

Our Ref: 01.01.01.01-5060U  
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Offshore Petroleum Regulator  
for Environment & Decommissioning

CAPRICORN ENERGY UK LIMITED  
WELLINGTON HOUSE  
4TH FLOOR  
125 THE STRAND  
LONDON  
ENGLAND  
WC2R 0AP

Department for Business, Energy  
& Industrial Strategy

AB1 Building  
Crimon Place  
Aberdeen  
AB10 1BJ

Registered No.: 04362104

Tel [REDACTED]

Date: 12th May 2022

Fax [REDACTED]

[www.gov.uk/beis](http://www.gov.uk/beis)  
[bst@beis.gov.uk](mailto:bst@beis.gov.uk)

Dear Sir / Madam

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

**Diadem, Valaris 123, DRILLING EXPLORATION WELL 22/11b- Diadem planned  
well**

A screening direction for the project detailed in your application, reference DR/2234/0 (Version 4), dated 28th April 2022 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](mailto: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**

**Diadem, Valaris 123, DRILLING EXPLORATION WELL 22/11b- Diadem planned  
well**

**DR/2234/0 (Version 4)**

Whereas CAPRICORN ENERGY UK LIMITED has made an application dated 28th April 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/13765/0/IDA/1 (Version 2).

Effective Date: 12th May 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 12 May 2022 until 30 November 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](mailto: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:

There are no comments at this time.

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]

Fax [REDACTED]



## **SCHEDULE OF SCREENING DIRECTION DECISION REASONS**

### **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 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 of an exploration well using a jack-up drilling rig, following which the well will be plugged and abandoned.

The well is expected to be a standard temperature and pressure. Anticipated hydrocarbons are oil and gas and the purpose of drilling is to determine any commercially viable reserves.

The well will consist two top-hole sections (36" and 24" diameters), drilled with seawater and a Water Based Mud (WBM) followed by lower sections of 16", 12.25" and 8.5" diameters drilled using Low Toxicity Oil Based Muds (LTOBM). The 8.5 " reservoir section will be drilled and assessed using logging while drilling (LWD). Drill cuttings generated from all LTOBM sections will be skipped and shipped to shore for treatment and disposal. The estimated time to target is 56 days with a total duration of 98 days which accounts for all ancillary activities.



These include a vertical seismic profiling survey, which will be undertaken in the well. A contingency 7" production liner will be run if hydrocarbons are found and a standard well-test carried out. Irrespective of success or dry-hole, the well will be plugged and abandoned as per the Oil and Gas UK Well Guidelines.

### **Description of the Project**

The drilling of the Diadem exploration well as a new prospect has not been previously assessed.

The well will consist initially of two top-hole sections of 36" and 24" diameters, drilled with seawater and gel/bentonite sweeps and a Water Based Mud (WBM) which will be used prior to pulling out the drilling assemblies and running the casing into the well. As the top-hole sections are riserless, mud and cuttings for these sections will be discharged directly to the seabed. Subsequent lower sections of 16", 12.25" and 8.5" diameters will then be drilled using Low Toxicity Oil Based Muds (LTOBM). LTOBM cuttings will be skipped and shipped to shore for treatment and disposal. The estimated time to target is 56 days with a total duration of 98 days which accounts for all activities, including a standard well test which will be performed following the installation of a 7" production liner should the well be successful.

Both casings will be cemented with returns to seabed. A total of 745 tonnes of cuttings will be discharged to sea.

The 16", 12.25" and 8.5" sections will be drilled using Low Toxicity Oil Based Mud (LTOBM) with zero discharge. A total of 691 tonnes of LTOBM cuttings contained in 1,440m<sup>3</sup> of LTOBM will be circulated back to the rig and skipped and shipped onshore for treatment and disposal.

The 8.5 " reservoir section will be drilled and assessed using logging while drilling. The well will be plugged and abandoned in a dry-hole case.

In a success case, a 7" production liner will be run and a well test carried out prior to plugging and abandoning the well. In a success case, drilling will be extended to include a standard well test, with all combined operations taking a maximum of 98 days. The well will be plugged and abandoned.

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 block 22/11b and is located approximately 174 km east of the nearest Scottish coastline and 57 km southwest of the United Kingdom (UK) /Norway Median Line. The water depth in the vicinity of the proposed Diadem well is approximately 89 m. The seabed in the area of the Diadem well is described as comprised of sand and slightly gravelly sands with a localised area of gravelly sand in the south of the Block.

Sediments in the area are predominantly comprise sand and slightly gravelly sands with a localised area of gravelly sand. Site specific surveys identified the seabed sediments to comprise sand with shell fragments (as evidenced by sand ripples) with varying proportions of gravel, pebbles and shells (either scattered or in patches) and occasional cobbles and boulders. The annual mean significant wave height ranges from 2.4-2.11 m.

