probability of condensate beaching and a minimum arrival time of 16 day between the months of March and May.

The modelling within the OPEP for Chiswick indicates that condensate would cross the UK/Netherlands boundary line with a minimum arrival time of approximately 6 hours in and has the shortest time potential to reach the German shoreline after 15 days with a 10-20% probability of crude oil beaching. A maximum volume of oil modelled to accumulate on the shoreline is 0.14 m³

The Developer has a number of mitigation and control measures in place to reduce



the risk of a major accident occurring and the probability of such an event occurring (including the worst-case scenario identified above) is very low.

No additional power generation will be required on Grove platform as a result of the proposed well.

No cumulative impacts are expected to occur between this project and other projects due to operations occurring within the 500 m zone and no current applications in the vicinity. Currently, there is no aggregate extraction, dredging, or dumping activity. The TCE Wind Lease Area with the Grove platform at a distance of approximately 4.5 km, shipping activity within Block 49/10 is considered moderate and a number of oil and gas installations are within 40 km of the Grove platform. However as operations will occur within the 500 m zone, the operations at Grove are not considered to cause a significant impact to other sea users. The fishing activity in ICES rectangle 36F2 and is considered to be relatively low. Cumulative impacts have been assessed as not likely to have a significant effect on the environment. There are no charted wrecks located in the vicinity of the proposed Grove well location.

It is considered that the change to the drilling activities for the Grove NE 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 change to 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