



Offshore Petroleum Regulator
for Environment & Decommissioning

Dana Petroleum (E&P) Ltd

Arran Development
Environmental Statement Summary

To: Jonathan Ward
From: Tracy Edwards
Date: 27th September 2018

ES Title:	Arran Development
Developer:	Shell UK Limited (previously Dana Petroleum (E&P) Limited)
Consultants:	Xodus Group
OGA Field Group:	Central North Sea
ES Report No:	D/4197/2017
ES Submission Date:	11 th April 2018
Block No:	23/11, 23/16 and 22/30
Development Type:	Field Development

Project Description

The proposed Arran development is located in the central North Sea, 240 kilometres (km) east of Aberdeen and 3 km from the UK / Norway median line. The development is located in a water depth of approximately 80 metres (m).

The Arran development is a gas and condensate field, and it will be developed via two subsea drill centres, Arran North and Arran South, with two production wells in each drill centre. The wells will be drilled using either an anchored semi-submersible drilling rig or a heavy-duty jack-up drilling rig. The wells will be tied back to the existing Shearwater production installation in Block 22/30, operated by Shell UK Limited (Shell), via a new 60 km pipeline and umbilical connecting to the existing Scoter riser. The pipeline and umbilical will be buried in separate trenches, and an estimated 6,900 tonnes of rock will be deposited over sections of the pipeline to mitigate upheaval buckling. An additional 41,600 tonnes of rock will be deposited to protect pipeline, umbilical and cable crossings. A total of approximately 450 mattresses and a number of internal concrete support structures will also be required at the five crossing locations.

First Gas and condensate is expected in Q4 2020, and production chemical use and discharge and produced water discharge will be mediated through the Shearwater installation.

Key Environmental Impacts

The Environmental Statement (ES) identified the following key potential environmental impacts:

- Seabed disturbance;
- Discharges to sea;

- Atmospheric emissions;
- Underwater noise;
- Interactions with other sea users; and
- Accidental events.

Key Environmental Sensitivities

The ES identified the following key environmental sensitivities:

- **Fish:** The Arran development is located within spawning grounds for blue whiting cod, European hake, lemon sole, Norway pout, plaice, mackerel and sandeels; and within nursery grounds for cod, haddock, ling, Norway pout, plaice, whiting, angler fish, herring, mackerel, sandeels, spurdog and spotted ray. There will be limited spatial and temporal impacts during construction activities, but the spawning and nursery grounds are extensive and the proposals are unlikely to have any significant impact.
- **Seabirds:** Seabird vulnerability to surface oil pollution is generally low throughout the year, although there is missing data for some blocks and months. It is considered that there are sufficient mitigation measures in place to prevent accidental spills that could have a significant impact on seabirds, and appropriate Oil Pollution Emergency Plans will be required for the drilling, construction and production operations.
- **Seabed habitats and species:** The development area supports a diverse community, including sea urchins, sea cucumbers, polychaetes and molluscs. It also supports some soft corals and low densities of ocean quahog, and a small number of Methane Derived Authigenic Carbonate (MDAC) structures have also been identified in the area. Direct impacts resulting from the anchoring, the drilling operations and discharges, and the installation of seabed infrastructure including the pipelines and umbilicals will be localised and are not considered to be significant. The nearest protected site is 20 km from the Shearwater platform, and no impacts are anticipated.
- **Marine mammals:** Six species of cetaceans are regularly recorded throughout the North Sea, including the harbour porpoise, bottlenose dolphin, white-beaked dolphin, Atlantic white-sided dolphin, killer whale and minke whale. Risso's dolphin, common dolphin, long-finned dolphin and sperm whales are also known to use the area, and there are occasional recordings of other species. Grey seals may be observed in the area but are unlikely to be present regularly or in significant numbers. Noise impacts will be of limited duration and/or extent and are consequently considered to be minor, and no significant adverse effects on marine mammals are anticipated.
- **Other users of the sea:** Fishing effort and value in the ICES rectangles covering the development area (43F1, 43F2 and 44F2) are reported as low. Shipping density is also low. Safety zones and 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.
- **Cumulative/Transboundary impacts:** No significant in-combination, cumulative or transboundary effects are anticipated.

Key Mitigation Measures (including environmental or monitoring conditions)

Three mitigation measures are considered particularly relevant to the impact assessment:

- Dana Petroleum (E&P) Ltd (Dana) undertook to follow the JNCC guidelines for minimising the risk of disturbance and injury to marine mammals from piling when undertaking infrastructure piling activities.;
- Dana confirmed that, prior to anchor lay operations, a visual survey would be undertaken to confirm a clear seabed. If any obstructions, including MDAC structures are noted the anchor pattern will be modified, including ensuring that the anchors,

chains or warps do not impact the MDAC structures.

- Dana will be required to update their environmental commitments register to capture mitigation commitments made in dialogue with BEIS OPRED.

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 Health and Safety Executive (HSE) was also notified of the proposals and the ES was subject to public notice.

- JNCC commented on a number of aspects and identified details that should be considered at the environmental permitting stage. They confirmed there were no objections.
- MS provided comments that were addressed by the provision of additional information (see below). They confirmed there were no objections.
- MCA requested that standard navigational conditions should be included at the environmental permitting stage. They confirmed there were no objections.
- NLB provided standard navigational conditions to be included at the environmental permitting stage. They confirmed there were no objections.
- MOD confirmed there were no objections.

No comments were received from the HSE or in response to the public notice.

Further Information

Additional information was requested from Dana on 31st July 2018 and 12th September to address issues raised by consultees or during the BEIS OPRED review of the ES. The responses received from Dana on 16th August and 17th and 21st September 2018 satisfactorily addressed all the issues raised.

Determination

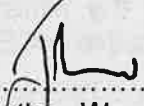
During the review of the ES, Dana confirmed that its Board had decided not to pursue the Arran development, that they intended to sell their interest in the development and that the licensees had agreed to apply to the Oil and Gas Authority (OGA) to request transfer of operatorship to Shell. An amended application for consent was subsequently submitted to the OGA by Shell. That application has been reviewed and it has been confirmed that there are no material differences from the application for consent submitted by Dana.

Following review of the ES, the responses received from consultees and the additional information provided by Dana, and a comparison of the applications for consent submitted by Dana and Shell, BEIS OPRED is satisfied that the proposed development 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

BEIS OPRED is content that there are no objections to the proposals and agrees to the OGA issuing the necessary consent to Shell UK Ltd to allow the development to proceed. The agreement is conditional upon Shell subsequently confirming that it accepts the key mitigation measures identified by Dana, and conditional upon BEIS OPRED agreeing to any proposed modification of the environmental commitments identified by Dana. Shell should also note that the agreement does not extend to installation of the Columbus tie-in structure

referred to in the documents supporting the applications for consent submitted to the OGA, as those works were not addressed in the ES for the Arran development. The installation of the Columbus tie-in structure will therefore be assessed as part of the BEIS OPRED review of the ES for the development of the Columbus field. The OGA will therefore be advised of these conditions, which will also be notified to Shell in the BEIS OPRED letter confirming its determination of the ES.


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Jonathan Ward
Director, Environmental Operations
BEIS OPRED

28/9/18
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Date