

Environmental Statement (ES) Summary and Sign-Off

Title:	Bains Gas Storage Project Offshore Environmental Statement
Operator:	Hydrocarbon Resources Limited (Centrica)
Report No:	D/4061/2009
Submission Date:	November 2009
Block No:	110/3c
Development Type:	Gas Storage Development
Reviewer:	Carol Newbigging Saravan Marappan
Date:	February 2011

A) Project Description:

Hydrocarbon Resources Limited (Centrica) currently operates the Bains gas field which was developed via a subsea tieback through a single production tree and flowline to the existing South Morecambe DP1 Platform. With the Bains gas field nearing depletion, Centrica is planning to develop a natural gas storage system in the Bains reservoir. Gas for storage will be taken mainly from the National Transmission System (NTS) during periods of low demand, compressed and sent for storage in the Bains reservoir via a subsea pipeline. During periods of high demand, gas will be returned from the Bains reservoir via the same pipeline to shore for conditioning to allow for export to NTS.

The gas storage development plan will consist of:

- installation of a offshore wellhead platform,
- drilling of up to 6 new wells,
- laying of 30" wet gas bi-directional pipeline, approximately 26.8 km with a piggybacked 3" methanol line and a separate power cable.

Situated within Block 110/3c, the Bains reservoir lies approximately 31 km south-west of Barrow-in-Furness and approximately 29 km west of the Flyde coast and 122 km east of the UK / Ireland median line, in a water depth of 18 metres.

The wells will be drilled from a conventional jack-up drilling rig, the top hole and the lower sections will be drilled with water based mud (WBM) with a contingency to use low toxicity oil based mud (LTOBM) for the lower sections. Each well will generate approximately 1,166 tonnes of water based mud and cuttings which will be discharged to sea. Should contingency LTOBM be used, the cuttings generated will be skipped and shipped ashore for treatment and disposal. No extended well test will be carried out, but there will be limited flaring during well clean-up over a period of approximately 48 hours.

Pipelay operations will be conducted using an anchored pipelay barge or a dynamically positioned (DP) pipelay vessel. Offshore, the gas pipeline with the piggyback methanol line will be trenched by mechanical pipeline trencher and will be left to backfill naturally. Near shore, the pipeline trench will be prepared by suction hopper dredger and dipper dredger and will be backfilled following laying of the pipeline. The power cable will be installed in a

separate trench by a dedicated cable laying vessel.

Drilling is scheduled for Q2 2012 to Q3 2013, platform installation scheduled for Q1 2012 and subsea installation scheduled for Q1/Q2 2012. Bains reservoir is expected to receive gas in Q1 2013. All activities will be the subject of an approved Oil Pollution Emergency Plan.

B) Key Environmental Impacts:

The EIA identified and discussed the following key activities as having the potential to cause an environmental impact:

- Drilling – combustion emissions, well clean-up emissions, discharge of drill cuttings with WBM, rig and vessel noise, accidental hydrocarbon spills.
- Offshore Construction & sub-installation – combustion emissions, platform, subsea infrastructure and pipelines installation, pipelay vessel noise, rock dumping, hydrotest discharges, accidental spills.
- Production – atmospheric emissions, accidental hydrocarbon spills.
- Wider concerns – noise impacts, accidental events, transboundary issues, cumulative effects.

C) Key Environmental Sensitivities:

The EIA identified the following environmental sensitivities:

- Fish: The area is recognised as a spawning area for Cod, Whiting, Sole, Sprat, Plaice, Nephrops, Dab and Flounder and nursery area for Whiting, Sole, Plaice, Nephrops and Herring. The spawning and nursery areas are extensive and the area of impact would be localised and temporary. Therefore the drilling of wells and pipelay is unlikely to impact these species.
- Seabirds: Offshore areas of the eastern Irish Sea are visited by many seabird species mainly for feeding purposes. Species include over-wintering populations of cormorants, gulls, terns, red-throated diver and common scoter. Liverpool Bay has been identified as potentially qualifying as a Special Protection Area (pSPA). The proposed boundary for the pSPA covers an area totalling 170,225 hectares. The proposed Bains Development is located approximately 3.5 km to the north-west of the pSPA boundary and the proposed pipeline route do not cross the pSPA boundary. Seabird vulnerability is highest in March, April, September – December and lowest in June. It has been assessed that there are sufficient mitigation measures in place to prevent accidental spills that could have a significant impact on seabirds.
- Protected habitats: Site survey did not identify any potential Annex 1 habitats within the vicinity of the proposed Bains Development. There are currently two draft Special Areas of Conservation (dSAC) in the eastern Irish Sea – the Shell Flat and Lune Deep dSAC's. The proposed Bains platform location and pipeline route lie outside both of the dSAC boundaries, approximately 5 km to the west of the Shell Flat dSAC and 10 km to the south-west of the Lune Deep dSAC.
- Protected species: Moderate sightings of Harbour porpoise has been recorded in this general area during February, July – September. White-beaked dolphin has also been recorded in this general area between August – October. Grey and Common Seals inhabit the coastal waters. Distribution of grey seals is fairly widespread in the eastern Irish Sea whilst distribution of Common Seals is generally low. Any disturbance of marine mammals is expected to be limited to the drilling period, and the short duration and localised disturbance is considered unlikely to have any

