

The Greater Kittiwake Area

Location

The Kittiwake platform is located 160km East of Aberdeen, in Licence block 21/18. The platform coordinates are; latitude 57°28'6"N, longitude 00°30'43"E. The platform stands in a water depth of 85m.

Kittiwake Installation

The Kittiwake platform was installed in 1990 and is a fixed steel platform on the Kittiwake field with other fields being developed as subsea satellite tie-backs to the Kittiwake platform. The subsea satellites consist of; Goosander (block 21/12), Grouse (block 21/19), Gadwall (block 21/19) and Mallard (block 21/19). These fields are collectively known as the Greater Kittiwake Area. Petrofac are the current duty-holders, operating the installation on behalf of Enquest. Enquest and Dana Petroleum are 50/50 partners in the Greater Kittiwake Area.

The living quarters has a maximum POB of 79, and normal POB is around 70. The platform no longer has drilling facilities which were decommissioned in 2009.

Installation systems

Fluids from the Kittiwake reservoir are recovered through platform drilled wells and the Goosander, Grouse, Gadwall and Mallard reservoirs are recovered through subsea tiebacks. Originally designed for tanker export, the produced oil flows through a 4 stage crude stabilisation system. Mallard and Gadwall have their own dedicated first stage separator in parallel, before the oil is co-mingled upstream of the second stage separator.

Stabilised oil is metered then exported using the main export pumps to the Forties Pipeline System via a 10" export line to Forties Unity. Produced gas is compressed and used for fuel and gas lift. The surplus is exported via a 4" export line to the near-by Fulmar gas line. Produced water is cleaned and discharged overboard to the sea. The platform has a Produced Water Re-Injection (PWRI) system, but has never been fully commissioned.

Oil evacuation system

Oil is exported via a 33km, 10" pipeline (installed in 2007) from the platform to the BP operated Forties Unity platform. Oil used to be exported onto a shuttle tanker using a single point mooring system, which was removed in 2008.

Gas import

There are no gas import facilities on the platform. Any gas not used on the platform is exported to St. Fergus via the Fulmar gas line.

Infrastructure Information

Description:	Fixed steel jacket platform.
Arrival Conditions:	V-1010 – First stage separator (Kittiwake Grouse & Goosander) Design Pressure: FV / 28barg. Design Temperature: -6 to 112deg.C. V-1200 – First stage separator (Mallard & Gadwall) Design Pressure: FV / 40barg. Design Temperature: -50 to 102deg.C. Material of construction are NACE MR-0175 compliant H ₂ S: 300ppm max. CO ₂ : 4.5mol% max.
Exit Specification:	Forties Pipeline Specs for oil & SEGAL Pipeline Specs for gas (dispensation currently in place for 6mol% CO ₂ in the export gas rather than 4.5mol% CO ₂).
Outline details of Primary separation processing facilities:	4-stage crude oil stabilisation.
Outline details of gas treatment facilities:	Three stage centrifugal compressors (known as A-gas compressors) with an additional reciprocating compressor (known as E-gas compressor) to meet the gas export / gas lift pressure requirements. Gas Dehydration facilities are located between the A & E gas systems.

High Level Capacity Information

The basic capacity information is portrayed by colour coded 'traffic lights' that reflect thresholds of availability over the next 5 years

>25% capacity available	
5-25% capacity available	
<5% capacity available	

Processing Facility	Total Capacity	2014	2015	2016	2017	2018	Comments
Separation capacity	40,000bopd						Discussions currently ongoing with a potential tie-back of 3 rd party field to Kittiwake Platform.
Gas compression capacity	13.5mmscfd						Currently gas deficient.
Gas export capacity	9.3mmscfd						Restricted to 9.3mmscfd due to capacity of gas metering.
Gas lift capacity	5mmscfd						
Produced water handling capacity	50,000bwpd						Based on nozzle dimensions.
Water Injection capacity	37,500bwpd						2 x WI pumps rated to 125m ³ /h each.
H2S / CO2 treatment capacity	N/A						N/A
Power	17.4MW						3 x gas turbines capable of 5.8MW each. Currently run in a 2 out of 3 arrangement.
Oil Export	23,000bopd						2 x 100% export pumps capable of 26,500bopd. Oil export metering restricted to 23,000bopd.

Contact Information

For further enquiries, please contact EnQuest on Tel +44 1224 287000.

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