



Offshore Petroleum Regulator  
for Environment & Decommissioning

**Corallian Energy Limited**

**Wick Prospect Exploration Well (Well 11/24-D)  
Environmental Statement Summary**

**To:** Jonathan Ward  
**From:** Anna Buckingham  
**Date:** 2 November 2018

<b>ES Title:</b>	Wick Prospect Exploration Well (Well 11/24-D)
<b>Developer:</b>	Corallian Energy Limited
<b>Consultants:</b>	Orbis Energy Ltd.
<b>OGA Field Group:</b>	Northern North Sea
<b>ES Report No:</b>	W/4217/2018
<b>ES Submission Date:</b>	15 May 2018
<b>Block No:</b>	11/24b
<b>Development Type:</b>	Exploration Well

**Project Description**

Corallian Energy Limited (Corallian) submitted an Environment Statement (ES) to support an application for consent to drill an offshore exploration well in Block 11/24b in the Outer Moray Firth. The proposed well is located approximately 2.3 kilometres (km) from the Caithness coastline.

Two exploration wells have previously been drilled in the immediate vicinity of the proposed 11/24b-D well, in 1996 and 2000, and both were plugged and abandoned. The Lybster oil field operated by IGAS Energy Limited is located approximately 3.5 km southwest of the proposed well.

A jack-up mobile drilling unit (MoDU) will be used to drill the well, with operations planned to commence in November 2018. The intention is to drill a vertical well to target three potential hydrocarbon-bearing strata, located between 671 and 1,038 metres (m) below the seabed. It is not technically feasible to drill the required well from an onshore location. The well will not be flow tested (i.e. no reservoir hydrocarbons will be flowed to the surface), but a check-shot seismic survey will be undertaken to provide further information about the strata. Following completion of all proposed operations the well will be permanently plugged and abandoned leaving no infrastructure on the seabed. It is anticipated that the MoDU will be on location for up to 30 days.

Regardless of the outcome of the exploration drilling, Corallian has no plan to return to the offshore location. If economically viable quantities of oil are discovered, Corallian would propose to develop the field via extended reach drilling from onshore facilities, and any future development of the prospect would be the subject of a separate application for the relevant consents and is not assessed within the ES.

## Key Environmental Impacts

The ES identified and discussed the following key issues as having the potential to result in an environmental impact:

- Landscape, seascape and visual effects;
- Physical presence of the drilling rig and support vessels, including seabed disturbance relating to the footprint of the MoDU;
- Marine discharges of drill cuttings, water-based drilling fluids and cement;
- Atmospheric emissions;
- Underwater noise impacts relating to the drilling operations, the check-shot seismic survey and vessel movements; and
- In air noise impacts relating to well operations, vessel operations and helicopter flights.

## Key Environmental Sensitivities

The ES identified the following key environmental sensitivities:

- **Landscape, seascape and visual receptors:** Relevant landscape designations within the Zone of Theoretical Visibility (ZTV) include the Dunbeath Castle Garden and Designed Landscape, the Causeymire and Knockfin Flows Wild Land Area and Flow Country and the Berriedale Coast Special Landscape Area. A number of visual receptor groups were also identified within the core 15 km study area, including residents of, and visitors to, coastal settlements, and the users of the coastal tourist road. Although the MoDU will be located in an area where there are a number of relevant designations the effects on the landscape and seascape are not considered to be significant due to a combination of factors, principally the small area occupied by the MoDU, the short-term nature of the deployment and the timing of the proposed operations.
- **Fish:** The proposed well is within spawning grounds for cod, lemon sole, plaice, sandeels, sprat and *Nephrops*, and a potential spawning ground for herring; and within nursery areas for blue whiting, cod, European hake, haddock, lemon sole, ling, plaice, saithe, whiting, anglerfish, herring, horse mackerel, mackerel, sandeels, sprat, spotted ray, spurdog, thornback ray and *Nephrops*. However, the spawning and nursery areas are extensive and widespread, and the proposed operations are therefore unlikely to have any significant impact on any of these species. Scheduling the drilling operations during the winter months will also minimize potential impacts on migratory fish.
- **Seabirds:** The Moray Firth and surrounding coastline is important for foraging, loafing and migrating seabirds, and the proposed well location is within the boundary of the East Caithness Cliffs Special Protected Area (SPA) that is designated for internationally important populations of cormorant, fulmar, great black-backed gull, guillemot, herring gull, kittiwake, peregrine, puffin, razorbill and shag. Notwithstanding the presence of these species, seabird sensitivity to oil pollution in the vicinity of the proposed well is assessed to be low during the proposed drilling period, and appropriate mitigation measures will be put in place to prevent accidental spills that could have a significant impact on seabirds. An approved Oil Pollution Emergency Plan (OPEP) detailing those measures will be required for the proposed drilling operations.
- **Protected habitats:** There are a total of four (4) marine and coastal protected areas that could be potentially impacted by the proposed well, made up of two (2) Special Areas of Conservation – SACs (the Moray Firth SAC and the Dornoch Firth and Morrich More SAC), one (1) Special Protection Area – SPA (the East Caithness Cliffs

SPA) and one (1) Nature Conservation Marine Protected Areas - NC MPA. A Habitats Regulations Assessment (HRA) was therefore undertaken by BEIS OPRED, as the relevant competent authority, which concluded that the proposed well would not have a significant adverse effect on the qualifying species or habitats, either alone or in-combination with other plans or projects, and that the proposed operations would not have an adverse effect on the integrity of the relevant sites.

