Wingate

Decommissioning Programmes

Covers infrastructure in the UKCS (incl. pipelines from the Wingate platform to the UKCS median line)

Wintershall Noordzee

Version Control

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Content

Terms and Abbreviations

Abbreviation	Explanation	Abbreviation	Explanation
BEIS	Department for Business, Energy and Industrial Strategy	NOGEPA (ElementNL)	Nederlandse Olie en Gas Exploratie en Productie Associatie
CA	Comparative Assessment	NORM	Normally Occurring Radioactive Material
CoP	Cessation of Production	NSTA	North Sea Transition Authority
CS	Carbon Steel	NUI	Normally Unattended Installation
DESNZ	Department for Energy Security and Net Zero	ODS	Ozone Depleting Substances
DSV	Diving Support Vessel	OEUK	Offshore Energies UK
EMSA	European Maritime Safety Agency	OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
EA	Environmental Appraisal	OSPAR	Oslo and Paris Convention for the Protection of the Marine Environment of the North-East Atlantic
EU ETS	European Union Emissions Trading System	P&A	Plug and Abandonment
EU SRR	EU Ship Recycling Regulation	PCB	Polychlorinated Biphenyl
FPAL	First Point Assessment Limited	PFOS	Perfluorooctanesulfonic acid
FWHP	Flowing Wellhead Pressure	PP	Polypropylene
GIIP	Gas Initially in Place	PPP	Project Procurement Plan
HBCDD	Hexabromocyclododecane	P/Z	Reservoir pressure / gas compressibility factor
HSE	Health and Safety Executive	SAC	Special Area of Conservation
HLV	Heavy Lift Vessel	SCAP	Supply Chain Action Plan
IHM	Immunohistochemistry	SCI	Site of Community Importance
ITT	Invitation to tender	S.G.	Specific gravity
LSA	Low Specific Activity	SLV	Sheer Leg Vessel
MCZ	Marine Conservation Zone	SNS	Southern North Sea
MEG	Mono ethylene Glycol	t	Metric ton
NFFO	National Federation of Fishermen's Organisation	TCO	Total Cost of Ownership
MeOH	Methanol - H	UKCS	UK Continental Shelf
MEPC	Marine Environment Protection Committee	UK-OGA	United Kingdom Oil & Gas Authority
NGT	Noordgastransport B.V.	WGS84	World Geodetic System 1984
Nm^3	Cubic metres of dry gas at 0°C and a pressure of 1013 mBar	WINZ	Wintershall Noordzee B.V.

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1 Executive Summary

1.1 Wingate Field

The Wingate Field is operated by Wintershall Noordzee B.V. and straddles the boundaries between Licence P1239 and P1733 (located within blocks 44/18d, 44/23f, 44/24b & 44/19f), which is some 20 km east of the former Murdoch Platform location and some 20 km west of the D15-FA platform in the Dutch sector. The field was discovered after drilling of the 44/24b-7z well in October 2008. It received Annex B approval in 2010 for a single Normally Unmanned Installation (NUI) platform remotely operated from D15-FA host platform. The platform was installed and production started in 2011.

The Wingate platform is an 894t topside minimum facilities structure in 29.0m water depth. It was designed with 6 well slots and operated as a normally unattended satellite installation (NUI). Gas is exported to the nearby D15-FA host platform across the Dutch border, where the gas is compressed and dehydrated. The production from the Sillimanite field is the other production stream processed on the D15-FA facility. Operating cost for the D15-FA facility are shared on throughput basis. The production from the Sillimanite field is declining and foreseen to last into 2025. The share of the operating cost for Wingate is therefore expected to rise over the coming years. Measures to reduce cost at D15-FA are being initiated to push the economic lifetime of the facility. A 50% reduction on the dehydration and compression tariff was established in 2021.

The field is compartmentalized and additional compartments have been developed to maintain plateau production as long as possible. No remaining prospectivity is identified. No other hydrocarbon reserve developments are known in the area that may be affected by removal of the Wingate Normally Unmanned Installation (NUI), or decommissioning of the Wingate export pipeline. Based on the limited storage capacity, the geological complexity, and infrastructure limitations the Wingate field is not considered to be a commercial viable CO_2 storage location.

As no further field development will take place, the notional earliest CoP will be in Q4 2024, but is however dependent on the gas price. The recovery factor of the Wingate Field was 61% by end 2023 based on the probabilistic P50 GIIP estimate, and 81% based on the dynamic GIIP estimate from the P/Z material balance, with 172 million Nm^3 dry gas remaining, technical reserves could be produced until 2031. Production operations will be stopped for economic reason. Of the initial 6 development wells, there are still four (4) live gas wells (two currently producing, one (1) intermittently producing and one (1) not producing) and two (2) abandoned gas wells (44/24b-A2Z Phase 1 and 44/24b-A6 Phase 2).

Following public, stakeholder and regulatory consultation, the Decommissioning Programmes will be submitted without derogation and in full compliance with OPRED guidelines. The Decommissioning Programmes outlines the principles of the removal activities and is supported by an Environmental Appraisal (EA) and Comparative Assessment (CA).

Decommissioning Programmes

This document contains two (2) Decommissioning Programmes for one (1) installation and two (2) pipelines (PL2850 and PL2851). These Decommissioning Programmes assume an earliest cessation of production (CoP) in Q4 2024. The economic lifetime of the Wingate field is strongly dependent on the gas price and operating cost share on the D15-FA facility, therefore the actual cessation of production may fall in a following year.

The decommission strategy is based on an immediate reduction of operating cost of the facility once production ceases. The proposed working method is to bring the facility into a hydrocarbon free state by temporary plugging the wells and depressurizing and cleaning the pipelines. This increases the safety and reduces the platform maintenance scope and visit frequency, while monitoring of the wells and platform navigation remain operational. Final well plug and abandonment (P&A) and platform removal will most likely be carried out later in a campaign together with other Wintershall Noordzee B.V. operated facilities. It is WINZ's intention to minimize the time between CoP, final well P&A and platform removal as short as possible.

1.2 Requirement for Decommissioning Programmes

Installation(s):
In accordance with the Petroleum Act 1998, Wintershall Noordzee B.V. as Operator of the Wingate Field and on behalf of the Section 29 notice holders (see Table 1.2) is applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the installation detailed in Section 2.1 and 2.2 of this program. (See also Section 9 - Section 29 Holder Letter(s) of Support).

Pipeline(s):
In accordance with the Petroleum Act 1998, Wintershall Noordzee B.V. as Operator of the Wingate Field and on behalf of the Section 29 notice holders of the 2 (two) pipelines (see Table 1.4) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the pipelines detailed in Section 2.3 of this programme. (See also Section 9 – Section 29 Holder Letter(s) of Support).

In conjunction with public, stakeholder and regulatory consultation, the decommissioning program is submitted in compliance with national and international regulations and Department for Energy Security and Net Zero (DESNZ) (former Department for Business, Energy and Industrial Strategy (BEIS)) guidelines. The schedule outlined in this document is for a 6-year decommissioning project plan, notionally due to start after CoP, with bringing the facility in a hydrocarbon free state.

1.3 Overview of Installation/Pipeline(s) Being Decommissioned

1.3.1 Installation(s)

Installation Being Decommissioned			
Field:	Wingate	**Production Type:**	Gas
Water Depth (m)	29.0 m (LAT)	**UKCS block**	44/24b (field located in 44/18d, 44/23f, 44/24b & 44/19f)
Surface Installation			
Number	**Type**	**Topside Weight (t)**	**Jacket Weight (t)**
1	Fixed steel jacket	894	803
Distance to median	**Distance from nearest UK coastline**	**Number of Wells**	
10.0 km	177.0 km	**Platform**	**Subsea**
		6	0
- There are no drill cuttings piles associated with the installation. - Jacket weight excludes 119t of pile sections to be removed (cut 3m below seabed).			

