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Offshore Petroleum Regulator
for Environment & Decommissioning

CHRYSAOR LIMITED
BRETENHAM HOUSE
LANCASTER PLACE
LONDON
WC2E 7EN

Registered No.: 06418649

Date: 21st April 2021

Department for Business, Energy
& Industrial Strategy

AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Tel [REDACTED]
Fax [REDACTED]

www.gov.uk/beis
bst@beis.gov.uk

Dear Sir / Madam

**THE OFFSHORE OIL AND GAS EXPLORATION, PRODUCTION, UNLOADING
AND STORAGE (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS
2020
PLANNED WELL: EVEREST FIELD 22/10a- LAD**

A screening direction for the project detailed in your application, reference DR/2072/0 (Version 3), dated 5th April 2021 has been issued under regulation 6 of the above Regulations. The screening direction notice, and any relevant conditions and comments 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**

PLANNED WELL: EVEREST FIELD 22/10a- LAD

DR/2072/0 (Version 3)

Whereas CHRYSAOR LIMITED has made an application dated 5th April 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: 21st April 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 22 April 2021 until 20 September 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:

The Department has no comments.

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]

Fax [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

This document provides a summary of the assessments undertaken by OPRED to determine whether an Environmental Impact Assessment is required for this project. The document summarises the information considered in that assessment, the potential impacts, mitigation proposed and sets out the main reasons for the decision made.

In considering whether an Environmental Impact Assessment is required or not, the following information has been considered:

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 preliminary verifications or 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

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

Drilling the subsea Everest (East) Field LAD development well:

Drilling of 42 X 36" & 26" sections to form the top-hole with Water Based Mud (WBM).

Drilling of a further three sections, the 20", 13.5" and 9.5" sections using Low Toxicity Oil Based Mud (LTOBM).

Drilling of contingency 42X36 & 26" sections and side-tracks of 13.5 & 9.5" sections



Well clean up, drill stem test and completion.

Description of the Project

Phase IV of the development of Everest field, referred to as the Everest East Expansion project Environmental Statement (ES) (D/4043/2009) was approved in January 2011 to drill two gas condensate wells.

A direction was issued under the Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999 (as amended) in January 2020 to drill a third well 22/10a (referred to as LAD) from the Everest Field, reference number DRA/767). That well was not drilled, and this screening direction is being given in relation to a change to that drilling project in that the LAD well is now proposed to be drilled 3km north of the former approved project.

The drilling includes two top-hole sections, a 42X36 and 26-inch section using Water Based Mud with cuttings directly discharged to sea. Three further sections, a 20, 13.5 and 9.5-inch section will be drilled with Low Toxicity Oil Based Mud which is to be contained and shipped to shore with all sections cemented in place. Contingency elements include a potential re-drill of the top-hole sections (42X36 and 26 inch) and side-tracks for both the 13.5 and 9.5-inch sections which are included should issues arise. Well clean-up will follow installation of the lower completion. The horizontal well tree will be run with suspension plugs removed and the well will be flowed to the drill rig separator for clean-up and testing by flaring for the minimum period required to remove solids and acquire well and reservoir productivity information. The well will be left shut in with the down hole safety valve and tree valves closed pending future tie-in for production.

Drilling of the LAD well by the semi-submersible drill rig Paul B. Lloyd Junior to hook up to eight pre-laid anchor moorings is expected to take 92 days (with contingency up to 110 days in total). The LAD well is to be located 2.9km north west of the Everest East Expansion area manifold to which it will be tied back. Gas and condensate from the well will be exported via the North Everest production platform and Central Area Transmission System to Teesside.

The project is not likely to significantly impact population, human health, or the environment. Discharge to sea will not be toxic or bioaccumulating. Chemicals are selected on that basis and discharge of water-based mud derived drill cuttings are benign. Emissions to air will rapidly disperse and be kept to an absolute minimum to reduce contribution to climate change. The risk of a major accident from a well blowout has been modelled and assessed and control measures put in place to reduce its probability to very low. The risk posed by natural disaster was assessed to confirm rig site safety for drilling and survival. No significant cumulative impacts are expected to occur as a result of this project or with other existing or approved projects. Noise from drilling/vessels will not increase significantly above ambient levels.

