

APACHE BERYL I LIMITED
CALLATER FIELD DEVELOPMENT
Environmental Statement Summary

To: Sarah Pritchard

From: Mark Shields

Date: 24th October 2016

ES Title:	Callater Field Development
Operator:	Apache Beryl I Limited
Consultants:	Hartley Anderson Limited
Field Group:	OGA, Northern North Sea
ES Report No:	D/4189/2016
ES Date:	May 2016
Block Nos:	09/10b, 09/13a, 09/13c, 09/18a, 09/19b and 09/19c
Development Type:	Field Development

Project Description

Apache Beryl I Limited (Apache) propose to develop the Callater field, located in the northern North Sea in Block 09/10b. Callater will be a subsea development located approximately 166 km to the east of Shetland and 10 km from the Norwegian median line, and will be tied-back to the Beryl Alpha platform via the existing Skene field subsea facilities. The development, including connecting pipeline bundles and the control umbilical will occupy or cross UKCS Blocks 09/10b, 09/13a, 09/13c, 09/18a, 09/19b and 09/19c. The Callater field will produce both oil and gas, with oil exported via the existing shuttle tanker arrangements for the Beryl area, and gas potentially used as fuel on Beryl Alpha or exported via the Scottish Area Gas Evacuation (SAGE) pipeline system.

Phase 1 of the project involves the drilling of two production wells using a semi-submersible drilling rig (one of the wells will be a previously drilled exploration well that will be completed as a production well), and the installation of the Callater Field Infrastructure, which includes a subsea bundle incorporating two manifolds (the Callater towhead manifold and the Skene trailhead manifold). The Callater towhead manifold will be located adjacent to the Callater well facilities, and the Skene trailhead manifold will be located adjacent to the existing Skene manifold in Block 09/19c. The Callater towhead manifold and the Skene trailhead manifold will be connected by a 3.9 km pipeline bundle with integrated hydrocarbon, chemical and hydraulic flowlines. The bundle will be used to transport the hydrocarbons to Skene where they will then be exported to Beryl Alpha using the existing Skene pipeline bundle facilities. A 13.75 km control umbilical will be laid from the Callater towhead manifold to Beryl Alpha. It will be laid along a route running northeast from the Callater towhead manifold until it is approximately 2.9 km from the Callater facilities, and it will then run northwest adjacent to the Skene pipeline bundle.

Phases 2 and 3 will involve the drilling of additional wells, which are contingent on field performance during each preceding phase and the economic viability of production. The Callater towhead manifold has provision for six well slots, but up to nine wells could be drilled during project life, but some of these will be sidetracks of previous wells that have ceased viable production. First oil is anticipated in Q2 2017, with subsequent phases

anticipated to commence in 2018 and 2018/19 respectively. Gas lift or water reinjection to support production will be considered for Phase 3, but this will be dependent on field performance and feasibility. The Callater field is expected to have a field life of between eight and 13 years.

All wellheads and subsea Xmas trees will be fitted with protection structures, and it is estimated that approximately 11,750 tonnes of rock dump will be required to provide protection for the control umbilical. In addition, approximately 150 concrete mattresses will be required to provide protection for the infrastructure at the subsea well locations, the manifolds and the pipeline crossings. The total seabed area that will be impacted by deposit placement is estimated to be approximately 0.02km².

The 3.9km bundle, the Callater towhead manifold and Skene trailhead manifold have been designed to be recovered at the time of decommissioning. Identification of the most suitable decommissioning options will be considered as part of the comparative assessment prepared at the time of decommissioning.

Key Environmental Sensitivities

The Environmental Statement (ES) identified the following environmental sensitivities:

Fish Stocks: The development is within spawning areas for haddock (*Melanogrammus aeglefinus*), Norway pout (*Trisopterus esmarkii*), whiting (*Merlangius merlangus*) and saithe (*Pollachius virens*) and a nursery area for blue whiting (*Micromesistius poutassou*), haddock, Norway pout and mackerel (*Scomber scombrus*).

Seabirds: Seabird vulnerability is very high in October and high in January, July and December and moderate to low for the remainder of the year.

Annex I Habitats: No potential Annex I habitats have been designated in the vicinity of the proposed development.