Table 1-1 - Installation Being Decommissioned

Installation Section 29 Notice Holders Details		
Section 29 Notice Holder(s)	**Registration Number**	**Equity Interest** (%)
Wintershall Noordzee B.V.	FC027567	64.50
XTO UK, Ltd	05458042	15.50
GazProm UK Resources, S.A.	FC031912	20.00
GazProm International UK, Ltd	07877636	0.00
SEFE Securing Energy for Europe GmbH	FC029656	0.00
Gas-Union GMBH	FC027910	0.00

Table 1-2 - Installation Section 29 Notice Holders Details

1.3.2 Pipeline(s)

Number of Pipeline(s) Being Decommissioned	2	See Table 2.3

Table 1-3 - Pipeline(s) Being Decommissioned

Pipeline(s) Section 29 Notice Holders Details		
Section 29 Notice Holder(s)	**Registration Number**	**Equity Interest** (%)
Wintershall Noordzee B.V.	FC027567	64.50
XTO UK, Ltd	05458042	15.50
GazProm UK Resources, S.A.	FC031912	20.00
GazProm International UK, Ltd	07877636	0.00
SEFE Securing Energy for Europe GmbH	FC029656	0.00
Gas-Union GMBH	FC027910	0.00

Table 1-4 - Pipeline(s) Section 29 Notice Holders Details

1.4 Summary of Decommissioning Programmes

Proposed Decommissioning Solution	Reason for Selection
1. Topside	
Complete removal of the Topside by Heavy Lift Vessel (HLV) and transported to appropriate land-based facility for dismantlement, disposal and recycling. Cleaned equipment refurbished for reuse where possible. Equipment which cannot be reused will be recycled or processed via other disposal routes as appropriate.	Wintershall Noordzee B.V. has indicated that the Wingate Topside may be reused for other developments in the Southern North Sea.
2. Jacket	
Complete removal of the jacket by HLV, transported to appropriate land-based facility for dismantlement, disposal and recycling. Piles will be severed at 3.0m below the seabed. If any practical difficulties are encountered WINZ will consult OPRED. Once removal and disposal methods are selected OPRED will be advised.	Leaves clear seabed, removes any potential obstruction to fishing operations and other users and maximises recycling of materials. To comply with OSPAR requirements.
3. Pipelines, Flow lines & Risers	
Flush, clean and leave buried in situ. The abandonment of the 12" pipeline (number PL2850) and 2" piggy-back line (number PL2851) was subject to a Comparative Assessment, see also Chapter 4.3 Pipelines. Sections of the pipeline on the seabed immediately adjacent to the platform will be removed up to where the pipe goes into burial and cut ends covered with rock protection, as recommended by the National Federation of Fishermen's Organisation (NFFO). The footprint of the rock protection will be a maximum of $20m^2$ (rock dump at cut end: 2 x 5m long x 2m wide x 1m height = 20 m^3 (S.G. 2.5 – 3 Te per m^3)). The spool pieces will be removed and recovered to shore, recycled where possible, and remainder sent to landfill for disposal. The remaining pipeline will be left in place as there are no areas of spans, exposure or shallow burial. The target depth of soil cover is 0.8m above the pipe. Surveys indicate pipelines will remain buried. Degradation will occur over a long period within seabed. Buried and decommissioned pipelines are not expected to represent a hazard to other users of the sea. As per the last pipeline survey (year 2022), the pipeline remains buried. *See attached Trenched alignment sheet and Figure 1-1 Wingate Development Project Trenching.*	The last acoustic inspection survey in 2022 indicated that the pipeline was buried over most, >99%, of its length (no exposure on the pipeline reported in 2022 survey). The next survey (incl. Depth of Burial) is scheduled for 2026. The inspection frequency is once per four (4) years. OPRED will determine what is required for future PL monitoring following conclusion of the DP decommissioning activities and submission of the Close Out Report (COR). Minimal seabed disturbance, lower energy usage, reduced risk to personnel. Minimal seabed disturbance, lower energy usage, reduced risk to personnel. A Comparative Assessment (CA) has been undertaken to support the preparation of the DP. Eight options for decommissioning the pipelines were screened to shortlist technically feasible options. The CA assessed each shortlisted option against a set of criteria. The options assessed were: • Option 1: Leave in situ • Option 2: Partial removal • Option 4A: Full removal – reverse S lay • Option 4C: Full removal – cut and lift The recommended decommissioning option for the Wingate pipeline based on the scoring of the CA is Partial removal (Option 2).

4. Stabilisation features	
Stabilisation material was used to protect unburied sections of pipeline within 100m of the Wingate platform. The mattresses (22 pc on the Wingate side) and the grout bags (60m^2 in total) will be recovered to shore unless noted otherwise.	Leaves clear seabed, removes any potential obstruction to fishing operations and other users and maximises recycling of materials.
5. Wells	
The wells will be abandoned in accordance with OEUK (Offshore Energies UK) Guidelines for the Suspension and abandonment of Wells. The applications under the relevant regulations will be submitted in support of works carried out.	Meets NSTA and the UK Health and Safety Executive (HSE) regulatory requirements.
6. Interdependencies	
The Wingate Pipeline runs from the UK to the Dutch sector. At approximately KP10.38, the pipelines cross from UK Sector, block 44/24b (Wingate) into the D15 block in the Dutch sector of the North Sea. Total length is approx. 20.56km with 10.40km (PL2850) km and 10.38km (PL2851) in UK- and the remaining length in Dutch North Sea waters. The pipeline crossing (Minke – D15-FA 8" Pipeline and 4" umbilical at KP20.576 from Wingate) is located in the Dutch sector and will be completed under Dutch regulations, discussions will be held with the Dutch regulator and operators to discuss the decommissioning approach.	

Table 1-5 - Summary of Decommissioning Programmes

The Wingate Development Project Trenching at installation can be found in the graph below.

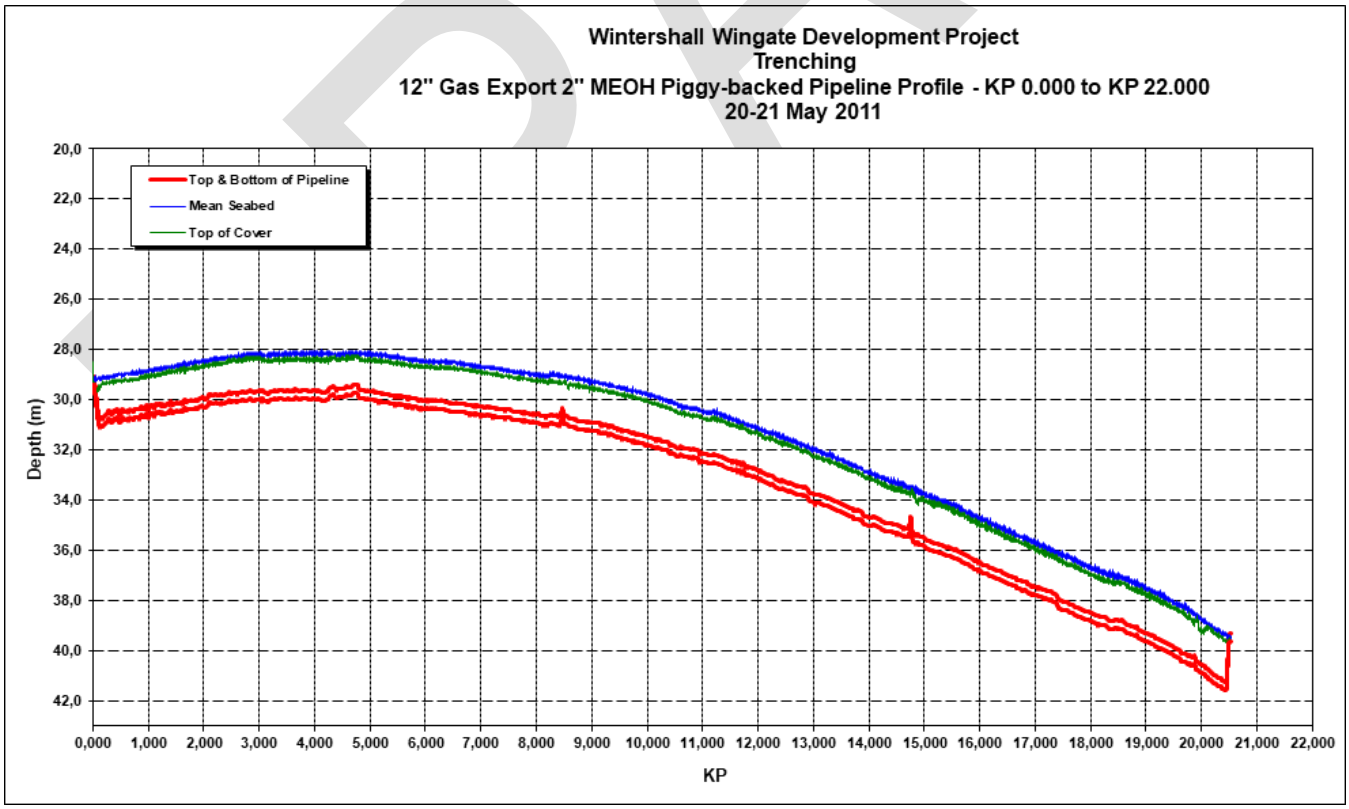


Figure 1-1 - Wingate Development Project Trenching (at installation)

1.5 Field Location Including Field Layout and Adjacent Facilities

The Wingate Field Location is indicated on the map below.