- **Protected species:** The Moray Firth and the coast of eastern Scotland are home to the only resident population of bottlenose dolphins in the North Sea, with the majority of sightings in the inner and coastal regions of the Moray Firth. Other cetaceans recorded in this area include common dolphins, harbour porpoises, killer whales, long finned pilot whales, minke whales, Risso's dolphins, white beaked dolphins, and white-sided dolphins. Harbour seals are sighted along the coast but are only likely to be infrequent visitors to the proposed well location as tagging data indicates that there is lower usage of this area than other areas of the Moray Firth. The proposed well is sufficiently distant from the Moray Firth and Dornoch Firth and Morrich More SACs to avoid any significant direct impact or disturbance to either bottlenose dolphins or harbour seals, and it is concluded that the proposed operations are unlikely to have any significant adverse impacts on marine mammals.
- **Other users of the sea:** The majority of fishing vessels operating in this area are under 15m in length, using both static gears (including potting and netting) and mobile gears (including trawls and dredges). Landings are dominated by shellfish species. Automatic Identification System (AIS) data indicates moderate fishing vessel activity in the area with some vessels also performing guard duties at the nearby Beatrice Offshore Wind Farm (BOWF) and others steaming on passage. Major ports in the vicinity of the proposed well location include Inverness, and Cromarty Firth, and there are a number of medium-small harbours situated along the coastline adjacent to the proposed well location. A significant number of recreational vessels are also likely to pass in close proximity to the proposed well location. Appropriate navigational controls will be in place, including a 500 m exclusion zone around the MoDU, notifications will be issued to local fishermen, marinas and recreational clubs, and a Fisheries Liaison Officer (FLO) will be appointed for the project. It is therefore not anticipated that there will be any significant impact on other users of the sea.
- **In-combination, cumulative and transboundary effects:** No significant in-combination, cumulative or transboundary effects are anticipated.

## Consultation

The Joint Nature Conservation Committee (JNCC), Scottish Natural Heritage (SNH), Marine Scotland (MS), the Scottish Environment Protection Agency (SEPA), the Maritime and Coastguard Agency (MCA), the Northern Lighthouse Board (NLB), the Ministry of Defence (MoD) and relevant Local Authorities (LAs) were consulted on the proposals. The Health and Safety Executive (HSE) was also notified of the proposals. The ES was also subject to public notice.

- **JNCC, SNH, SEPA, MOD and HSE:** No objections were raised.
- **MS:** No objections were raised, but it was confirmed that a European Protected Species (EPS) Licence would be required for the check shot survey.
- **MCA:** No objections were raised, but recommendations were included relating to the required navigational conditions.
- **NLB:** No objections were raised, but it was stated that the MoDU must comply with the navigational requirements detailed in the standard marking schedule.

- **Highland Council (HC):** HC raised concerns about migratory salmonids. However, they acknowledged that it was unlikely to be a concern because of the timing of the proposals and the limited duration of operations.
- **Public Notice:** One response was received, principally concerned with the potential effects of an oil spill and the requirement for monitoring.

The proposed well is located in Scottish Controlled Waters, and the emissions and discharges relating to the proposals, including the use and discharge of chemicals, will be regulated by SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR). In addition to the statutory consultation, BEIS OPRED has therefore been working closely with SEPA in connection with the chemical risk assessment and has also been working closely with Marine Scotland in connection with the navigational requirements, which are also devolved.

### **Further Information**

Corallian was requested to provide additional information to address issues raised during the consultation and the internal BEIS OPRED review. The requirement included:

- Clarification of technical issues, including the potential requirement for rock stabilisation material, cuttings containment during drilling of the reservoir section of the well; and the use of a Remotely Operated Underwater Vehicle (ROV) to monitor cement returns to the seabed;
- Provision of additional information relating to the cuttings discharge modelling; and
- An update of the Mitigation Measures and Commitments Register included in the ES, to add the key mitigation measures agreed with BEIS OPRED during the ES review.

The additional information received from Corallian on 3 and 15 October 2018 satisfactorily addressed all the outstanding issues raised during the consultation and the internal BEIS OPRED review. Corallian also provided the updated Mitigation Measures and Commitments Register and a copy is appended to this document.

### **Key Mitigation Measures (including Environmental or Monitoring Conditions)**

Corallian originally planned to discharge all the drill cuttings generated during the drilling operations, and there was a significant concern in relation to the discharge of cuttings during drilling of the hydrocarbon-bearing strata as they could be contaminated with reservoir hydrocarbons. Corallian therefore agreed to contain any contaminated cuttings and to ship them to shore for treatment and disposal. Corallian also committed to drilling the well outwith the peak seabird breeding period.