Annex II Species: Harbour porpoise (*Phocoena phocoena*), white-beaked dolphins (*Lagenorhynchus albirostris*), minke whale (*Balaenoptera acutorostrata*) and Atlantic white-sided dolphin (*Lagenorhynchus acutus*) have been recorded in the general area with most frequent observations between June and October. Grey seals (*Halichoerus grypus*) and harbour seals (*Phoca vitulina*) are unlikely to be present in large numbers in view of the distance from their haul-out sites.

Protected Sites: The nearest Special Area of Conservation (SAC) is the Braemar Pockmark located 49 km to the south. The closest Marine Protected Area is the Central Fladen site located 103 km southwest of the development.

Other Users of the Sea: Fishing effort is low to moderate through most the year, with periods of high fishing activity in spring and early summer. Landings are primarily the demersal species, haddock, cod (*Gadus morhua*) and whiting, and the pelagic species, mackerel and herring (*Clupea harengus*). The area is categorised as low shipping density.

Key Potential Environmental Impacts

The ES identified the following key potential environmental impacts:

Physical presence: The physical presence of the drilling rig, installation vessels and subsea facilities has been identified as a potential impact, primarily for fisheries and navigation. A 500m exclusion zone will be applied for to cover the Callater towhead manifold and wells, and a marginal increase in the size of the existing safety zone associated with the Skene development will be requested to cover the Skene trailhead manifold.

Physical disturbance: The main sources of physical disturbance will be from rig anchoring and installation of the subsea infrastructure and related protection structures. The surface laying of the subsea bundle and umbilical will introduce a hard substrate and will locally alter the seabed and related benthic fauna.

Marine discharges: The wells will be drilled using a combination of Water Based Mud (WBM) and Low Toxicity Oil Based Mud (LTOBM), with WBM cuttings discharged to sea and LTOBM cuttings shipped ashore for disposal. The selection of chemicals to be used in the course of the drilling and production operations will be based on balancing least harm and technical function. Produced water separated at Beryl Alpha may be reinjected or discharged to sea, with treated dispersed oil-in-water (OIW) concentrations typically in the range 13-18mg/l.

Atmospheric emissions: The main sources of atmospheric emissions will be combustion products from power generation and engines on the drilling rig, the vessels associated with subsea installation operations and the additional helicopter movements relating to the drilling and installation operations. There will also be an increase in Beryl Alpha power generation requirements relating to the need to run the existing gas compression trains at a higher rate.

Noise: No significant sound impacts have been identified (for example the subsea manifolds will not be piled). A number of minor sound sources have been identified associated with activities such as drilling and rock placement. These sources are regarded to be equivalent to the noise generated by large merchant vessels, and would be a temporary incremental source of noise.

Cumulative effects: Minor incremental or cumulative effects were identified in relation to physical presence, disturbance of the seabed, discharges, emissions to atmosphere, noise and potential spills. None of these cumulative effects were considered to represent more than a minor impact in a regional context. No significant synergistic effects, where the joint effect of two or more processes is greater than the sum of the individual effects, were identified.

Accidental events: Control measures will be in place to minimise the risk of accidental events. The procedures to mobilise equipment and respond to an oil spill will be detailed in the Beryl Field OPEP, which will be updated to include the Callater drilling activities and field development operations.

Transboundary effects: The proposed drilling and production activities are not anticipated to result in any significant transboundary effects. In the event of a significant oil spill that crosses the median line and enters Norwegian waters, the NORBRIT Agreement could be implemented.

Consultee(s):

The Joint Nature Conservation Committee (JNCC), Marine Scotland (MS), the Maritime and Coastguard Agency (MCA), the Ministry of Defence (MoD) and the Northern Lighthouse Board (NLB) were consulted on the proposals, and did not raise any objections. The ES was also subject to public notice, but no comments were received.

Further Information: In response to the consultee comments and a number of issues highlighted during the Department's review of the proposals, further information was requested. The response received from Apache adequately addressed the issues raised.

Conclusion(s):

Following consultation and the provision of the additional information received on the 29th September, 11th October and 4th November, the Department is satisfied that this project is not likely to have a significant impact on the receiving environment, on any sites or species protected under the Habitats Regulations or on other users of the sea.

Recommendation(s):

On the basis of the information presented within the ES and the advice from consultees it is recommended that the ES should be approved and that the OGA should be advised that there are no objections to issuing consent to the proposed development.

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Date 15/11/2016

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