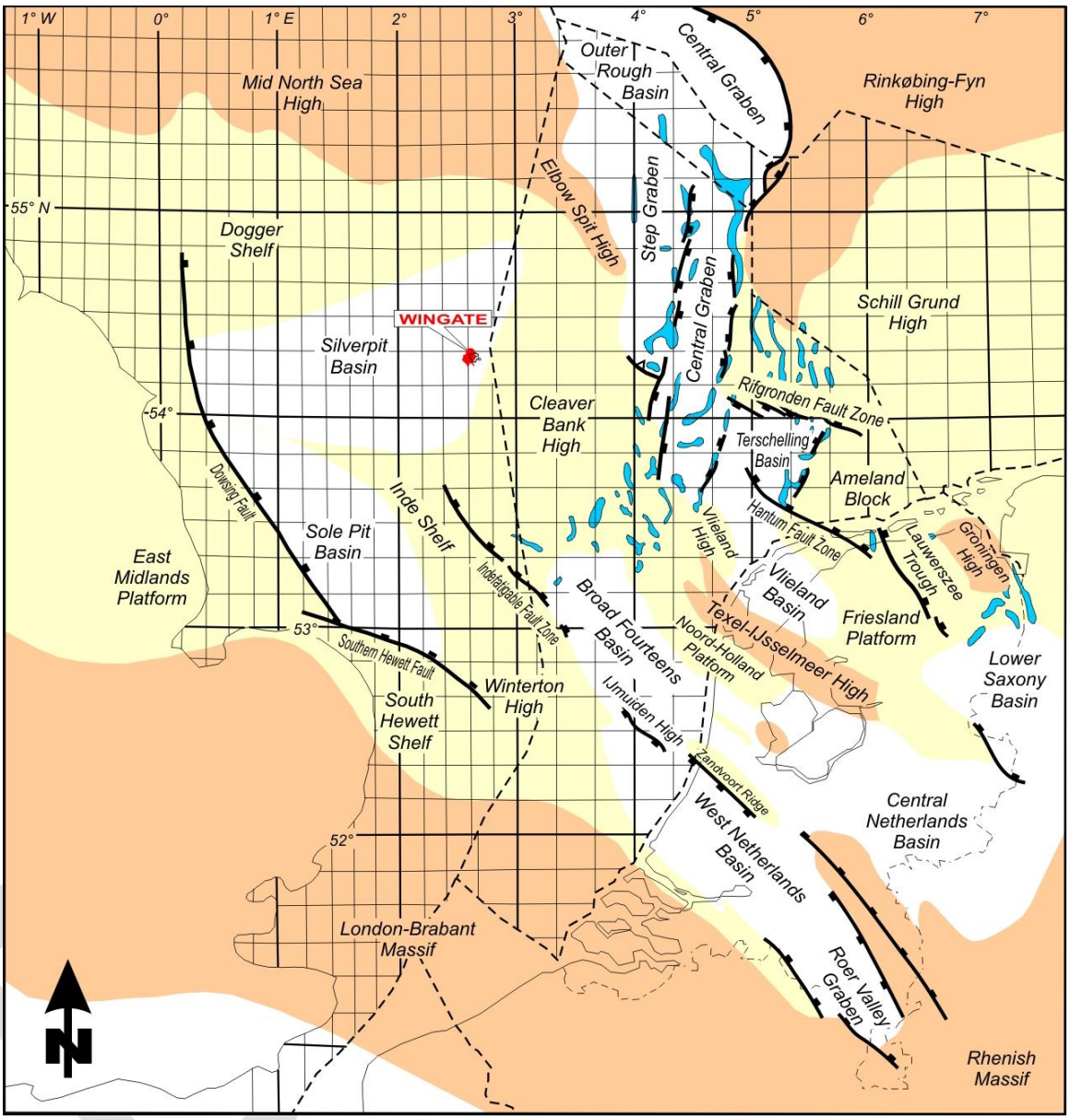


Figure 1-2 - Field Location in SNS

An overview of the Wingate Field Layout and Adjacent Facilities are demonstrated in the Figure 1-3 below.

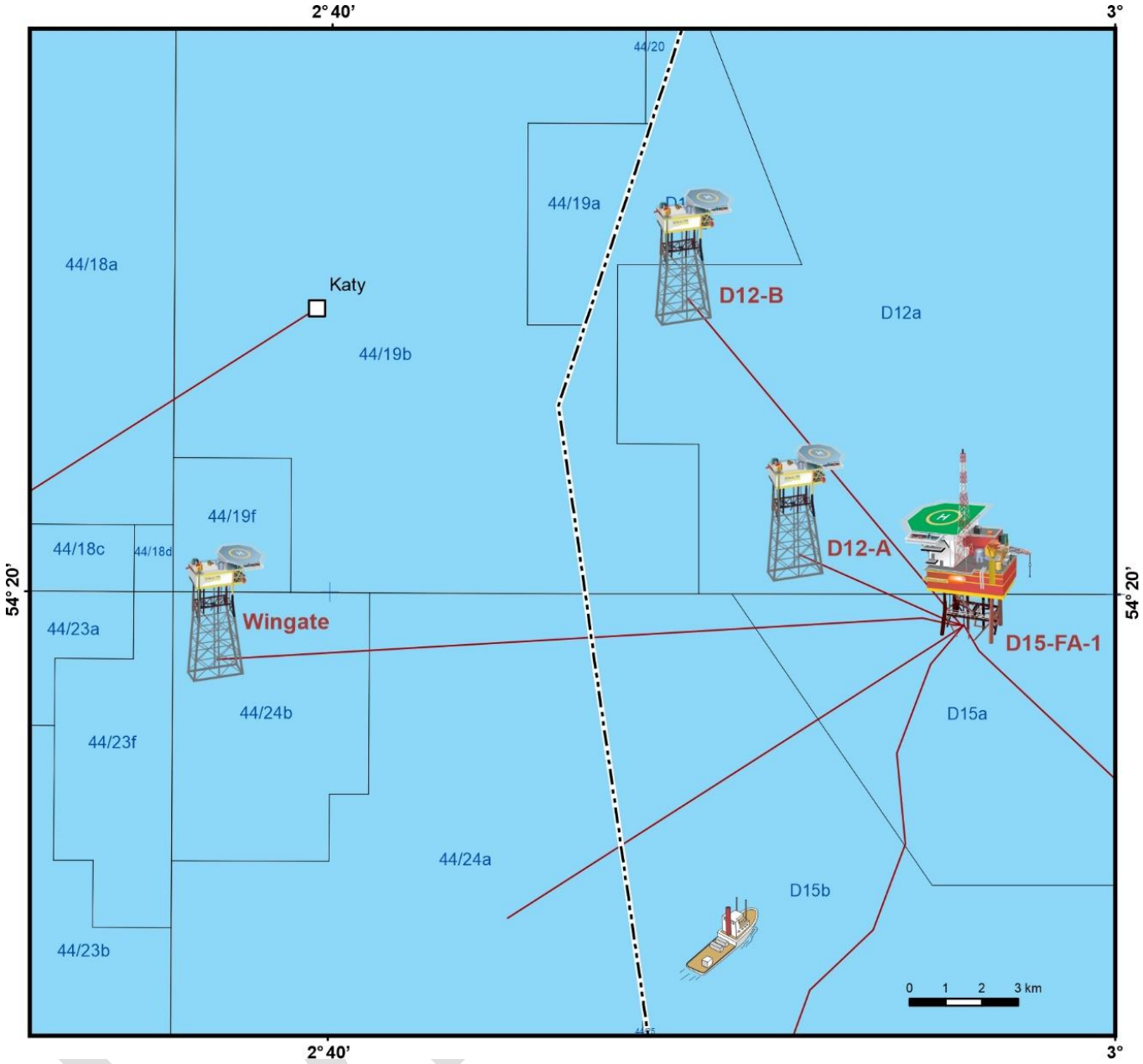


Figure 1-3 - Field Layout and Adjacent Facilities

An overview of the Wingate Adjacent Facilities can be found in the Table 1-6 below.

Adjacent Facilities					
Owner	**Name**	**Type**	**Distance/Direction**	**Information**	**Status**
Neptune Energy Netherlands B.V.	D15-FA (Dutch sector)	Host platform	20km East from Wingate	Gas/liquids processing, MEG and control system (including water wash) links for Wingate, onward export via the NGT to Uithuizen in the Netherlands. The D15-FA platform will be decommissioned under Dutch regulations.	Operational
WINZ	D12-A (Dutch sector)	Platform	16.4km East from Wingate	Gas routed via 10" pipeline to D15-FA (4.95km). Methanol pumped from D15-FA to D12-A in 4" umbilical line (incl. wash water, electrical power and fibre optic). No physical connection to Wingate.	Gas depleted P&A scheduled for May/June 2024
WINZ	D12-B (Dutch sector)	Platform	16.4km East North East from Wingate	Gas routed via 10" pipeline to D15-FA (11.9km). Methanol pumped from D15-FA to D12-B in 4" umbilical (incl. wash water, corrosion inhibitor, electrical power and fibre optic). No physical connection to Wingate.	Operational
Chrysaor Production (U.K.) Limited.	Murdoch (UK sector)	Platform	20km West from Wingate and 40.5km West from D15-FA.	Include three bridge-linked platforms including Murdoch MA, Murdoch MC and Murdoch MD. Each comprising a topside and a jacket structure; two trunk pipelines (one gas, one methanol). No physical connection to Wingate.	Removed in 2022
WINZ	-	PL2850 12” CS Pipeline	From Wingate to D15-FA (20.56km)	One Crossing of Minke immediately adjacent to D15-FA (outside UK EEZ) - 8” Pipeline and 4” umbilical at KP20.576 (calculated from Wingate)	Operational
WINZ	-	PL2851 2” CS Piggy back line	From D15-FA to Wingate (20.56km)	One Crossing of Minke immediately adjacent to D15-FA (outside UK EEZ) - 8” Pipeline and 4-inch umbilical at KP20.576 (calculated from Wingate)	Operational
Impacts of Decommissioning on adjacent facilities					
No anticipated impact on adjacent facilities.					

