

**RWE DEA UK  
TOPAZ DEVELOPMENT  
Environmental Statement Summary**

**To:** Wendy Kennedy

**From:** Evelyn Pizzolla

**Date:** 10 December 2008

<b>ES Title:</b>	Topaz Development
<b>Operator:</b>	RWE Dea UK
<b>Consultants:</b>	Metoc plc
<b>Field Group (DECC):</b>	London
<b>ES Report No:</b>	D4016/2008/
<b>ES Date:</b>	28 July 2008
<b>Block Nos:</b>	49/02a-6
<b>Development Type:</b>	Development (Well and Pipeline tieback)

**Project Description**

The project comprises of the installation of a 15.2km long 6-inch gas export pipeline and umbilical, incorporating a methanol feed line with a control and communications cable. The pipeline will connect the single gas well at the Topaz gas field, to the Schooner A platform. As Topaz is a marginal development, careful consideration was given to potential export routes. Several other receiving platforms were considered, and specifically Boulton H at 27km and Watt at 29km distance, but as no technical or environmental advantages were discerned, the most direct route was chosen. The Schooner A platform is connected to the Murdoch platform via existing pipeline infrastructure conducting gas to the UK at Threadlethorpe.

The pipeline will be laid on the seabed using a dynamically positioned (DP) reel pipelay vessel and trenched using a displacement plough. A backfill plough will be used to return the spoil to the trench and cover the pipeline, to protect against fishing activity and to prevent upheaval buckling. This operation is estimated to take 10 days. The pipeline will be hydro-tested and tied-in to the subsea connections at Topaz and Schooner A. Three installation options for the control umbilical were also considered including, installation in a separate trench 15–20m offset; installation in the same trench as the pipeline, but not connected; installation in the same trench but piggy-backed. In all cases the trench depths for the pipeline and/or control umbilical have been designed to eliminate the need for rock placement. However, it is recognised some protection may be required at the Topaz end if the plough is unable to achieve the planned depth close to the well head or at spots along the pipeline if backfill does not provide the required protection.

Only a single well has been drilled at the Topaz field to date, but it is possible that a second well may be drilled if the current well is unable to access all reserves due to connectivity issues. If required it will be drilled approximately 50m from the main well and the subsea well head will be tied into the Topaz pipeline via a tee piece already included in the pipeline design.

**Key Environmental Sensitivities**

- The waters of the southern North Sea (SNS) and the Topaz well are important for large numbers of seabirds, especially in the winter months.
- The Topaz well lies 28km to the north east of the North Norfolk Sandbanks possible Special Area of Conservation (pSAC) while the Schooner ‘A’ platform is 19.4 km to the south of the

Dogger Bank draft Special Area of Conservation (dSAC). Operations are not expected to impact on these areas.

- No Annex 1 habitats were identified and cetacean abundance in the area is low.

### **Key Potential Environmental Impacts**

- Seabed disturbance
- Discharges to the marine environment
- Accidental hydrocarbon spills
- Gas release

**Seabed disturbance.** This will be caused by the trenching and backfill operations along the pipeline and umbilical routes. The localized benthic communities will be disturbed and/or smothered by the displaced sediments, however, once backfill is complete it is expected that re-colonisation will commence. No rock placement is anticipated although contingency has been allowed around the Topaz well or at spot areas for safety along the pipeline if total backfill is not achieved. However, these areas would be minimal and are not considered to have a significant impact on the typical fauna of the southern North Sea. Pipe and umbilical lay will be from DP vessels so there will be no additional disturbance from anchors.

**Discharges to the marine environment.** These would include pipeline hydrotest chemicals which it is expected would be quickly dispersed by currents and tidal effects in the area. If a second well is drilled at Topaz there would be associated cuttings and chemical discharges. The well would be the same design as the original and therefore the cuttings would impact an estimated area of 550m<sup>2</sup>. Only WBM will be used and the chemicals will have the lowest environmental risk category where possible. Any impacts will be close to the well and the low toxicity values of the chemicals should allow recovery and re-colonisation of the area.

**Accidental hydrocarbon spills.** High seabird vulnerability during the winter months makes them particularly susceptible to accidental oil spills. As this is a gas field crude oil is not expected and associated condensate will be minimal. Transfers of diesel between the drilling rig and supply vessels are identified as moderate risk. Should an accident occur it was estimated that a worst case scenario of 331tonnes of diesel could enter the marine environment which could travel up to 16km from the discharge point but would not reach the dSACs or the coastline. Proposed control measures to preclude accidental spillage of fuel oil include bunkering operations only during daylight hours and good weather; the use of non-return valves on all hoses; monitoring of all operations by designated personnel. The operator will also ensure that an adequate Oil Pollution Emergency Plan is in place to reduce the risk in the event of an oil spill.

**Gas release.** Loss of containment integrity leading to a release of gas and associated condensate may occur due to design fault or external damage by fishing gear or anchors. In the event of a breach, condensate discharge before shut-down was calculated at 0.41m<sup>3</sup>, which should disperse or evaporate rapidly. Natural gas components are soluble in water and are of low toxicity so there would be a minimal impact on the marine environment. However, a major breach could impact on a vessel through fire or loss of buoyancy. Mitigation measures include leak-testing during commissioning, corrosion protection, regular inspections, leak sensors and shut-down controls installed. In addition the pipe is protected from damage by backfill, rock placement in areas of exposure and publication of the pipeline route to relevant sea-users.

**Public Consultation:** No comments were received as a result of the public consultation.

**Consultee(s):**

The statutory consultees for this project were JNCC and CEFAS. The following comments were made:

JNCC: JNCC commented that in general there was good discussion and presentation of the seabed surveys results in the ES. However, they noted that the final decision on umbilical installation had not been determined, and requested that the rationale behind the selected option should be discussed in future submissions relating to this activity.

CEFAS: Cefas noted that there were no restrictions on oil & gas activity during the proposed period of pipeline installation.

**Further Information:** DECC asked if a final decision had been made regarding umbilical installation. RWE Dea confirmed that a decision had been reached and that a separate trench would be required for the umbilical and confirmed that option had already been assessed in the ES. RWE Dea provided a technical analysis of pipeline conditions leading to the requirement for separate trenching. They also provided further discussion on the installation using a trenching plough as opposed to the technical challenges of using a cable plough. The additional information was forwarded to JNCC who indicated that they were disappointed that the trenching plough method had been chosen, leading to greater seabed disturbance, but raised no further comment.

**Conclusion(s):**

Following consultation and the provision of the additional information on 19 November 2008, DECC and its consultees are satisfied that this project is not likely to have a significant impact on the receiving environment, including any sites or species protected under the Habitats Regulations.

**Recommendation(s):**

**On the basis of the information presented within the ES and advice from consultees it is recommended that the ES should be approved.**

*Wendy Kennedy*.....

10/12/2008.....

**Wendy Kennedy**

**Date**