Department of Energy & Climate Change

EOG Resources United Kingdom Limited (EOGUK)
Conwy & Corfe Field Development Addendum
Environmental Statement (ES) Summary

Title:	Conwy & Corfe Field Development Environmental Statement Addenda to the Environmental Statement
Operator:	EOG Resources United Kingdom Limited (EOGUKL)
Report No:	D/4077/2010
File Reference No:	01.08.06.02/208C
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Quad/Block No:	110/12 & 110/13
Project Type:	Development
Reviewer:	Julie Cook
Date:	10 May 2013

Project Description:

The Conwy and Corfe Fields are located in Blocks 110/12 and 110/13, approximately 33 kilometres (km) west of the nearest UK coastline and 106 km east of the UK / Eire median line, in a water depth of approximately 33 metres (m). The Conwy and Corfe Fields have a maximum estimated recovery of 8,000 million barrels of oil.

EOGUKL are planning to develop the Conwy and Corfe Fields as a subsea tieback to the BHP Billiton Petroleum Limited operated Douglas Complex. The planned development consists of the installation of a Normally Unattended Installation (NUI) and the drilling of three platform production wells, two penetrating the Conwy reservoir and one penetrating the Corfe reservoir. Two water injection wells will also be drilled, to support production from each field. The NUI will be tied back to the Douglas Complex via a 12 km production flowline, water injection pipeline and control and chemical umbilical. Fluids from the production wells will be comingled at the NUI manifold and exported to the Douglas Complex for processing.

The production and water injection wells will be drilled using a standard jack-up drilling rig, and using Water-Based Mud (WBM). The cuttings and associated WBM will be discharged to the sea. Each production well is estimated to take approximately 60 days to complete, and each water injection well approximately 45 days. No extended well tests will be carried out, but there will be limited flaring during the well clean-up operations over a period of approximately 96 hours.

Pipeline and umbilical installation operations will be conducted using either a reel or conventional pipelay vessel, and be completed within approximately 30 days. It is anticipated that the pipelines and umbilicals will be trenched and backfilled, but rock dumping may be necessary to provide protection if adequate trenching is not achieved. Any exposed lengths of the pipeline and umbilical systems will be protected by rock dumping or flexible concrete mattresses.

Installation of the NUI, drilling operations and pipelay operations are scheduled to commence in Q2 2012, with hook-up, commissioning and first oil scheduled for Q3 2012. All activities will be the subject of an approved Oil Pollution Emergency Plan (OPEP).

Key Environmental Sensitivities:

The EIA identified the following environmental sensitivities:

- Seabirds: Offshore areas of the East Irish Sea are visited by many seabird species, and it is an important over-wintering area for gulls, auks, kittiwakes, cormorants and black scoter. Liverpool Bay has been identified as qualifying as a potential Special Protection Area (pSPA), but the proposed development is located approximately 15.5 km from the northern boundary of the pSPA boundary and the proposed pipeline route does not cross the pSPA. Seabird vulnerability is high or moderate throughout most of the year, but the timing of the proposed activities should ensure that there are no detrimental effects on breeding bird populations and appropriate mitigation measures will be in place to prevent accidental spills that could have a significant impact on seabirds.

- Protected habitats: There are no designated protected habitats in the vicinity of the proposed development. There are two draft Special Areas of Conservation (dSAC) in the East Irish Sea, the Shell Flat and Lune Deep dSACs, but the Shell Flat dSAC is located approximately 31 km to the north-east of the development and the Lune Deep dSAC is located approximately 43 km to the north-east.

- Protected species: Harbour porpoise, bottlenose dolphin, white-beaked dolphin and common dolphin are recorded in the development area, with a peak number of calves during the summer months. The East Irish Sea region also supports a small number of common and grey seals. In view of their marginal use of the development area, there are no anticipated significant impacts on marine mammals.

- Fish stocks: The area is a recognised spawning area for cod, whiting, sole, sprat, plaice and *Nephrops,* and a nursery area for whiting, herring, plaice and *Nephrops*. The power cable from the Douglas Complex to the NUI will be trenched and backfilled to reduce the impact of the associated electromagnetic field on sensitive fish species such as elasmobranches and basking sharks.

- Other users of the sea: The proposed development is situated within ICES rectangle 36E6. Fishing occurs throughout the year, with the highest effort during spring and summer. Shipping density in the vicinity of the proposed development is moderate to high. Details of all planned works will therefore be communicated through the normal notification procedures.

Key Environmental Impacts:

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

- Physical Presence of the NUI and Drilling Rig – Appropriate mitigation measures, e.g. a 500 m safety zone, and relevant navigational aids and warnings, will be put in place to minimise impacts on shipping and commercial fishing activities.

- Seabed Disturbance – Drilling operations (particularly cuttings discharge), jacket installation, and trenching and ploughing operations during pipeline, umbilical and cable installation have the potential to disturb the sediment and impact benthic species. However, seabed disturbance during the proposed operations is anticipated to be local to the development and limited in scale. Any impacts on benthic communities are therefore anticipated to be negligible.