Table 1-6 - Adjacent Facilities

1.6 Procurement

1.6.1 Introduction

Following the NSTA (former United Kingdom Oil and Gas Authority (UK-OGA)) requirement and measurement guidelines, Wintershall Noordzee B.V. will prepare a Supply Chain Action Plan (SCAP). The purpose of the SCAP is to facilitate and demonstrate that Wintershall Noordzee B.V. (WINZ) derives maximum value from its Wingate Decommissioning project and to support WINZ's demonstration that it is well positioned to deliver on its commitments. This SCAP will highlight how WINZ intends to contribute towards Total Cost of Ownership through fair and open engagement with its chosen supply chains.

1.6.2 Procurement Guideline

WINZ has an internal applicable Procurement Guideline. This document defines and describes the mandatory procurement principles to be applied by conducting procurement activities, from tender to completion.

As an integral part of its processes WINZ defined a Code of Conduct that shall be adhered to and is made available to any party via its internet page: https://www.wintershall-noordzee.nl/suppliers.html.

1.6.3 Project Procurement Plan

To support and manage project execution and to facilitate its internal and partner approval process, WINZ will develop a Wingate Decommissioning Project Procurement Plan (PPP). The PPP provides the baseline for this SCAP.

1.6.4 SCAP Assessment

The SCAP will focus on the four (4) defined assessment criteria:

a) Engagement;

b) Trust;

c) Innovation;

d) Quality

Using the WINZ PPP as a basis, this document shall provide the NSTA guidance towards the WINZ working methods related to each of these criteria.

1.6.5 Quality

Following the WINZ Procurement Guideline, bidders are selected from First Point Assessment (FPAL) in case of estimated contract values of € 250.000 and more. Due to its history of executing similar projects, WINZ does not execute additional pre-qualification processes in case companies have worked with or have been part of shortlisted selections with WINZ before.

With respect to further risk mitigation, WINZ participates in the FPAL Verification program and maintains an internal Supplier Solvency Assessment (as further referenced in the Procurement Guidelines).

WINZ maintains a project risk register and, based on experiences of people involved, previous projects, defined scopes and risks derived from the project register, WINZ seeks to identify operational and commercial risk and related mitigation actions prior to ITT issue on an individual ITT basis. These latter aspects are identified in Summary Tender Process documents, of which examples will be provided in the PPP.

1.6.6 Optimization

The Wingate Decommissioning project includes the following key activities:

- Pipeline flushing and cleaning; base case is to flush and clean from Wingate back to D15-FA platform
- DSV scope; pipeline severance; re-bury cut ends (recommended by the NFFO) and decommissioning of stabilisation materials
- Pre-rig activities at the wells
- Well Plugging & Abandonment; with jack-up rig
- EPRD (Engineering, Preparations, Removal & Disposal) of both Wingate NUI topside and jacket
- Pre-decommissioning surveys
- Post-decommissioning surveys (such as the recovery of seabed debris related to offshore oil and gas activities)

The above activities will be planned carefully to recognise synergies and efficiencies with the overall Decommissioning Programming of WINZ, for Post CoP activities (Pipeline flushing/cleaning and pre-rig activities at the wells), well P&A and removal. Also potential synergies with activities of other Oil & Gas operators in the Dutch (coordinated by Nexstep) and UK sector will be taken into account for Wingate well P&A and removal.

Strategically, suppliers with working vessels and assets in the Southern North Sea area will be invited to tender. All contracts will be competitively tendered as per WINZ procurement guidelines.

From a procurement perspective the Wingate decommissioning project has three (3) pillars:

1. **Safe Cessation of Production (CoP),**
   Mainly executed with the use of operational contracts in place.

2. **Safe Plug & Abandonment (P&A) of Wells**
   Larger scopes will considerably contribute to the reduction of costs for well P&A because of optimization of efficiency and the direct implementation of lessons learned. A longer-term P&A campaign will create opportunity of increasing efficiency, implementing lessons learned and will lead to lowest decommissioning costs. WINZ has been operating a jack-up P&A rig since August 2021 and has successfully conducted P&A operations on 45 wells with this rig. In total WINZ has Plug & Abandoned over 100 wells. This jack-up unit with all related P&A services has a proven focus on ensuring safe execution by competent suppliers and contractors at the lowest Total Cost of Ownership (TCO). The agreement with the jack-up supplier includes options for extension in line with the Wingate timeline.

3. **Safe Removal of the Facilities**
   WINZ is aiming at including the removal of the Wingate installation into a larger EPRD campaign. Due to differences of facilities (e.g. size, weight and location) to be removed and the different lifting capacities of the contractors for removal, the tender process will define scopes that best fit to the available contractors, leading to the lowest final cost.

Current operational contracts for items such as environmental permitting, potential vessel sharing and logistic support will be implemented to support decommissioning activities. All activities shall be executed to meet the UK legislative and regulatory requirements, be balanced with possibly more sustainable possibilities in order to determine the most effective solution.

2 Wingate Field

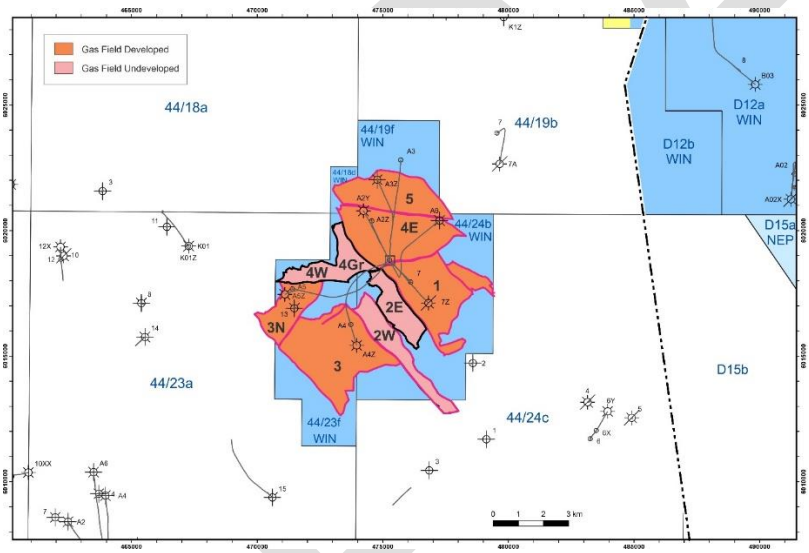
2.1 Historical background

The Wingate gas field, operated by Wintershall Noordzee B.V., straddles the boundaries between Licence P1239 and P1733 (Blocks 44/24b, 44/23f, 44/19f and 44/18d), situated in the Silverpit Basin of the UK Southern North Sea, some 10.4 km to the west of the UK-Netherlands median line, 20.1 km east of the former Murdoch facilities (CMS) in Block 44/22a and 177.0 km to the east of the Yorkshire coast (distance to nearest coastline, ref. Figure 1-1 - Field Location in UKCS). Gas production from the six-slot 44/24b-A NUI, situated at the surface location of the 44/24b-7Z horizontal exploration well, commenced on 11 October 2011.

The field was discovered after drilling of the 44/24b-7z well in October 2008. The gas was found in the Westphalian C sands, the well tested 1.46 mln Nm^3/d at 226 bar Flowing Wellhead Pressure (FWHP). The Wingate Field is compartmentalized and the development of the field has been phased with the objective to maintain plateau production as long as possible, given the maximum production capacity of the platform. In February 2012 a First Addendum was submitted to incorporate the 44/24b-A2 well-draining block 4E. The Second Addendum of the Wingate Field Development Plan covered the development of Block 5 of the Wingate field by drilling well 44/24b-A3. The Third Addendum of the Wingate Field Development Plan covered the development of Block 3 of the Wingate Field by drilling well 44/24b-A4. The Fourth Addendum of the Wingate Field Development Plan covered the development of Block 3N of the Wingate Field by drilling well 44/24b-A5. The Fifth Addendum of the Wingate Field Development Plan in 2015 covered the further development of Block 4E of the Wingate field by drilling well 44/24b-A6.

The Table below shows the probabilistic GIIP volume estimate for the different blocks and the dynamic connected volume estimate from the P/Z estimate.