Location of the Project



Having regard, most significantly, 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 LAD well is located in the Central North Sea approximately 220 kilometres (km) east of the Scottish coastline and 9 km from the United Kingdom-Norwegian median line in a licenced field development area.

The project location is characterised by deep clayey sand with a water depth of 89 metres (m). Tidal velocities in the area are between 0.01-1.0 m/s during spring tides and residual current speeds are 0.1 - 0.15m/s. The wave heights for the area range between 2.11 m and 2.4 m in the Everest field. Surveys indicate that the area is predominately classified as deep circalittoral sand sediment with a subset sediment type of Maldanid polychaetes and Eudorellopsis deformis in deep circalittoral sand. Additional habitat types were identified to a lesser extent, including deep circalittoral mixed sediments. No depressions associated with methane derived authigenic carbonates characteristic (Annex I feature) were identified.

Survey work found that sediments generally support sparse epifauna with sea-pens and burrows being frequent to common with up to 9 burrows per 10m², but no mounds were visible. Starfish, Leptasterias, anemones, whelk and nudibranchs and less common brittle stars, sea urchins and hermit crab were found. The OSPAR listed threatened and/ or declining 'sea pens and burrowing megafauna communities' was initially discounted based on the presence of deep circalittoral sand; however, this designation can occur in sandy habitat with frequent burrows and mounds. Absent to frequent burrows were observed at sample stations which indicates this habitat is present. Additionally, evidence indicates 'burrowed mud' a Scottish Priority Marine feature and habitat of principle importance 'mud habitats in deep waters' to be present.

Ocean quahog which is on the OSPAR list of threatened and/ or declining species was found at all survey stations in 2018 and 2020 as juveniles (but not in 2010). LAD is 18km from the Norwegian Boundary Sediment Plain (Nature Conservation Marine Protected Area) designated for that species. Other OSPAR listed threatened and/ or declining species in the area include cod and harbour porpoise. Scottish Priority Marine Features (PMF) listed species include cod, Norway pout, Angler fish and Norway lobster (peak spawning April) though the latter is unlikely to be found in the sandier sediment of Everest field. Sandeel might have been present but they would have been buried at the time surveys were undertaken and are unlikely to be found at Everest field due to the higher fines content of the sediment.

'Species of national interest' (formerly Annex II species) include bottlenose dolphin and harbour porpoise which are likely to be present in the area. No other species or habitats of conservation significance under the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended) were observed within the survey area. Other 'species of national interest'/ 'priority marine features' (formerly Annex IV European protected species) include the harbour porpoise (high density in



July/ August) and minke whale (high density in July the qualifying species of the Southern Trench MPA 197 km from LAD), with Atlantic white-sided dolphin, white beaked dolphin and Risso's dolphin present in the area.

The Hedekaer wreck is 40km south east of the proposed LAD well and Fiskenes wreck 28km north east in Norwegian waters. No aggregate dredging and disposal sites, sites of marine archaeological interest or planned offshore renewable energy developments or interconnectors have been identified within 40km of the LAD well. They are therefore screened out from further consideration. With regard to cumulative impacts, three Chrysaor production installations are within 14km of the development.

The well is in a dispersed atmospheric environment with wind speeds more than 8 m/s 60-65% of the time in winter months and 20-27% in summer months. The project aligns with the policies of the adopted Scottish Marine Plan.

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, noise, 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 the environment, population, and human health.

Atmospheric emissions will be generated from drill rig power generation, supply/ guard/ emergency response vessels, helicopter transfers and well clean up and testing. They will rapidly disperse. Well testing by flaring will determine reservoir variability and potentially mitigate against future plant upsets when producing the well at North Everest platform, minimising emissions from blowdown of the processing platform.

