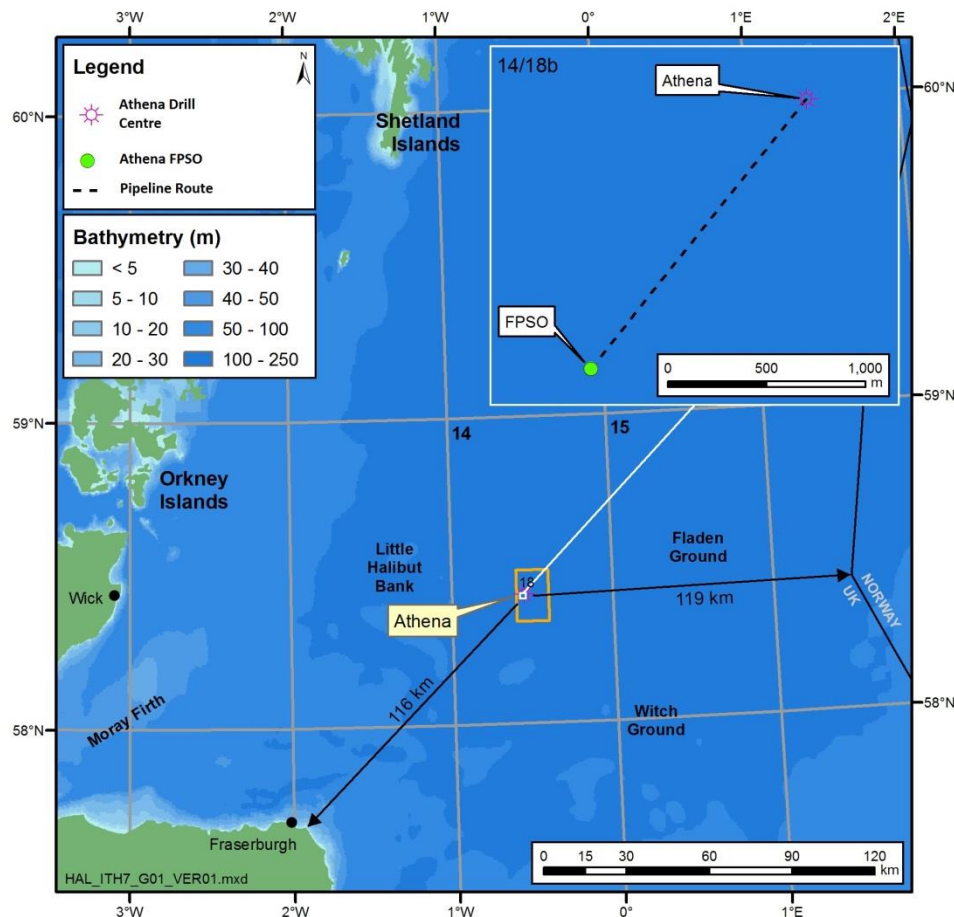


1 Introduction

This Environmental Statement presents the findings of the Environmental Impact Assessment conducted by Ithaca Energy (UK) Ltd (Ithaca) for the decommissioning programmes of the Athena Field in United Kingdom Continental Shelf (UKCS) Block 14/18b following cessation of production via the *BW Athena* FPSO. The Block is located in the central North Sea, approximately 116km north east of Fraserburgh and 119km from the UK-Norway median line (Figure 1.1).

Figure 1.1 – Athena Field location



1.1 Project Background

1.1.1 Licensing

Block 14/18b was awarded to Ithaca Energy (UK) in 2005 as part of the UK's 23rd Seaward Licensing Round (Licence No. P1293). Ithaca is block operator on behalf of current co-venture's (Dyas Exploration UK Ltd - 17.5%, Ithaca Energy (UK) Limited - 22.5%, Parkmead (E&P) Limited - 30%, Spike Exploration UK Limited – 15% and Trap Oil Limited - 15%).

1.1.2 History and background

There have been nine exploration wells drilled in Block 14/18 since the first in 1978. The Athena reservoir was discovered by well 14/18b-7 in 1991.

Having completed post drilling evaluation work, Ithaca developed the field via a subsea tie-back to the FPSO BW Athena. An Environmental Impact Assessment (EIA) was carried out and an Environmental Statement (ES) submitted to DECC in support of the project in March 2010 (DECC Ref No. D/4071/2010). This was assessed and after initial comments were addressed, approval was received in August 2010.

1.2 The Environmental Statement

1.2.1 Purpose

Environmental Impact Assessment (EIA) is an integral part of Ithaca's environmental and project management processes, which satisfies the company's environmental policy objectives with regard to the assessment of potential risks to the environment from its activities. EIA is an iterative process which continues through the various phases of a project and is a systematic, objective assessment of the environmental effects the proposed project may have on its surrounding environment. Cumulative effects with those of existing activities, transboundary effects and effects on other sea users are also addressed. This ES documents the results of the EIA process, highlighting environmental sensitivities, identifying potential hazards, assessing/predicting risks to the environment and identifying practical mitigation and monitoring measures to be carried forward into detailed field decommissioning operations.