Wingate Volumetric GIIP



Wingate Block 1 - 44/24b-A1 GIIP (bcm)			
Probabilistic			P/z
P90	P50	P10	
1.5	1.9	2.4	1.77

Wingate Block 3 - 44/24b-A4Z GIIP (bcm)			
Probabilistic			P/z
P90	P50	P10	
1.6	2.0	2.4	1.58

Wingate Block 3N - 44/24b-A5Z GIIP (bcm)			
Probabilistic			P/z
P90	P50	P10	
0.5	0.6	0.7	0.56

Wingate Block 4E - 44/24b-A2Y GIIP (bcm)			
Probabilistic			P/z
P90	P50	P10	
1.1	1.5	1.9	0.49

Wingate Block 5 - 44/24b-A3Z GIIP (bcm)			
Probabilistic			P/z
P90	P50	P10	
1.4	1.7	2.1	1.38

Table 2-1 - Wingate Volumetric GIIP

2.2 Exploration potential

In the exploration phase, the Wingate prospect and surrounding area were mapped on post-stack merged time-migrated volumes of 3D seismic surveys. Following the completion of the 44/24b-7Z discovery well, former legacy 3D surveys and parts of the ConocoPhillips 1992 CMS survey were pre-stack merged and depth migrated (PSDM) in 2010 using a Kirchhoff algorithm. After completion of the PSDM volume, the pre-stack data was used in several non-linear inversion studies based on full waveform equation algorithms. The limit of usability of existing seismic data has been reached and the multiple reprocessing and reservoir characterization studies proved that it is hard to achieve better results due to obvious reasons: seismic resolution in subsalt, imaging problem in geologically complex and survey merging areas, rock-physics limit, off-set limits.

Following the Wingate development, additional prospectivity surrounding the Wingate Field was investigated, including the Wingate Block 6 (to the North) and Wingate South (small object toward Minke field) prospects. The outcome of this evaluation was that Block 6 volumes do not justify the drilling of a well. The same conclusion was drawn for Wingate South. Consequently, there is no further attractiveness of exploration and/or appraisal in Licence P1239 and P1733 is not foreseen.

2.3 Deferral and Phased Decommissioning

No other hydrocarbon reserve developments are known in the Wingate area that may be affected by removal of the Wingate NUI, or decommissioning of the Wingate export pipeline PL2850.

2.4 Carbon storage potential

Based on the dynamic connected volume estimate of 5.77 billion Nm^3, an initial reservoir pressure of 372 bar, an abandonment pressure of 30 bar and a reservoir temperature of 115°C, a CO_2 storage capacity of 14.4Mt is calculated, excluding aquifer. Aquifer influx is experienced in the Wingate field and the irreducible water saturation after secondary drainage may be higher than the original value. This effect is not included in the calculation but may affect the storage capacity.

The Wingate field is complex, it is heterogeneous and compartmentalized and is expected to spill towards the Minke Field, situated south-east of Wingate, as can be seen from the gas composition.

Suitability for reuse of the existing wells for CO_2 injection will require a detailed technical assessment. Plugs have been set in the wells to shut-off water, and a well contains an obstruction resulting from a well intervention. CO_2 containment in relation to well integrity and possible mitigation would need to be assessed. During the design phases, CO_2 storage was not considered. In case the wells cannot be reused for injection a similar number of production wells as production wells would be required as each production well drains a separate compartment which would impact commerciality of re-purposing Wingate to a CO_2 storage site.

Produced gas is transported via the NGT pipeline towards Uithuizen in the Netherlands. The NGT export pipeline remains a gas export route for other producing assets in the Dutch sector in the foreseeable future. No other Carbon Storage projects are known in the nearby area that could share cost for new pipeline infrastructure required to transport CO_2 to the Wingate field. CO_2 supply by barge transport results in cyclic CO_2 injection which is undesirable for optimal CO_2 injection reservoir management in depleted gas fields.

Based on limited storage capacity, geological complexity, and infrastructure limitations, the Wingate field is not considered a commercial viable CO_2 storage location.

3 Description of Items to be Decommissioned

3.1 Installations: Surface Facilities

The Wingate Surface Facilities Information can be found in the table below.

Surface Facilities Information									
Name	**Facility Type**	**Location**		**Topsides/ Facilities**		**Jacket** (if applicable)			
				Weight (t)	**No of modules**	**Weight** (t)	**Number of legs**	**Number of piles**	**Weight of piles** (t)
Wingate NUI	Small fixed steel	Decimal WGS84	54.315846366667 N 2.618097916667 E	894	1	803	4	4	451 Note: The pile weights are separate to the topsides and jacket weights
		Decimal Minute WGS84	54 18.951 N 2 37.0859 E						

Table 3-1 - Surface Facilities Information

Figure 3-1 - Wingate facility

3.2 Pipelines including Stabilisation Features

The Wingate Pipeline Information can be found in the table below. For more information reference is made to chapter 4.3 Pipelines and 4.4 Pipeline Stabilisation Feature(s).

Pipeline and Flowline Information									
Description	**Pipeline Number** (as per PWA)	**Diameter** (inches)	**Length** (Km)	**Description of Component Parts**	**Product Conveyed**	**From – To End Points**	**Burial Status**	**Pipeline Status**	**Current Content**
Export line	PL2850	12"	20.56 (10.40 in UK sector)	3-layer PP coated Carbon steel	Gas	Wingate platform - D15-FA platform	Trenched and buried[*], (no exposure)	Operational	Hydrocarbon
Chemical line[**]	PL2851	2"	20.56 (10.38 in UK sector)	3-layer PP Coated Carbon steel	Chemicals	Wingate platform - D15-FA platform	Trenched and buried[*], (no exposure)	Operational	Chemicals
Stabilisation Features									
Concrete mattresses		22x (Wingate side) / 7x (D15-FA side)		8.7t each (weight in air)	6m x 3m x 0.3m				
Grout bags		Grout bags installed for the length of the straight section of the spool, total 60m^2, 20m length x 3m width[***]							
P/L crossings									
No P/L crossings within the DP boundary.									

Table 3-2 - Pipeline/Flowline Information

Note: The boundary of the programme only extends to the median line, but details of the full Pipelines have been given for completeness

**) At installation the pipelines were trenched and then back filled (buried, as part of the design). The last acoustic inspection survey was in 2022. The pipeline was seen buried over most, >99%, of its length.*

***) The line is currently being used to transport injection water.*

****) There are grout bags installed below the spool piece connecting of the pipeline to the riser section at Wingate to support the connecting spool. The total of grout bags is not mentioned in the as built documentation. At D15-FA only one (1) grout bag was installed to support the 2" riser.*

The Wingate platform subsea arrangement and tie-in are shown in the Figure 3-2 below. This is most recent Multibeam Echo Sounder (MBES) images of the Wingate platform from 2022.

Export from the field is via the Wingate NUI platform and a 12" gas export pipeline (W50, PL2850), piggybacked with a 2" Methanol chemical supply line (W72, PL2851) to the D15-FA-1 platform, in the Netherlands sector of the North Sea.

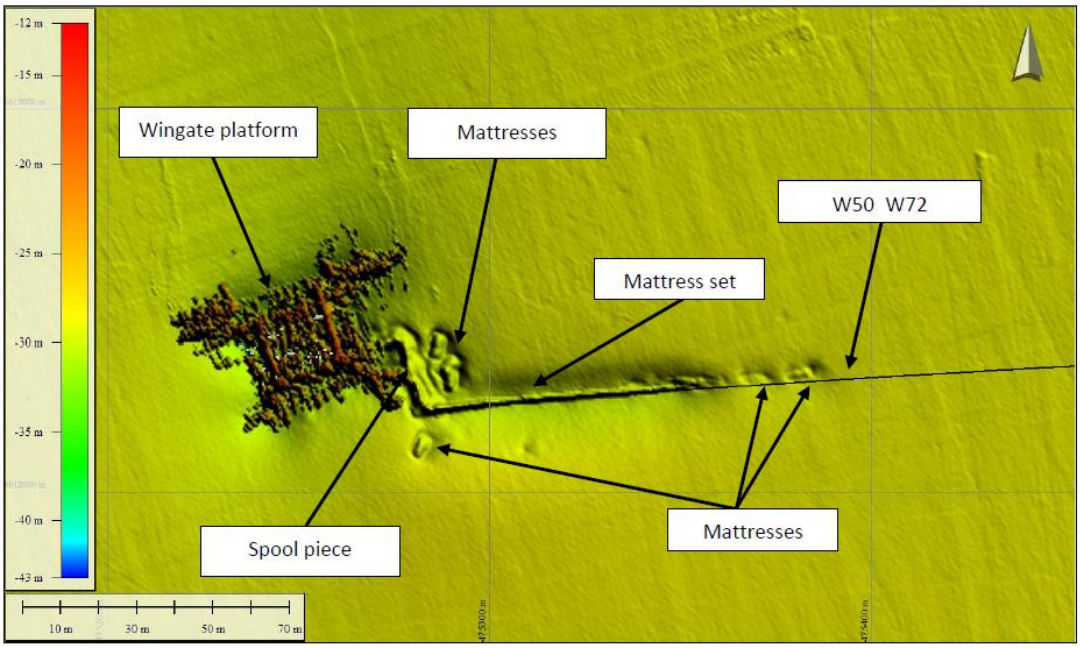


Figure 3-2 - MBES survey demonstrating the Pipeline Departure at Wingate Platform (GeoXYZ, 2023)

3.3 Wells

The Wingate Wells Information can be found in the table below.