Benthic surveys observed the two biotopes 'Deep circalittoral sand' and 'Deep Circalittoral Coarse Sediment'. The epifaunal communities associated with these biotopes were mobile epifauna (hermit crabs, (Paguridae) and starfish (*Asterias rubens* and *Astropecten irregularis*). Sessile epifauna included urchins (*Echinoidea* including *Spatangus* sp. and *Gracilechinus acutus*), sea pens (*Pennatula phosphorea*), anemones (*Hormathiidae*) calcareous worm tubes (*Serpulida*) and faunal turf (*Hydrozoa/Bryozoa*). Fish species included flatfish (*Pleuronectiformes*, including *Pleuronectes platessa*), cod (*Gadus morhua*), gurnard (*Triglidae*), gobies (*Gobiidae*), unidentified fish species. Encrusting bryozoans (*Bryozoa*) were also identified on boulders. There was evidence of limited ocean quahog in the vicinity of the Diadem prospect.

No other Annex I habitats or Annex II species, OSPAR threatened and/or declining species and habitats or UK Biodiversity Action Plan priority habitats and species were observed within the survey area. The nearest protected site to the proposed operations is the East of Gannet and Montrose Fields Nature Conservation Marine Protected Area (NC MPA) is located approximately 16 km to the southeast. This site, which is approximately 1,839 km<sup>2</sup>, is designated for protected features of offshore deep-sea muds and *A. islandica* (including sands and gravels as their supporting habitat) (JNCC, 2021a). The project is in the Scottish area's Nation Marine Plan.

Moderate to high densities of five cetacean species observed in the area (Atlantic white-sided dolphin, harbour porpoise, killer whale, minke whale, and white-beaked dolphin). Grey and harbour seals may also be encountered in the area; however, are not expected to be found in significant densities.

Seabird vulnerability in the vicinity of the proposed Diadem location is low throughout the year, with no data available for November.



Cod, lemon sole, mackerel, Norway lobster, Norway pout and sandeels all spawn within the vicinity of the proposed operations during the period of drilling operations. Of these, cod, mackerel, Norway pout and sandeel are Priority Marine Feature species.

There are a number of oil and gas fields nearby with several installations. The nearest marine cable is located approximately 20 km away. There are no nearby Military of Defence practice areas. There are no operational renewable energy sites, nor any under construction in the vicinity, with the nearest site 137km away. The project area is primarily used for demersal fishing and the fishing effort in the area is rated low, with shipping in the area also considered to be low. There are 3 wrecks within 12 km of the area, with the nearest 2km NW of the proposed well location. There are no other 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 will be a temporary 500 m radius safety zone around the Diadem well location which will exclude unauthorised access of vessels and prohibit access to fishing vessels for the duration of operations.

During the drilling of the top-hole sections, WBM and cuttings will be discharged to the water column however, given sediment movement and the residual current in the vicinity of the Diadem area is approximately 0.2 m/s, it can be expected that over time the recovery of seabed sediments should occur. WBM are water-soluble and are expected to dissolve, dissociate and disperse during settlement through the water column. A chemical risk assessment concluded that chemical discharges are not expected to result in a significant environmental impact. In addition, it is predicted that most of the cementing material will remain downhole with discharge to the environment only occurring when the conductor is cemented back to the seabed and when the cement unit is cleaned at the end of the cementing operation. A small area of the seabed will be impacted when cementing the conductor back to the seabed, however, this is very small in comparison to the surrounding available seabed and therefore the impact is considered not to be significant.



There is evidence of ocean quahog in the vicinity of the Diadem prospect, however, this species is not expected to be significantly impacted at a population level by the proposed operations. Sparse sea pens were identified across the survey area. Sea pen species contributes to the 'sea pen and burrowing megafauna communities' habitat, which is on the OSPAR (2008) list of 'threatened and or declining species and habitats', however, as no megafauna burrows were evident during surveys, the seabed did not fit the criteria set for designation of this habitat and so no further assessment was required. 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 while sandeels are unlikely to be impacted at a significant population level due to the nature and timing of operations.

Due to the mitigation measures in place and the highly localised area impacted, there are no significant effects expected from the proposed activities on marine mammals.

There are no expected transboundary effects from the drilling operations at the Diadem well location. The nearest boundary (UK/Norway Median Line) is located approximately 57 km north east of the operations. It is not considered likely that any planned operational discharge to the marine environment will be detectable at this distance from the well location.

The main spill risk associated with the drilling of the proposed Diadem well is a large spill of crude oil occurring from loss of well control. In the event of a blowout incident from the proposed Diadem well, a capping strategy is not deemed suitable and therefore, drilling of a relief well will be the primary form of source control for the Diadem Well, with an estimated 81 days to drill. In the case of an accidental diesel release from the Valaris 123, it is expected to evaporate quickly due to its very high level of light ends and as such, is not expected to present a significant risk.

The emissions associated with the project result from power demand for the proposed operation (including ancillary works). It is expected the emissions will be rapidly dispersed and are not likely to have a significant impact. Project design demonstrated that fewer emissions will be emitted by the chosen project rather than if some common alternatives had been selected. Contractor selection includes energy efficiency and emissions parameters as a differentiating factor for contractors tendering for drilling, marine and aviation services, with contractors being excluded from further consideration if exceeding those parameters. The project includes contractor offsetting by the purchase of carbon credits. Operations will be optimised to minimise emissions through specific measures (i.e. bespoke aviation software, vessel planning and use of high-efficiency well-test equipment). These operational and planning measures combined significantly reduce emissions to a level of negligible contribution.

Drilling operations will be conducted from Valaris 123 MODU such that there is a negligible and temporary impact on the seabed from the drilling rig 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 Diadem 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.