- Noise and Vibration – Noise will be generated during various activities, including the drilling operations, NUI installation, pipeline installation and vessel operations. However, the noise levels are not expected to significantly exceed normal background

noise levels in the area, and unlikely to result in injury or disturbance of European Protected Species.

- Atmospheric Emissions – The emissions from vessels during drilling and NUI and pipeline installation, and from flaring during well clean-up and routine NUI operations will have a negligible impact on air quality, and represent a trivial contribution to global warming.

- Marine Discharges – Discharges during drilling, pipeline and production operations have the potential to impact on water quality. Drill cuttings and associated drilling fluid discharges will have a very localised impact, and all drilling and production chemicals will be CEFAS registered and selected to minimise the environmental impact. and monitored on a daily basis. Produced water will be treated prior to discharge to comply with the OSPAR 30 mg/l dispersed oil concentration standard.

- Accidental Loss of Containment (Hydrocarbon Releases) – Appropriate mitigation measures will be in place to prevent accidental spills. The total diesel inventory for the rig is 968 tonnes. Modelling has been undertaken to assess the potential impact of the worst-case scenarios, a blow-out involving the release of 1,282 tonnes/day of oily (low pressure reservoir requiring pumps to assist production) and 968 tonnes of diesel (the maximum fuel inventory of the drilling rig). Assuming that there was no intervention to stop the blow-out, the oil could beach at various locations around the Irish Sea, but the diesel would disperse naturally and would not impact any coastline. An Oil Pollution Emergency Plan (OPEP) and Emergency Procedures Plan (EPP) will be in place to detail arrangements for responding to any spill.

- Cumulative Impacts – The proposed development area is adjacent to a range of oil and gas operations, offshore wind farms, marine aggregate extraction and commercial fishing. However, in-combination effects have been assessed and are considered to be negligible.

- Transboundary Impacts – The nearest transboundary line is the UK/Eire median line, approximately 106km to the west of the development. It is therefore not anticipated that there will be any transboundary impacts.

Consultation:

The Joint Nature Conservation Committee (JNCC), the Countryside Council for Wales (CCW), the Centre for Environment, Fisheries and Aquaculture Science (CEFAS), the Marine Management Organisation (MMO), the Maritime and Coastguard Agency (MCA), the Ministry of Defence (MoD) and Trinity House Lighthouse Board (THLB) were consulted on the proposals. The ES was also subject to public notice.

JNCC/CCW: In a joint response, JNCC/CCW requested additional information in relation to seabed communities within Welsh territorial waters, the distribution of marine mammal populations, offshore and coastal protected sites and sensitive habitats and the potential impacts and effects of the development on these sites. They confirmed that they were satisfied with the additional information provided by EOGUKL, but have requested clarification of the response measures in the event of an accidental spill, which will be included in the relevant Oil Pollution Emergency Plans (OPEPs).

CEFAS: CEFAS Environment confirmed that there are no restrictions on drilling activities in specified blocks, but pointed out that there are restrictions on seismic activities between January and June to protect spawning demersal stocks. CEFAS Chemicals had no objection

to, the proposed generic chemicals list in the ES, but deferred final assessment until they were consulted on the relevant chemical permit applications.

MMO: MMO confirmed that they had no objections.

MCA: MCA confirmed that they had no objections subject to the normal navigational conditions that would be included in the relevant Consents to Locate.

MoD: MoD confirmed that they had no objections.

Trinity House: Trinity House confirmed that the standard marking requirements for offshore installations would apply, and requested details of any remote wellheads to determine if surface markings would be required.

Public Consultation: No comments were received in response to the public notice.

Further Information:

On 19th December 2011 and 7th November 2012, EOGUKL submitted two further addenda to the above ES assessing the potential environmental impacts of the following changes:

- Installation of a new riser and emergency shutdown valve (ESDV) on the Douglas Complex;
- Installation of a new 3-inch condensate line piggy-backed on the 8-inch production line between the Douglas Complex and Conwy Platform;
- Installation of a new ESDV on the Conwy Platform;
- New pipework on the Conwy Platform between the ESDV and water injection Xmas tree;
- Drilling of an additional condensate injection well from the Conwy platform; and
- Revised production profiles.

Further information was requested from EOGUKL in relation to the revised production profiles, and the response from EOGUKL satisfactorily addressed the issues raised. The additional information contained in the addenda and the requested information was not considered to materially affect the original assessment or the comments received from consultees.

Conclusion:

Following its review of the ES and subsequent addenda, DECC OGED is content that the Conwy & Corfe Field Development is unlikely to have a significant adverse environmental effect on the marine environment in general, any protected sites or species or other users of the sea.

Recommendation:

On the basis of the information presented within the ES and the addenda, and the advice received from consultees, DECC OGED is content that there are no environmental or navigational objections to approval of the proposals, and has advised DECC LED that there

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are no objections to the grant of the relevant consents
Approved *Wendy Kennedy* …… Date 16 May 2013 **Wendy Kennedy** Director, Oil and Gas Environment and Decommissioning