Well Information			
Wingate NUI Wells	**Designation**	**Status**	**Category of Well**
44/24b-7 (pilot hole)	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-7Z which was renamed to 44/24b-A1 after installation of the platform (sidetrack of 44/24b-7)	gas	Live	PL-3-3-3
44/24b-A2 (pilot hole)	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-A2Z (sidetrack of 44/24b-A2, still pilot hole)	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-A2Y (sidetrack of 44/24b-A2Z)	gas	Live	PL-3-3-3
44/24b-A3	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-A3Z (sidetrack of 44/24b-A3)	gas	Live	PL-3-3-3
44/24b-A4 (pilot hole)	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-A4Z (sidetrack of 44/24b-A4)	gas	Live	PL-3-3-3
44/24b-A5	gas	Abandoned (Phase 1)	PL-0-0-0
44/24b-A5Z (sidetrack of 44/24b-A5)	gas	Plugged	PL-3-3-3
44/24b-A6	gas	Abandoned (Phase 2)	PL-0-0-3

Table 3-3 - Well Information

Notes:

- *There are currently four live gas wells (two currently producing, one intermittently producing and one not producing) and two abandoned gas wells (44/24b-A2Z Phase 1 and 44/24b-A6 Phase 2).*
- *Wells in the list with the same colour belong to the same slot.*
- *Well categorisation according to OEUK Guidelines for the Suspension or Abandonment of Wells. Issue 7, November 2022.*
- *At this planning stage, it is assumed that all 3 phases (reservoir abandonment, intermediate abandonment, wellhead and conductor removal) are done with a rig.*

3.4 Inventory Estimates

In this Section, an estimated materials inventory is provided for the Wingate NUI (topside and jacket) and pipelines, as shown in Figure 3-3 and Figure 3-4. Herewith reference is made of the *Wingate Environmental Appraisal* for more detailed information on the inventory (Ref 4).

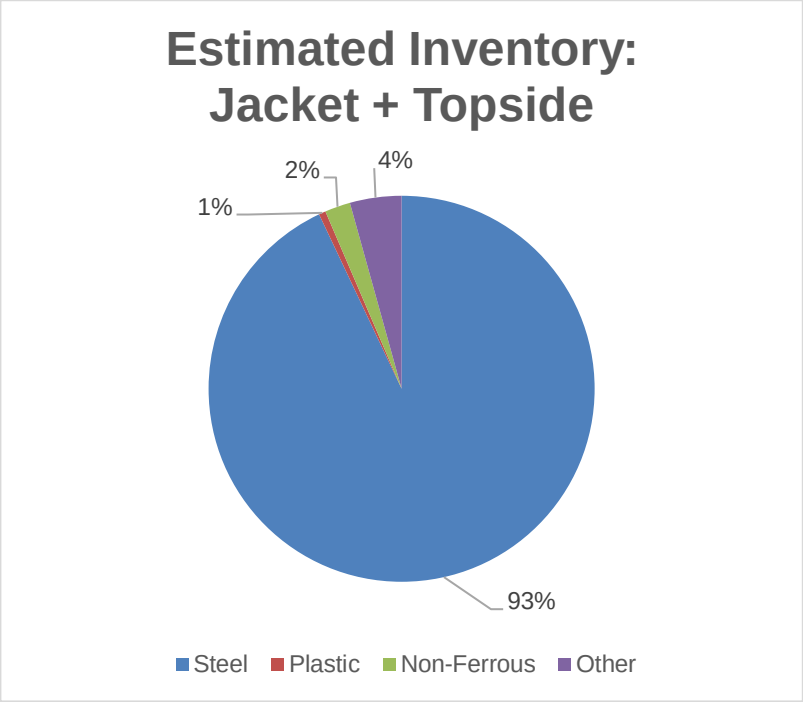


Figure 3-3 - Pie Chart of Estimated Inventories (Installations)

Total Mass Jacket (excl. pile sections) in Tonnes = 803.2 and Total Mass Topside in Tonnes = 894.0

Estimated Inventory Jacket + Topside

Inventory	Jacket + Topside		Topside	Jacket
	%	Total Mass (t)	Total Mass (t)	Total Mass (t)
Steel	93.43%	1,696.9	865.3	831.6
Plastic	0.53%	9.7	9.7	0.0
Non-Ferrous	2.00%	36.3	1.0	35.3
Other	4.04%	73.3	18.0	55.3
Total	100.00%	**1,816.2**	**894.0**	**922.2**

Jacket weight (922.2t) includes 119t of pile sections to be removed (when cut 3m below seabed)

Table 3-4 - Table of Estimated Inventories (Installations)

Note:

- *Minor discrepancies due to rounding of numbers.*
- *Figure 3-4 and Table 3-4 does not include stabilisation features.*

Estimated Inventory Pipelines:

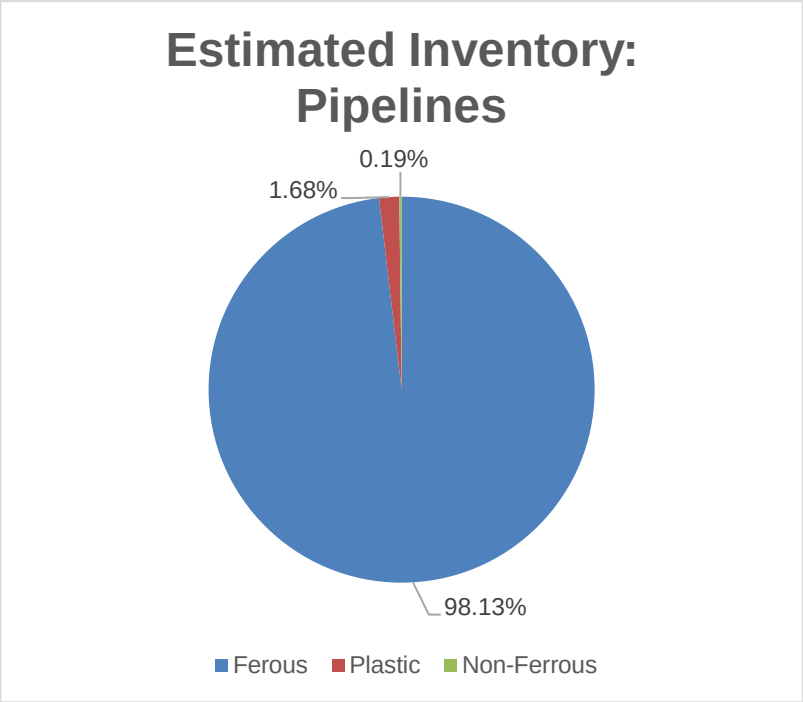


Figure 3-4 - Pie Chart of Estimated Materials Inventory (Pipelines) – UK section

Total mass of the full length of the pipelines excl. stabilisation features and non-ferrous materials in Tonnes = 2,607.0 Non-Ferrous materials (anodes) in Tonnes = 5.3 (84 pieces, 63,3Kg weight in air). For the UK section this the total mass of the pipelines excluding stabilisation features and Non-ferrous materials in Tonnes = 1,318.7

Estimatd Inventory Pipelines

Inventory	%	Total Mass (t)	%	UK sector (t)
Ferrous	98,12	2607,0	98,13	1318,7
Plastic*	1,68	44,7	1,68	22,6
Non-Ferrous	0,20	5,3	0,19	2,6
	100,00	**2657,0**	100,00	**1343,9**

**Plastic = pipeline coating*

Table 3-5 - Table of Estimated Inventory (Pipelines)

Note:

- *Minor discrepancies due to rounding of numbers.*

4 Removal and Disposal Methods

In line with the Waste Framework Directive the reuse of an installation (or parts thereof) prioritised when considering decommissioning options.

Options which – in order or preference - have been and will be considered for disposal of the Wingate platform:

- Relocation elsewhere to produce hydrocarbons
- Sale for reuse to others
- Bring to shore and refurbish topside. Reuse structural part for other development.
- The jacket will be removed, dismantled and disposed, ensuring a high level of material recycling.

Once a decision is made by WINZ, the OPRED will be advised.

Wingate Facilities between CoP and final decommissioning activities
After CoP the Wingate NUI will be transferred into the light house status. WINZ typically equips its facilities in the Lighthouse mode with solar panels to maintain the mandatory navigational aids (LED navigation aids, obstacle and nameplate lighting and foghorn) to ensure the structure is visible from every angle. The platform is operated as Normally Unattended Installation (NUI). The platform is therefore monitored from the Central Control Room (CCR) via Remote Controlled Operation (RCO). The CCR is situated in the Production Coordination Centre (PCC) in Den Helder, The Netherlands. After CoP the following will be monitored: Well-annuli (only if the wells have not been P&A'd), power supply from renewable energy sources (solar panels), navigational aids and collision avoidance systems.

For maintenance and intervention purposes, personnel will visit the Wingate installation by a vessel equipped with an offshore motion compensated access system (Walk to Work-vessel). The helideck is to be taken out of use. It is expected that the crew will only visit the Wingate NUI for 2 or 3 days per year for activities such as well inspection (if the wells has not been P&A'd), bird(nest) inspection, structural inspection, fabric maintenance and maintenance to solar panels. For larger well service and P&A activities, a mobile rig will be used. The visits are planned according to the maintenance schedule.