All activities will be undertaken in accordance with the measures and commitments detailed in the Mitigation Measures and Commitments Register and following best industry practice. Where necessary, the requirements can be enforced in relevant permit conditions.

### **Conclusion**

Following its review of the ES, the responses received from consultees and the additional information provided by Corallian Energy Limited, BEIS OPRED is satisfied that the project will not have a significant adverse impact on the receiving environment or the living resources it supports, or on any protected habitats or species or other users of the sea.

**Recommendation**

On the basis of the information presented within the ES, the advice received from consultees and the additional information provided by Corallian Energy Limited, BEIS OPRED is content that there are no objections, and agrees to the OGA issuing the necessary consent for the proposals.

  
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Jonathan Ward  
Director, Environmental Operations  
BEIS OPRED

12/11/18  
.....  
Date

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Table 14.1: Commitments Register

Ref	Theme	Commitments
1	Physical Presence	<p>a. The proposed drilling operations are scheduled to avoid the months when peak numbers of seabirds are likely to be breeding and nesting within the East Caithness Cliffs SPA / NC MPA;</p> <p>b. Operators of vessels working at the nearby oil fields and the BOWF will be provided with advanced notice of the drilling operation so they can take this into account within their activity planning;</p> <p>c. Harbour masters of the marinas including Wick, Inverness, the Caledonian Canal, Scrabster and Orkney will be provided with advance notice so that visiting vessels to the harbour and marina can be informed about the proposed drilling operations;</p> <p>d. An onshore Fishery Liaison Officer (FLO) will be appointed to maintain good communication with local fisheries and co-ordinate activities throughout the proposed drilling operations;</p> <p>e. A safe passage zone will be agreed between the FLO and the fishermen to mitigate any gear loss from supply vessels sailing over static gear marker buoys;</p> <p>f. Standard lighting on MODU and support vessels will be kept to a minimum, as far as reasonably practicable, to minimise the impact of artificial lighting on birds, with considerations for marine navigation and health and safety of offshore workers.</p>
2	Seabed Disturbance	<p>a. The surface location of the proposed 11/24b-D well will remain outside the boundary of the East Caithness Cliffs SPA / NC MPA;</p> <p>b. The MODU spud cans will be positioned to avoid potential Annex 1 stony reef locations;</p> <p>c. A ROV will be used to monitor cement returns to help ensure the volume of cement discharged to the seabed is kept at a minimum;</p> <p>d. Cement will not be pumped unless the ROV is on location and fully functioning;</p> <p>e. 'Stab-in' cementing equipment will be used to allow the volume of cement to be minimised as only the drillpipe volume needs to be displaced and not a full conductor.</p>
3	Noise	<p>a. JNCC protocol for minimising the risk of injury to marine mammals from geophysical surveys (August 2017) will be followed when conducting the check shot survey;</p> <p>b. The proposed drilling operation are scheduled to avoid the months of May through to August, thereby avoiding peak breeding and nesting activities for seabirds within the East Caithness Cliffs SPA / NC MPA, as well as the peak salmon smolt run, which is generally March through to June;</p> <p>c. Recreational diving clubs and businesses operating in the area will be given advance notification of the proposed check shot survey to help ensure their users are aware and can plan their activities accordingly;</p> <p>d. All helicopter trips will be carried out in accordance with the requirements of the Basic Aviation Risk Standard, Offshore Helicopter Operations Safety Performance Requirements (Flight Safety Foundation, 2016); thereby ensuring appropriate clearance from areas of known bird activity and, as far as possible, existing flight paths from Aberdeen Airport will be used to minimise the disturbance corridor for onshore/coastal bird species.</p>
4	Atmospheric Emissions	<p>a. As part of the contractor selection processes, the MODU and vessel contractors will be required to demonstrate that they have control processes in place to minimise the environmental impacts (i.e. maintain equipment),</p>

Wick (11/24b-D) Exploration Well ES (W/4217/2018) – Responses to OPRED Comments

Ref	Theme	Commitments
5	Marine Discharges	<ul style="list-style-type: none"> <li>a. If oil shows are recorded whilst drilling through the payzone, cuttings will be skipped and shipped to shore for appropriate treatment and disposal;</li> <li>b. A robust chemical selection process will be undertaken, the primary focus of which will be to evaluate the environmental performance of all chemicals being considered for use and discharge and, where possible, minimise discharges to sea and the use of hazardous chemicals;</li> <li>c. The selected MODU will have an approved and certified sewage treatment plant.</li> </ul>
6	Accidental Releases	<ul style="list-style-type: none"> <li>a. Bunkering operations will be undertaken in daylight and in good weather conditions;</li> <li>b. Use of floating hoses;</li> <li>c. As part of the contractor selection processes, the MODU and vessel contractors will be required to demonstrate that they have appropriate spill mitigation measures in place;</li> <li>d. Crews will be adequately trained, supervised and appropriate oil spill response exercises held;</li> <li>e. A container of shoreline response equipment will be on hire from Briggs Environmental Services Limited for the duration of the proposed response operations and stored at Wick harbour.</li> </ul>