Waste in the form of WBM cuttings will be discharged at the seabed. LTOBM and cuttings will be transported to shore for treatment and disposal.

Discharge of chemicals associated with the WBM and associated drill cuttings to sea has been assessed as having no likely significant direct or indirect long-term effect. Chemicals associated with LTOBM and associated drill cuttings will be returned to shore for treatment and disposal, resulting in no significant impact to the offshore environment. Most cementing chemicals will remain down hole to line the well apart from very minor quantities of cement, additives and spacers circulated out of the well during the setting of the 20" casing and from washing out the unit between activities



with a low probability of cementing needing to be repeated. Cement, its mix water or cement spacer emergency discharge has been requested (assessed under Best Practicable Environmental Option). The probability of unplanned events resulting in emergency discharge is very low (1% in 7 years) and pose no significant impact to the environment being largely inert chemicals dispersed readily by currents.

After installation of the lower completion, the well will be cleaned from LTOBM via base oil spacer and surfactant to brine. Most of the base oil will be recovered for re-use or skipped to shore for disposal and the brine collected, separated and either skipped and shipped or discharged only when it contains very low levels of base oil while running the horizontal well tree. Flaring to remove solids and test the well uses MEG (Mono Ethylene Glycol) and water which is filtered, separated to remove most reservoir hydrocarbons which are skipped and shipped to shore for disposal or discharged only when below 30 parts per million. Dispersal and breakdown of discharges is rapid with no likely significant effect.

Emissions to air and sea will have insignificant impact on human health and the environment, being of low toxicity or bioaccumulation potential and rapidly dispersed.

The risk of vessel collision throughout the project is assessed as low. A guard vessel will be on site for the duration of anchor pre-lay. An emergency response and rescue vessel will be on site during rig operations with a temporary 500m exclusion zone and an over trawlable wellhead protection structure will be installed permanently within a statutory 500m safety exclusion zone put in place around the well tree prior to rig departure until the well is decommissioned.

Seabed disturbance from the drill rig anchor moorings will have a temporary impact from anchor pre-lay and rig hook up, impacting to a depth of 9 to 12 meters (anchors) and area of 0.08287km². Recovery to 0.4 m depth over 4 years is observed on neighbouring wells. Impacts will be highly localised and unlikely to significantly adversely impact any ocean quahog which bury, particularly in sandier substrate. The wellhead protection structure and horizontal xmas tree will have a minor permanent subsea and seabed impact for the duration of the well. Sea pens can recover rapidly from being dislodged, dragged, uprooted or smothered and re-anchor themselves.

The drill rig generates a small increase in low frequency noise above background levels, but the supply vessel generates more noise but with no potential for injury or significant disturbance to marine mammals and fish which temporarily avoid such areas.

A worst-case major accident scenario resulting from a potential well blow-out was modelled and assessed, albeit a very low probability event and minimal potential volume beaching on UK are neighbouring coastlines and low potential impact on birds, fish, shell fisheries and protected sites and species. Control measures are in place as required by the Safety Case Regulations 2015 and Oil Pollution Emergency Plans (OPEPs) for North Everest and the drill rig.

No cumulative impacts relating to discharges to sea, seabed impacts, noise or



physical presence, are expected to occur between this project and others due to temporal and spatial separation between them. Atmospheric impacts are low and well dispersed but any direct emissions and indirectly derived ones from resource consumption have a contribution to climate change and will be kept to a minimum.

The drilling operations are in accordance with the policies and objectives of the adopted Scotland's National Marine Plan.

There are no significant transboundary effects from the operations at LAD. The nearest boundary (UK/Norway Median Line) is located approximately 9 km away and discharges/ emissions will not be detectable at this distance from LAD. An accidental spill would cross the median line but environmental impact upon marine and beach environments is low.

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, population and human health 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.