4.1 Topside

Topsides Description: The Wingate Topside structure comprises four levels and weighs 894t. The lower level is the cellar deck with the process, hydraulic pressure equipment, wells and temporary accommodation facilities. The 23m x 16m mezzanine deck supports the control and utility room. The 23m x 23m main deck support the power generation, a pedestal crane and vent boom. The main deck is located 25.8m above sea level. A helideck is located at the upper level. Figure 4-1 and 4-2 illustrate the Wingate Topside.

The Wingate NUI decommissioning method will be reverse from its installation sequence, commencing with a single lift of the Topside.

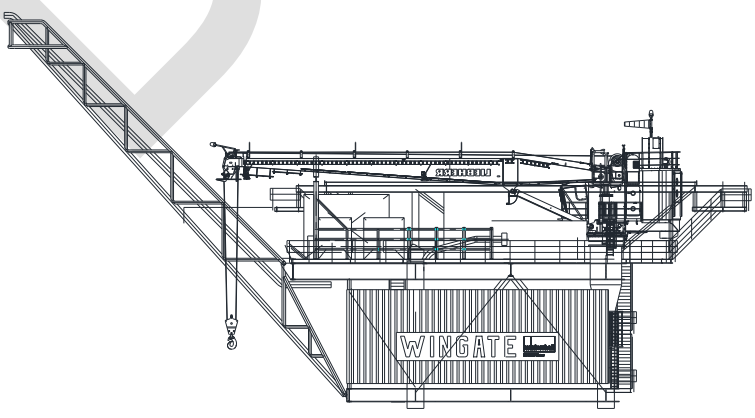


Figure 4-1 - Drawing of Wingate Topside – Facing South

Preparation/Cleaning: Table 4-1 describes the methods that will be used to the offshore flushing and cleaning of the Topsides, prior to its transport to shore.

Cleaning of Topsides for Removal	
Waste Stream	**Removal and Disposal method**
Bulk liquids	Residual hydrocarbons will be removed from the topsides and any associated bulk seawater from the topsides will be cleaned prior discharge overboard under permit. The 12" pipeline will be pigged, flushed and left filled with seawater prior to the start of decommissioning activities. The 2" Chemical line will be flushed. The pipeline flushing and cleaning fluids, in case of pig routing from D15-FA towards Wingate, foreseen to be injected into one of the Wingate gas production wells. However, the current methodology for flushing and cleaning the pipelines has not yet been defined. If residual fluids are collected from these pipelines, they will be transported to shore. In that situation pig routing is from Wingate towards D15-FA. Further cleaning and decontamination will then take place onshore prior to recycling/reuse.
Marine growth	N/A
NORM/LSA scale	Tests for NORM will be undertaken offshore and any NORM encountered will be dealt with and disposed of in accordance with guidelines and company policies and under an appropriate permit.
Asbestos	No asbestos is expected on the installation, use of asbestos was already forbidden when the platform was built, but small quantities cannot be ruled out e.g. in gaskets; the final disposal route will depend on the quantities found, but will be dealt with and disposed of in accordance with applicable legislation and guidelines.
Other hazardous wastes	Other hazardous waste will be recovered to shore and disposed of according to applicable legislation and guidelines and under an appropriate permit. Several tests on Chromium-based paints have been carried out in 2019 and 2022 with negative results. Therefore, Chromium-based paint is not expected.
Onshore Dismantling sites	Appropriate licensed sites will be selected. Dismantling site must demonstrate proven disposal track record and waste stream management throughout the dismantling process and demonstrate their ability to deliver sustainable and innovative reuse and recycling options.

Table 4-1 - Cleaning of Topsides for Removal

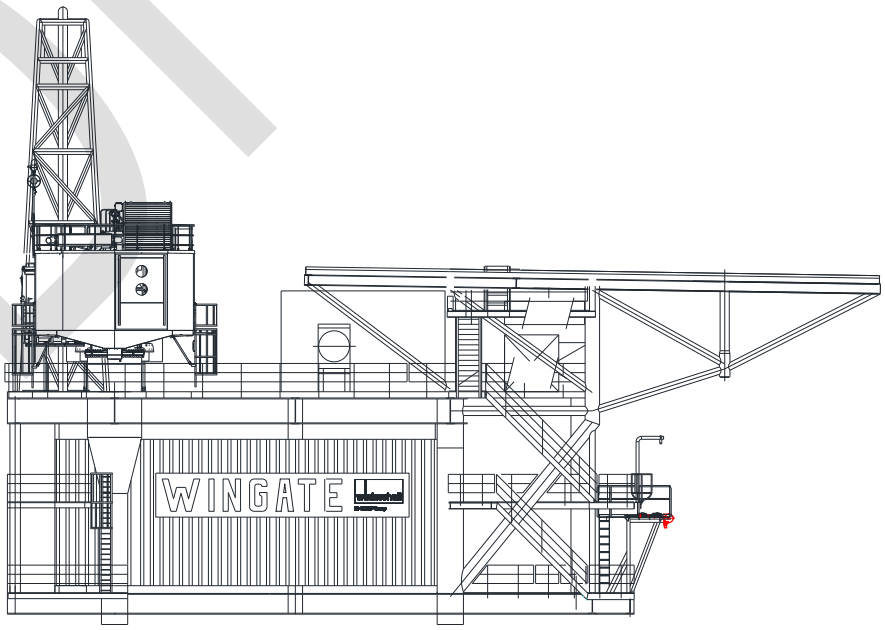


Figure 4-2 - Drawing of Wingate Topside – Facing East

Table 4-2 describe the optional method that can be used to remove and decommission the Topside including the proposed method.

Removal Methods:

Topsides Removal Methods	
1) Heavy lift vessel (HLV, semi-submersible crane vessel) ☑ 2) Mono-hull crane vessel ☑ 3) Sheer Leg Vessel (SLV) ☑ 4) Piece small ☑ 5) Other ☐	
Method	**Description**
Single lift removal by SLV/HLV	Removal of Topside as complete unit and transportation to shore for reuse of selected equipment, recycling, break up, and/or disposal.
Modular removal and reuse/recycle by HLV	Removal of parts/modules from Topside for transportation and reuse on alternative location(s) and/or recycling/disposal.
Offshore removal 'piece small' for onshore reuse/disposal	Removal of Topside by dismantling offshore followed by transportation to onshore location using workbarge(s). Items will accordingly be sorted for reuse, recycling or disposal.
Proposed removal method and disposal route	**Removal of Topside in a single lift by SLV or HLV.** **Transportation to onshore location to execute the disposal method(s) as described in this Chapter.** **Trans Frontier Shipment of waste will be addressed during the commercial tendering process.** Once the removal method and disposal route has been selected, OPRED will be advised.

Table 4-2 - Topside Optional Removal Methods

4.2 Jacket

The Wingate Jacket will be cut 3m below the seabed and then removed. The Jacket will be single lifted and transported to shore potentially in the cranehook of the HLV/SLV or by barge. This aspect will be considered in more detail during the engineering- and procurement phase. Figure 4-3 illustrates the Wingate Jacket.

Once onshore the Jacket will be dismantled and recycled.

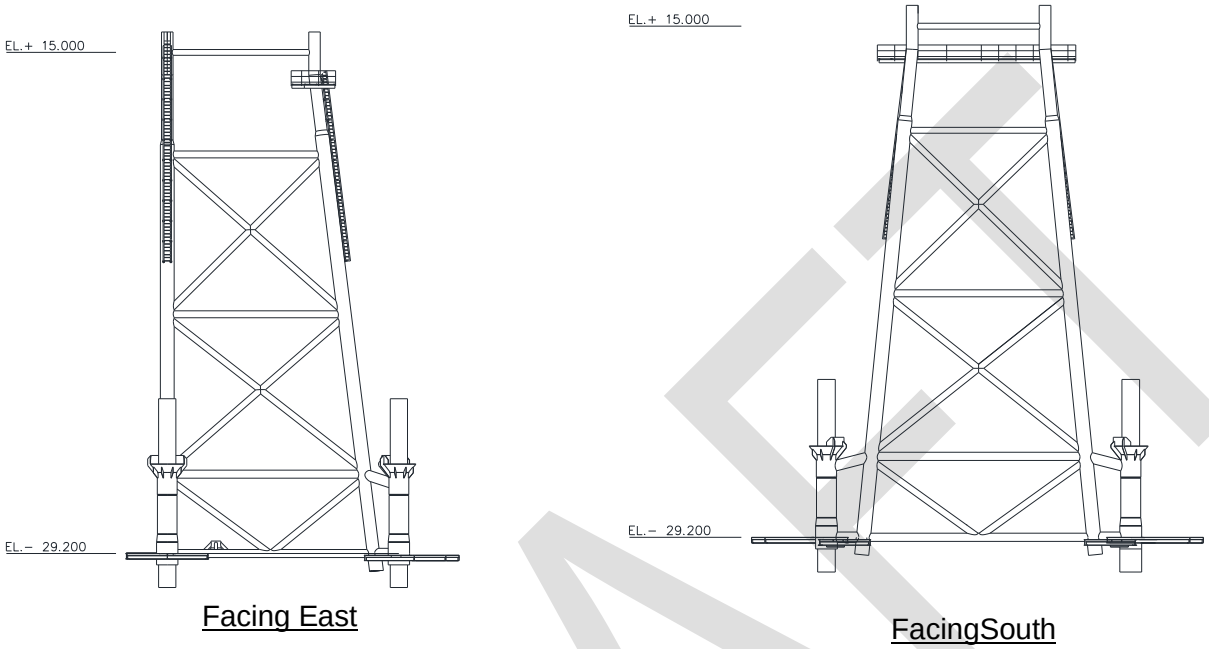


Figure 4-3 – Drawing of the Wingate Jacket Elevation

Preparation/Cleaning: Table 4-3 describe the methods that will be used to clean the Wingate Jacket offshore, prior to removal to shore.

