



**GDF SUEZ E&P Nederland B.V.  
Orca Field Development  
Environmental Statement (ES) Summary**

<b>Title:</b>	Orca Field Development Environmental Statement
<b>Operator:</b>	GDF SUEZ E&P Nederland B.V.
<b>Report No:</b>	D/4152/2012
<b>File Reference No:</b>	12.04.05.02/83C
<b>Submission Date:</b>	February 2013
<b>Quad/Block:</b>	44/24a, 44/29b, 44/30
<b>Project Type:</b>	Development
<b>Reviewer:</b>	Julie Cook
<b>Date:</b>	25 June 2013

**Project Description**

GDF SUEZ E&P Nederland B.V. (GDF) intends to develop the Orca Field, located on the Netherlands Continental Shelf (NCS) approximately 180 km northwest of Den Helder. The Orca Field straddles the median line between the Netherlands and UK and is located in the Southern Gas Basin of the North Sea in Netherlands Blocks D15b and D18a and in UKCS Blocks 44/24a, 44/29b and 44/30. Although the development infrastructure will be on the NCS, it will be less than 500 metres from the UK / Netherlands median line, in a water depth of approximately 45 metres (m).

The proposed development will consist of an unmanned satellite platform (D18a-A), installed in block D18a, and up to three development wells, connecting to the nearby D15-A platform via a new 20 km 8" pipeline and 2" piggy-backed methanol pipeline. The produced gas and condensate will be processed on the D15-A platform, prior to entry into the NoordGasTransport (NGT) export pipeline system.

The platform is scheduled to be installed, and drilling is scheduled to commence, at the start of 2014. Drilling is expected to take a minimum of 6 months to complete, and production is expected to commence during 2014. The unmanned satellite platform will have a production capacity of approximately 4.8 million normal cubic metres (Nm<sup>3</sup>) of natural gas per day. Production is expected continue for 20 years, and the calculated allocations are 55% to the UK and 45% to the Netherlands.

**Key Environmental Sensitivities**

The Environmental Statement (ES) identified the following environmental sensitivities:

**Fish Stocks:** The NCS area of development is a spawning ground for cod, plaice and smelt, and herring eggs from the central North Sea and southern North Sea populations are present between August and October and November and January respectively. There are no recognized nursery areas in the Orca area.



**Seabirds:** Seabird vulnerability in the adjacent UKCS blocks ranges from moderate to very high (during November and December).

**Annex I Habitats:** The proposed D18a-A platform and 7 km of the main pipeline will be located within the boundary of the Cleaver Bank, proposed by the Netherlands for designation as a Special Area of Conservation (SAC). The nearest UKCS protected sites are the proposed Dogger Bank SAC, located 21 km to the northwest, and the proposed Markham Triangle Marine Conservation Zone (rMCZ) located 27 km to the south of the proposed development.

**Annex II Species:** Harbour porpoise are recorded in large areas of the NCS, with higher concentrations likely to be sighted within the development area between February and July. A number of other marine mammal species may also occur in low numbers within the area, e.g. Northern fin whale, white-beaked dolphins and white-sided dolphin. Common seals and grey seals range across the entire North Sea, however the development area is unlikely to be of any significance to the North Sea populations for reproduction, foraging or other activities, and numbers are expected to be low.

**Other Users of the Sea:** The level of fishing activity in the area of the proposed development is moderate, and the level of shipping traffic is low.

### **Key Potential Environmental Impacts**

The ES identified the following potential impacts and related mitigation measures:

**Physical interference:** Appropriate mitigation measures will be put in place to ensure that other users of the sea are aware of the proposed activities, e.g. a 500m safety zone around the platform, drilling rig and wellheads, the use of standby vessels, and dissemination of information in the UK via the Kingfisher Bulletin and Notices to Mariners. The area has low shipping and moderate fishing activity and any impact on other users of the sea is therefore expected to be negligible.

