

**Venture North Sea Gas Limited.
Annabel East Extension
Environmental Statement Summary**

To: Sarah Pritchard

From: Sarah Dacre

Date: 24 November 2009

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| ES Title: | Annabel East Extension |
| Operator: | Venture North Sea Gas Limited |
| Consultants: | Genesis Oil and Gas Consultants |
| Field Group (DECC): | London |
| ES Report No: | W/4049/2009 |
| ES Date: | August 2009 |
| Block Nos: | 48/10a |
| Development Type: | Single development well and tie-back |

Project Description

The project comprises:

- the drilling of one production well. Drilling operations for the appraisal well and completion (if well was deemed successful) started in August 2009 under PON15B/235.
- installation of a 3.6km 6" flexible subsea tie-back to the existing Annabel production manifold, where fluids are routed via a 10" export pipeline to Audry WD (A) platform. Here it will co-mingled and exported to the LOGGS complex for processing.
- Pipeline installation, well tie-in and first gas are scheduled for Q2 2010.

Environmental Sensitivities

The EIA identified the following environmental sensitivities:

- Moderate shipping activity (average 15 vessels per day within 10nm miles);
- Low fishing activity;
- Fish spawning area for mackerel (peak May-July), herring, plaice (peak January-February), lemon sole, sandeel, sprat (peak May-June) and *Nephrops* (peak April-June). There are currently no restrictions on drilling or seismic activity in this block during the drilling period proposed.
- Seabird vulnerability is very high or throughout the year.
- Low numbers of cetaceans have been recorded;
- Annex I Habitats: *Sabellaria spinulosa* was identified at some of the pipeline route survey stations. However, the aggregations identified do not constitute biogenic reef structures.
- Annex I Species: there are no Annex I species identified.
- Annex II Species: harbour porpoise occurs in low numbers, however moderate numbers occur July;
- Protected sites: The proposed operations are 77km from the southern boundary of the Dogger Bank dSAC and approximately 5.6km from the northern boundary of the North Norfolk Sandbanks pSAC.

Key Potential Environmental Impacts

The following potential impacts and mitigation were addressed in the EIA:

- Obstacles to other marine activities during operations – the primary obstacles will be the presence of the rig and associated support vessels during mobilisation, drilling and demobilisation. A collision risk management plan will be in place to minimise the risk of vessel collision. In addition, safety zones will also be designated and the operations will be promulgated in advance through the Notices to mariners, Navtex and VHF broadcast.
- Seabed disturbance – As a result of drilling activities there will be a temporary disturbance to the seabed through:
 - (i) *Physical presence of the rig* - The placement of the spud cans of the jack-up rig on the seabed will disturb localised areas of seabed. Each spud can impact area will be approximately 255m², therefore the total impact area of the 3 spud cans is estimated to be no more than 775m². Once the rig has moved off station it is expected that the spud can indentations will infill due to the mobile state of the sediments. Potential seabed impacts due to the rig are not considered to be significant.
 - (ii) *Mud and cuttings discharge* - Drilling operations at the proposed well will include the use and discharge of WBM mud and cuttings to the sea-surface and at the seabed. A worse case scenario of 740 tonnes of mud and cuttings will be discharged which will cause initial smothering of benthic communities in the immediate area of the well location. Re-colonisation is expected in the short term and modelling indicates that cuttings will not encroach on the North Norfolk Sandbanks pSAC.
 - (iii) *Installation of subsea infrastructure* – the flowline and umbilical will be installed in two separate trenches, approximately 4m wide and 1m deep. The overall footprint width is expected to be 7.5m, therefore it is estimated that the total impact area is 0.054km². The trench is to be backfilled and therefore it is not anticipated that a significant berm will remain. In addition, approximately 76 mattresses will be required to stabilise the pipeline end spools. At present, there is no requirement for rock dumping. The installation and protection of pipeline will cause localised disturbance of the seabed and local habitat change, however due to the nature of the seabed impacts are considered not to be significant.
- Noise – the drilling, pipeline installation operations and the presence of standby vessels and helicopter traffic will produce noise intermittently over a period of 9 months. In view of the high vessel traffic in the area and low marine mammal numbers, noise disturbance is considered to be low significance.
- Atmospheric emissions – the main sources of atmospheric emissions during drilling and subsea operations will be the result of diesel burnt for power generation of the drilling rig and associated stand-by vessels. Vessel usage and duration of operations will be kept to a minimum and low sulphur fuel will be used.
- Marine discharges – the only foreseeable discharges are associated with the proposed drilling of the well and pipeline commissioning. All chemicals are CEFAS registered and are not considered to be significantly harmful to the environment. All chemical discharges will be subject to PON15 chemical permits.
- Accidental events – A number of control measures will be in place to minimise the risk of accidental events such as an Oil Pollution Emergency Plan (OPEP) and an Emergency

Response Plan (ERP). In addition, an environmental briefing pack will also be prepared for contractors to ensure awareness of environmental risks associated with the proposed operations.

- Cumulative Impacts – It is unlikely that operations conducted will have a significant effect in combination with other activities in the area.

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: advised that development was unlikely to have a significant effect and were content that all the impacts and cumulative effects were assessed adequately. Approval was recommended.

CEFAS: There are no fisheries related restrictions covering this Block during the proposed works period. Recommendation for consent was issued.

Further Information: No further information was requested.

Conclusion(s):

Following consultation, 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.

Sarah Pritchard

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Date 25 November 2009