

**ConocoPhillips.  
Viking Replacement Pipeline  
Environmental Statement Summary**

**To:** Wendy Kennedy

**From:** Philip Bloor

**Date:** 30<sup>th</sup> April 2009

<b>ES Title:</b>	Viking Replacement Pipeline
<b>Operator:</b>	ConocoPhillips
<b>Consultants:</b>	Rudall Blanchard Associates Limited
<b>Field Group (DECC):</b>	London
<b>ES Report No:</b>	D/4023/2008
<b>ES Date:</b>	October 2008
<b>Block Nos:</b>	49/17 & 49/16
<b>Development Type:</b>	Pipeline

## Project Description

The project comprises of:

- The trenching and burial of a 27.3 km pipeline between Viking BP and LOGGS complexes in the southern North Sea;
- The pipeline is 16" in diameter and has a 3" methanol line.
- The pipeline will be trenched to a depth of approximately one metre using conventional ploughing techniques.
- Patches of sand waves may be levelled to ensure pipeline integrity and safety.
- Rock dumping will be required at pipeline crossings and pipeline ends. There will also be some requirement to spot rock dump along the line to minimise the risk of upheaval buckling

## Environmental Sensitivities

The EIA identified the following environmental sensitivities:

- Fish spawning for mackerel, plaice, lemon sole, sandeel, sprat and *Nephrops* with peak periods scattered from January to July
- Fishing nursery area for whiting, lemon sole, sandeel and *Nephrops*;
- Generally low fishing activity;
- Seabird vulnerability is very high during March, high during February, April, October and November.
- Low numbers of cetaceans have been recorded with white-beaked dolphin and harbour porpoise most frequently recorded in the spring;
- An area of relatively high shipping density;
- Annex I Habitats: The proposed project is in the North Norfolk Sandbanks pSAC.

## Key Potential Environmental Impacts

Potential impacts and mitigation were addressed in the EIA:

The key areas of concern related to potential impacts arising from pipe laying activities in the pSAC.

These included impacts arising from:

- **Pre-pipe lay preparation** – Prior to any pipe laying areas of sand waves may require pre-sweeping. This activity physically removes the tops of the waves so as to minimise the risk of free spans. It is estimated that up to a 36 metre wide corridor, 20 – 60 metres in length will be required to be dredged to depths of 0.4m – 1.7m at approximately 40 – 60 sections along the pipeline route. The material will be placed within 100 metres of the proposed activities. The total area directly impacted will be approximately 0.12km<sup>2</sup>.
- **Trenching of the pipeline** - The 27.3 km pipeline will traverse the Swarte Bank and an unnamed sand bank that lies immediately west of the Viking platform.

The pipeline will be trenched using a conventional plough to a depth of 1 metre. The trenching will disturb the sediment out to 5 metres either side of the pipe laying activities. Consequently 0.27km<sup>2</sup> of habitat will be impacted.

- **Laying of the pipeline** – The pipeline will be laid using a conventional lay barge. The barge will maintain position through the use of anchors. There will be between 8 and 12 anchors placed out to approximately 1,200 metres from the vessel. The anchors and anchor chains will have a direct impact on the sandbanks. The anchors will penetrate the seabed up to 2 – 3 metres depth and can leave a mound that protrudes approximately 0.7 metres above the level of the seabed. Anchor chains have the potential to rest or drag across the seabed surface.

The laying of the pipeline has the potential to impact localized patches of *Sabellaria* identified at two locations along the pipeline corridor. Anchors and anchor chains would have a direct physical impact on these areas.

- **Rock dumping** – To ensure the integrity of the pipeline and safety of other sea user's lengths of the pipeline may require rock placement. This will have direct physical impact on the area and introduce a hard substrate into an otherwise mainly soft sediment environment. It is not possible to quantify exactly the length of line that may be impacted. However, based on existing data it is predicted that less than 5% of the line will require rock dumping. If the rock is dumped to a width of 10 metres then 0.0135km<sup>2</sup> will be covered.

The impacts of most concern were the potential physical impact on the sites qualifying features of sandbanks which are slightly covered by seawater all the time.

- **Impacts from preparatory works** – These are primarily from the pre-sweeping of the sand waves. An estimated maximum total of 3.6 km and area of 0.12 km<sup>2</sup> of the pipeline route may require pre-sweeping. However, a realistic area is 0.068km<sup>2</sup>. Pre-sweeping entails reducing the height of some of the sand waves by dredging prior to laying the line. There will be a direct physical impact arising from this. The impact will occur in an area where significant transport of sediment occurs with an estimated 400,000 tonnes of new sand introduced to the area each year from natural activities (Stride 1988 referenced in ES). The high sediment load and the mobility of sand waves indicates that any impacts will of short duration and the waves will reform after activities have ceased. The area of impact will be less than 0.003% of the total sandbank area.
- **Impacts from trenching operations** - These will occur along the entire pipeline route of 27.3km. The soft sandy sediments are highly mobile and will quickly refill any trench. The applicant has undertaken detailed assessment of existing pipelines in the pSAC to determine what impacts pipe laying activities may have on the qualifying features. The report concluded that in most areas it was not possible to distinguish where the pipelines were with seabed features being identical to the natural surrounding area. The total area of impact will be 0.27km<sup>2</sup>, accounting for 0.007% of the pSAC.
- **Impacts from pipe laying** – The impacts from pipe laying most likely to have the potential to cause an adverse effect are those associated with the laying of anchors and associated anchor chains. The anchors will produce mounds at each location. Evidence presented within the ES from 10 sites in similar areas demonstrated that following activities, impacts from anchors rapidly dispersed with no sign of any impacts within a month.
- Two areas of *Sabellaria* have been identified approximately 800 -1000 metres from the pipeline. The operator has identified these areas and to ensure there is no possible impact on these patches the operator will implement 'no anchor' zones in the area and therefore avoiding any possible physical impact on the sites.
- **Impacts from rock dumping** – Rock dumping is required in areas where there is a risk of upheaval buckling and areas of pipeline crossings and at the end of pipelines. The total volume of rock estimated to be required is 112,259 tonnes. This includes a substantial contingency with existing pipelines usually requiring between 100 – 600% less than has been anticipated. The placement of rock has a permanent impact. The total area of impact is predicted to be no greater than 0.0135km<sup>2</sup>, amounting to 0.0003% of the designated site.

Additional sensitivities were addressed satisfactorily within the ES.

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

**Consultee(s):**

The statutory consultees for this project were Natural England (NE)/JNCC and CEFAS. The following comments were made:

JNCC: it was advised that an Appropriate Assessment be undertaken as there is the potential for significant impact on the conservation objectives of the pSAC.

JNCC's main issues highlighted in earlier response have now been satisfactorily addressed.

CEFAS: Raised concerns over the chemical usage and discharge and wished to wait for the application of a chemical permit before being satisfied. CEFAS have since advised that they are content with subsequent applications.

**Further Information:** In addition to the consultees comments a number of issues were highlighted by DECC and further information was requested.

ConocoPhillips provided the additional information requested and where appropriate. All issues were considered satisfactorily amended and clarified.

**Appropriate Assessment:** DECC undertook an Appropriate Assessment. It was concluded, that Based on the information presented in the applicant Environmental Statement and taking into account the scale and often temporary nature of the impacts, it is concluded that the Viking Pipeline Replacement project will not on its own, or in-combination have an adverse effect on the structure, function and integrity of the North Norfolk Sandbanks pSAC.

**Conclusion(s):**

Following consultation and the provision of the additional information, 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*

30 April 2009

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**Wendy Kennedy**

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**Date**