**Seabed disturbance:** A number of the proposed activities will impact the seabed, the most significant being the installation of the platform, the spud cans of the drilling rig, the discharge of drill cuttings and the installation of the pipelines. The estimated worst-case total area of impact within the Cleaver Bank is 0.14 km<sup>2</sup>, which equates to 0.011% of the area of the proposed SAC. It is therefore concluded that the proposed project will not have an adverse effect on the structure, function and integrity of the proposed Cleaver Bank SAC. Seabed disturbance will be limited to the immediate vicinity of the platform and the pipeline, and is not expected to encroach onto the UKCS.

**Noise:** A number of noise sources will be associated with the proposed operations, including noise relating to the platform installation, the drilling, the pipeline installation and vessel



movements. Piling operations associated with the installation of the platform will be limited to a total of 8 hours. Marine mammals will be encouraged to move away from the area using a noise deterrent (pinger) or by progressively increasing the intensity of the pile-driving operations (soft-start). High levels of underwater noise generated by piling operations will impact the UKCS, but the risk to marine mammals is considered to be low because of GDF's commitment to a number of mitigation measures

**Marine discharges:** The planned Orca wells will be drilled using a combination of Water Based Mud (WBM) and Low Toxicity Oil Based Mud (LTOBM) with WBM cuttings discharged to sea and LTOBM cuttings shipped to the Netherlands mainland for disposal. The marine environment in the development area is sufficiently dynamic to facilitate rapid dispersion and dilution of the proposed discharges and impacts on the water column will be limited to the immediate vicinity of the platform, with insignificant impacts on the UKCS.

**Atmospheric emissions:** The main source of atmospheric emissions will be fuel use during the drilling, production and support operations, and flaring during well testing. The total emission load will be low and, considering the highly dispersive nature of the environment, potential impacts are considered to be insignificant with no cross-border impacts.

**Accidental events:** A number of control measures will be in place to minimise the risk of accidental events. In the event of a spill entering the waters of an adjacent State, it may be necessary to implement international contingency arrangements.

**Cumulative Impacts:** The proposed development is within a relatively well developed oil and gas area of the NCS, with a low level of shipping and moderate commercial fishing operations. No significant in-combination navigational or environmental effects are anticipated.

**Transboundary Impacts:** Most impacts resulting from the installation of the platform, the drilling, the production operations and the ultimate decommissioning of the platform will occur within a range of approximately 500 metres, which is the approximate distance from the D18a-A platform to the UK / Netherlands median line. Noise generated during piling operations may result in cross-boundary impacts, but the impacts are not expected to be significant on the NCS or UKCS.

### **Consultation**

The Joint Nature Conservation Committee (JNCC) and The Centre for Environment, Fisheries and Aquaculture Science (CEFAS Environment & Chemical) were consulted on the proposals. The ES was also subject to Public Notice.

**JNCC:** JNCC confirmed they were content that the ES should be accepted.

**CEFAS (Environment):** CEFAS confirmed that there are no drilling-related fisheries



restrictions in the UK blocks adjacent to Block D18a, or the surrounding blocks, and recommended that the ES should be accepted.

**CEFAS (Chemical):** CEFAS confirmed they had no concerns in relation to the planned use of chemicals during the drilling or production operations and confirmed they were content that the ES should be accepted.

**Public Notice:** No comments were received in response to the Public Notice.

#### **Further Information**

Further information was requested from GDF in relation to the production profiles. The response received on 13 June 2013 adequately addressed the issues raised.

#### **Conclusion**

Following its review of the ES, the comments received from consultees and the additional information provided by GDF, DECC OGED is content that the Orca Area Field Development is unlikely to have a significant adverse effect on the UKCS marine environment in general, or on any protected sites or species or other users of the sea.

#### **Recommendation**

On the basis of the information presented by GDF and the advice received from consultees, DECC OGED is content that there are no environmental or navigational objections to approval of the proposals, and has advised DECC LED that there are no objections to the grant of the relevant consents.

#### **Approved**

*Wendy J Kennedy*

.....Date 28 June 2013

**Wendy Kennedy**

Director, Offshore Oil and Gas Environment and Decommissioning (DECC OGED)