significant impact.

- Other users of the sea: The proposed development (Bains Platform) is situated within ICES rectangle 36E6 and the proposed pipeline crossing within ICES rectangle 37E6. In Rectangle 36E6, a total of 1,449 days fishing effort was recorded in 2008 and in Rectangle 37E6, a total of 2,817 days fishing effort was recorded in 2008. Shipping density in the vicinity of the proposed development is moderate to high.

D) Consultees:

Natural England (NE), The Joint Nature Conservation Committee (JNCC), Centre for Environment, Fisheries and Aquaculture Science (CEFAS Environment & Chemical), Maritime and Coastguard Agency (MCA), Ministry of Defence (MoD), Environment Agency, Marine and Fisheries Agency (MFA), Trinity House Lighthouse Board (THLB) and The Crown Estate made the following comments:

NE/JNCC: NE/JNCC in a joint response requested additional information in relation the seabed disturbance, sediment release, proposed drilling schedule, oil spill modelling and further advised that DECC consider undertaking an appropriate assessment screening exercise as the development lies close to the boundaries for the Liverpool Bay pSPA. NE/JNCC confirmed that they are satisfied with the additional information provided by Centrica. Further, an appropriate assessment screening exercise was carried out by DECC. NE are in agreement with the conclusion that the proposed development is unlikely to have a significant effect alone or in combination with other projects upon the integrity of the Liverpool Bay pSPA. JNCC accept that the appropriate assessment screening exercise comprehensively address the potential impacts of qualifying species of the Liverpool Bay pSPA but have requested that response measures to an accidental spill also be considered. JNCC have been advised that DECC has considered the response measures to an accidental spill in the appropriate assessment screening exercise prior to drawing conclusions and that JNCC will have further opportunity to consider the spill response measures in activity specific Oil Pollution Emergency Plan (OPEP).

CEFAS (Environment): CEFAS Environment has confirmed that there are no English fisheries related restrictions on drilling or seismic activities and have recommended consent. CEFAS have recommended that pipe lay operations close to coast line are not undertaken during July to October to ensure migratory fish species are not disturbed.

CEFAS (Chemical): CEFAS Chemical have noted to make an informed assessment in the PON15B and PON15C application stage.

MCA: MCA confirmed that they have no objections.

MoD: MoD confirmed that they have no objections.

Environment Agency: Environment Agency confirmed that they have no objections but recommend that pipe lay operations close to coast line are not undertaken during July to October to ensure migratory fish species are not disturbed.

MFA: MFA confirmed that they are content that the ES identified salient points and that Centrica should liaise with the fishing industry during offshore installation period.

Trinity House: Trinity House confirmed that the standard marking requirements for offshore installations will apply. A more detailed assessment will be provided at the Coastal Protection Act (CPA) application stage.

Crown Estate: Crown Estate confirmed that they have no particular comment.

E) Public Consultation:

No comments were received following the public notice.

F) Further Information:

Further information was requested from Centrica which addressed the issues raised by NE/JNCC and the internal DECC review, which included clarification in relation to the pipeline installation, seabed disturbance, pipeline protection (rock dumping) and oil spill modelling. Additional information was provided by Centrica on 20 April 2010 and 10 December 2010, which adequately addressed the issues raised.

G) Conclusion:

Following consultation and the provision of further information, DECC OED is satisfied that this project is unlikely to have a significant environmental impact, and content that it will not have a significant adverse effect on the marine environment in general or on any protected sites or species.

H) Recommendation:

DECC OED recommends that the Bains Gas Storage Development is given consent to proceed.

Approved : Sarah Pritchard - Head of Environmental Operations Unit

...Sarah Pritchard

Date: ...14/02/2011.....