



Shell U.K. Limited

Penguins Field Redevelopment Project

Environmental Statement Summary

To: Wendy Kennedy

From: Paul Batty

Date: 4 December 2017

ES Title:	Penguins Field Redevelopment Project
Developer:	Shell U.K. Limited
Consultants:	Environmental Resources Management Ltd
OGA Field Group:	Northern North Sea
ES Report No:	D/4184/2015
ES Submission Date:	3 May 2016
Block No:	211/13a, 211/13aF2, 211/14REST, 211/29F1, 211/08
Development Type:	Field Redevelopment

Project Description

Shell U.K. Limited (Shell) propose to redevelop the Penguins field located in the northern North Sea in Blocks 211/13a, 211/13aF2, 211/14REST, 211/29F1 and 211/08, approximately 150 kilometres (km) from the nearest UK coastline in the Shetland Isles and adjacent to the UK / Norway median line. The water depth in the area is approximately 170 metres (m).

The Penguins field is currently produced as a subsea tieback to the Shell Brent Charlie platform. As Brent Charlie cessation of production is expected in the near future, Shell propose to install a circular Floating Production, Storage and Offloading (FPSO) installation, which will be held in position by 12 anchor piles. Six new production wells are also planned to complement the existing wells, with a possible further three wells that may be drilled at a later date. Four production manifolds, one pipeline end manifold (PLEM), one riser base manifold and 34.7 km of surface laid pipeline will connect the wells to the FPSO. The pipeline system will be protected by rock dumping or concrete mattresses. The FPSO will process produced hydrocarbons and oil will be stored within the the integral storage tanks prior to offloading by shuttle tanker. Gas will be exported via the existing pipeline system, which will be reconfigured to export directly *via* the Far North Liquids and Associated Gas System (FLAGS) pipeline (instead of *via* Brent Charlie) to the St Fergus gas terminal.

The initial six new wells will be drilled using a Mobile Drilling Unit (MoDU), with drilling conducted in two phases. The initial top hole sections will be drilled in Q2/3 2019 and the wells will then be completed between Q4 2020 and Q4 2021. Subsea infrastructure will be installed and reconfigured in Q2/3 2020, and first oil is anticipated by Q3 2022. Field life is expected to span from 2022 to 2041. All activities will be subject of an approved Oil Pollution Emergency Plan (OPEP) covering both drilling and production operations.

Key Environmental Impacts

The Environmental Statement (ES) identified the following key operations as having the potential to result in an environmental impact:

- Drilling operations - MoDU location and anchors, vessel and drilling noise, marine discharges, atmospheric emissions and accidental chemical and hydrocarbon spills.
- Installation operations - Increased vessel movements, vessel and subsea infrastructure installation noise, atmospheric emissions and accidental hydrocarbon spills.
- Production operations – Marine discharges, including produced water, atmospheric emissions and accidental hydrocarbon spills.

Key Environmental Sensitivities

The ES identified the following environmental sensitivities:

- Fish stocks: The Penguins field is located within spawning grounds for cod, haddock, Norway pout, saithe and whiting, and nursery areas for blue whiting, haddock, hake, ling, Norway pout, whiting, mackerel, herring and spurdog. However, the spawning and nursery areas are extensive and the proposed operations are unlikely to have any significant impact on these species.
- Seabirds: Seabird vulnerability is moderate in October and low for the remaining months of the year. It is considered that there are sufficient mitigation measures in place to prevent accidental spills that could have a significant impact on seabirds, and an approved Oil Pollution Emergency Plan (OPEP) will be in place for both the drilling and production operations.
- Protected habitats: The Penguins field is not located in the vicinity to any protected habitats. The closest Natura 2000 site is the Pobie Bank SAC, which is protected for bedrock reef habitats and is located approximately 120 km from the proposed development.
- Protected species: Harbour porpoise have been recorded in the area in low numbers during May and August, and in moderate numbers during July. Grey and common seals inhabit coastal and inshore waters adjacent to Scotland and have occasionally been observed to travel long distances when foraging. However, both species are unlikely to be present in large numbers in the Penguins field area. Whilst there may be limited disturbance of marine mammals during the anchor piling operations and subsea installation works, the operations be localised and of short duration, and no significant adverse impacts on marine mammals are anticipated as a result of the proposed operations.
- Other users of the sea: The development is located within ICES rectangle 52F1, and relative fishing effort in the area is low to moderate. Shipping density in the vicinity of the development is also low. Appropriate navigational controls will be in place, and it is not anticipated that there will be any significant impact on other users of the sea as a result of the development.
- In-combination, cumulative and transboundary effects: No significant in-combination, cumulative or transboundary effects are anticipated as a result of the proposed development.

Key Mitigation Measures (including environmental or monitoring conditions)

No significant adverse impacts are anticipated that would warrant specific mitigation measures or monitoring conditions. All activities will be undertaken in line with commitments detailed in the ES, industry best practice and conditions included in the relevant operational permits, etc. A disturbance licence may be required for the proposed piling operations, but this will be discussed with the consultees in advance of the proposed operations.

Consultation

The Joint Nature Conservation Committee (JNCC), Marine Scotland (MS), the Maritime and Coastguard Agency (MCA), the Northern Lighthouse Board (NLB) and the Ministry of Defence (MoD) were consulted on the project. The Scottish Fisherman's Federation (SFF) were also notified of the proposals. The ES was also subject to public notice.

None of the consultees raised any objections, and only one response was received in response to the public notice requesting Shell to consider using harbour facilities on the Shetland Isles during the proposed works.

Further Information

Further information was requested from Shell to address issues raised during the internal BEIS OPRED review of the ES, including clarification of survey data and the emissions from power generation, and to address a discrepancy between the production levels detailed in the ES and the levels included within the Field Development Plan Addendum submitted to the Oil and Gas Authority (OGA). The additional information received from Shell on 28 June 2017 and 30 November 2017 adequately addressed the issues raised.

Determination

Following review of the ES, the responses received from consultees and the additional information provided by Shell, BEIS OPRED is satisfied that this 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, advice received from consultees and additional information provided by Shell, BEIS OPRED is content that there are no environmental grounds for objection to proposals, and agrees to the issue of the necessary consent for the proposals.

Wendy Kennedy

5 December 2017

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Wendy Kennedy
Chief Executive
BEIS OPRED

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Date