The ES has been produced in accordance with the *Offshore Petroleum Production and Pipe-lines (Assessment of Environmental Effects) Regulations 1999, (as amended 2007)* under which the submission of an ES to the Secretary of State for the Department of Energy and Climate Change (DECC) may be required for the decommissioning of hydrocarbon reservoirs.

1.2.2 Environmental Assessment Process

The EIA process has been ongoing through the project. Information on the existing environment and other users of the decommissioning location and adjacent area was synthesised and important features and sensitivities identified. This information was used in the assessment of alternatives during option selection procedures.

For this ES, the interactions between the proposed activities and the environment (in its broad sense) together with issues raised during previous consultations with government bodies and others were identified at the screening and scoping stages of the EIA process, using defined severity criteria (see Section 5); those interactions with the potential to result in significant environmental effects were then assessed in more detail (see Section 6). Where appropriate, mitigation measures were identified to reduce effects and to ensure compliance with Ithaca and legal standards.

The EIA process has been conducted by Ithaca, supported by independent consultants Hartley Anderson Limited.

1.3 Scope

This ES includes consideration of the main parts and stages of the decommissioning programmes including drilling P&A and subsea equipment removal. Field development was a subsea tieback to an FPSO and the main elements of the Athena decommissioning programmes are:

- Well P&A on four of production, one water injection and one previously suspended appraisal well. Including removal of the ESP equipment from the production wells
- Removal of the mooring system comprising; 9 suction cans approximately 7.5m long, by 10m diameter with chains and wire rope moorings fixed between the STP buoy and the suction cans. (Note: not in the section 29 notice and included for information)
- Removal of the 8" production, 8" water injection and 3" service flowlines and risers, electro/hydraulic/chemical injection umbilical and power cable.
- Removal of the riser base structure and four 660mm diameter x 25.4mm wall thickness x 30m long driven piles.
- Removal of the production manifold including piping and control modules and four 660mm diameter x 25.4mm wall thickness x 30m long driven piles.
- Removal of the midwater arch and clump weight including two 660mm diameter x 25.4mm wall thickness x 30m long driven piles. (Note: not in the section 29 notice and included for information)

For assessment purposes within the ES emissions, discharges and other sources of environmental effects from the development installation scope were considered.

1.4 Areas of uncertainty

There are some areas of the programmes which are still to be defined and a number of assumptions and options have been made to inform the assessment process where these occur. The contracting processes are not yet complete for the rig or the other vessels involved in the decommissioning work, therefore the final rig and vessel selection may change.

Where more than one option remains, each has been considered in the ES. Where definition is lacking, best estimates of emissions, discharges and other sources of interaction are used in the consideration of possible effects. It is not considered that the remaining flexibility in project definition results in significant uncertainty in assessment of environmental effects.

1.5 Consultation

A statutory consultation period will commence on submission of the decommissioning programmes to DECC and statutory consultees. This ES and the CA will be submitted with the decommissioning programmes.

Initial meetings with DECC and SFF have been conducted to outline the requirements.

All comments received during the consultation period will be reviewed and the documents updated accordingly.

1.6 Structure of the Environmental Statement

The ES is comprised of seven Sections plus a non-technical summary, bibliography and appendices. Figures and tables are interspersed throughout the document. The sections have been updated from the previous ES, but in some areas, for example those required to Section 4 the changes were relatively minor.

The **Non-Technical Summary** is intended as a comprehensive stand-alone summary of the ES, its findings and conclusions.

Section 1 Introduction provides both a context and guide to the main body of the report and a summary scope of the project.

Section 2 Environmental Management and Regulation summarises legislative requirements and Ithaca's approach to environmental management.

Section 3 Project Description provides a description of the proposed decommissioning programmes.

Section 4 Description of the Environment is a summary description of the character and sensitivity of the environment over the Athena Field and adjacent areas.

Section 5 Identification and Screening of Potential Environmental Issues details the procedure used to identify those aspects of the decommissioning programmes with potential interactions with the natural environment and other users of the area. The section also includes results of screening of the potential effects identified.

Section 6 Evaluation of Potentially Significant Issues is a more detailed consideration of those environmental interactions raised in consultation or with the potential to cause significant effects together with proposed mitigation measures.

Section 7 Management and Conclusion summarises the key issues to be taken forward through an Environmental Management Plan. The section also provides an overall conclusion regarding the likely effects of the proposed decommissioning programmes and proposed mitigation actions identified by the EA process.

Bibliography lists the published and other data sources used in the conduct of the EA and referenced in the ES.

Appendix 1 Glossary and Abbreviations provides a non-technical explanation of terms used in the ES.

Appendix 2 Legislation relevant to the proposed development programme and a summary of Block Licence conditions.

Appendix 3 Chemical Description for the possible primary and contingency mud and cementing chemicals that may be used in isolating the Athena reservoir.

Appendix 4 – Seabed features A3 illustration depicting FPSO location, anchor pattern for rig, sampling stations and representative seabed photographs.