Cleaning of Jacket for Removal	
Waste Stream	**Removal and Disposal method**
Bulk liquids	N/A
Marine growth	Some marine growth will be removed offshore to guarantee structural integrity or reducing the total weight for the lift. The remainder will be brought to shore, dismantled and disposed of according to guidelines and company policies.
NORM/LSA scale	Tests for NORM will be undertaken offshore and any NORM encountered will be dealt with and disposed of in accordance with guidelines and company policies and under an appropriate permit.
Asbestos	N/A
Other hazardous wastes	Will be recovered onshore and disposed of according to applicable legislation and guidelines and under appropriate permit. Chromium-based paints have not been encountered and are not expected.
Onshore dismantling sites	Appropriate licensed sites will be selected. The selected dismantling site must demonstrate a proven disposal track record and waste stream management throughout the dismantling and disposal process and demonstrate their ability to deliver sustainable and innovative reuse and recycling options.

Table 4-3 - Cleaning of Jacket for Removal

Table 4-4 describe the optional methods that can be used to remove and decommission the Wingate Jacket including the method proposed by WINZ.

Jacket Decommissioning Methods	
1) Heavy lift vessel (HLV, semi-submersible crane vessel) ☑ 2) Mono-hull crane vessel ☑ 3) Sheer Leg Vessel (SLV) ☑ 4) Piece small ☑ 5) Other ☐	
Method	**Description**
Removal and reuse	Jacket piles will be cut 3m below seabed. Then removal of jacket for transportation to onshore disposal site.
Offshore removal with single lift. Plus, onshore disposal	Jacket piles will be cut 3m below seabed. Then removal of the jacket as a complete unit and transport to shore for dismantling, recycling and/or disposal.
Offshore removal using 'piece small' for onshore disposal	Remove Jacket in several pieces using attendant work barge and transport to shore yard. Jacket piles will be cut 3m below seabed.
Proposed removal method and disposal route	**Cut Jacket piles 3m below seabed.** **Removal of Jacket with single lift, without Topside.** **Transportation to shore for dismantlement, disposal and recycling.** **Trans frontier shipment of waste will be addressed in during the commercial tendering process.** Once the removal method and disposal route has been selected, OPRED will be advised.

Table 4-4 - Jacket Decommissioning Methods

Navigational provisions and Safety Zone

Wintershall typically removes the Topsides and Jackets in a single operation, whereby the Heavy Lift Vessel may need to sail to shore in between lifting of the Topside and the Jacket. During these days a guard vessel will remain at the Wingate location, or the Jacket will be equipped with a temporary navigational system. As the Jacket remains above the sea surface after the Topside has been removed, the Safety Zone (SZ) remains in place. The SZ automatically terminates when this is no longer the case.

Upon termination of the surface SZ, WINZ will seek to apply for a Statutory Instrument SZ until decommissioning is complete. On the completion of decommissioning, the SI SZ would be cancelled.

Thereafter, where there may still be assets on the seabed which represent a hazard to fishermen, WINZ will consider the establishment of a Fishing Awareness Zone (FAZ), which would appear in the FishSAFE dataset.

4.3 Pipelines

The pipelines as detailed in Table 3.2 and Table 4.5 have been subject to a Comparative Assessment process in line with the recommendations of the BEIS Guidance Notes to determine the most appropriate decommissioning solution.

Decommissioning Options

The following options considered (and identified in terms of applicability to the pipelines in Table 3.2 are shown in the table below:

Pipeline or Pipeline Groups Decommissioning Options			
Pipeline (as per PWA)	**Condition of line** (Surface aid/ Trenched/ Buried/ Spanning)	**Whole or part of pipeline/group**	**Decommissioning Options* considered**
PL2850 12" Export	Trenched and buried	Whole pipeline	1, 2, 4A, 4C
PL2851 2" Chemical	Trenched and buried	Whole pipeline	1, 2, 4A, 4C

Table 4-5 - Pipeline or Pipeline Groups Decommissioning Options

Comparative Assessment Method

A Comparative Assessment (CA) has been undertaken (Intertek, 2024a, P1841_R6322_Rev1, attached to this DP) to support the preparation of the Decommissioning Programmes. This was undertaken to meet the requirements of the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) decommissioning guidance (BEIS 2018) which states that when a Decommissioning Programme includes a pipeline, a CA is required to be carried out for all feasible options to inform decisions relating to the decommissioning.

The scope of the CA was for the UK sections of the two pipelines (PL2850 and PL2851). A subsequent regulatory process for the Dutch sector will be undertaken with the Regulatory Authorities in the Dutch sector, in parallel to this in the UK. The Minister of Economic Affairs and Climate decides (based on Section 45 of the Dutch Mining Act and Article 103.1 of the Dutch Mining Regulation). Under the Dutch regulations, the current starting point is that a pipeline can remain in situ unless it meets certain criteria, to date the Wingate Pipelines meet these criteria.

Eight options for decommissioning the pipelines were screened to shortlist technically feasible options. The CA assessed each shortlisted option against a set of criteria. The options assessed were:

Key to Options:

- Option 1: Leave in situ;
- Option 2: Partial removal;
- Option 4A: Full removal – reverse s lay; and
- Option 4C: Full removal – cut and lift.

Criteria were defined in line with the BEIS Guidance Notes (BEIS, 2018) and Guidelines for Comparative Assessment in Decommissioning Programmes (OGUK, 2015). The criteria were grouped into five (5) main sections to include Safety, Environment, Technical, Societal and Commercial. Sub-criteria were developed for each criterion. Options were scored on a scale of 1 to 5 and weightings applied to allow for differing opinions on the relative importance of the criteria.

A series of workshops were run to identify, assess and score the options for the pipeline including:

I. An Environmental Risk Identification (ENVID) workshop was undertaken to identify the environmental risks associated with each option. This workshop was also used to identify the options to be carried forward to CA.
II. An internal CA workshop was undertaken to score and comparatively assess the feasible options.
III. A subsequent CA workshop was held with stakeholders to review and verify the scoring and ensure all concerns were identified and assessed.

The stakeholder CA workshop was held with representatives from National Federation of Fishermen's Organisations (NFFO), Health and Safety Executive (HSE) and OPRED. The purpose of this workshop was to receive input from these

stakeholders in the evaluation of decommissioning options and ensure transparency in the identification of the preferred option. Ahead of this workshop Joint Nature Conservation Committee (JNCC) were consulted and provided comments on an early draft of the CA report to ensure environmental aspects were identified and evaluated appropriately. OPRED attended the workshop in the role of observers and to provide advice on decommissioning regulations/guidance as required.

The recommended decommissioning option for the Wingate pipelines based on the scoring of the CA is Partial Removal.

The CA concludes the following:

- Partial removal is considered the best option in 9 of the 12 sub criteria.
- Partial removal is assessed as having the lowest safety risk.
- Partial removal and leave in situ are assessed as having the same environmental risk, technical risk, societal impact and similar economic costs.

Outcome of Comparative Assessment: The outcome of the Comparative Assessment is shown in the table below.

Outcomes of Comparative Assessment		
Pipeline or Group	**Recommended Option***	**Justification**
PL2850 12" Export	(Option 2) - Partial removal is considered the best option in 9 of the 12 sub criteria. - Partial removal is assessed as having the lowest safety risk. - Partial removal and leave in situ are assessed as having the same environmental risk, technical risk, societal impact and similar economic costs.	Option 2 (Partial removal) was considered as the most suitable decommissioning option for the PL2850 12" Export pipeline considering that this option was assessed to have the lowest safety risk, a small risk to the marine environment (both long and short term), and a very low risk of project failure. Additionally, this option was assessed to have insignificant likely effects to societal and economic receptors. Compared to other decommissioning options, Option 2 scored the lowest in risk, and ranked the highest in suitability. See P1841_R6322_Rev1 Wingate Pipeline Decommissioning Comparative Assessment Report for more information.
PL2851 2" Chemical	(Option 2) - Partial removal is considered the best option in 9 of the 12 sub criteria. - Partial removal is assessed as having the lowest safety risk. - Partial removal and leave in situ are assessed as having the same environmental risk, technical risk, societal impact and similar economic costs.	Option 2 (Partial removal) was considered as the most suitable decommissioning option for the PL2851 2" Chemical considering that this option was assessed to have the lowest safety risk, a small risk to the marine environment (both long and short term), and a very low risk of project failure. Additionally, this option was assessed to have insignificant likely effects to societal and economic receptors. Compared to other decommissioning options, Option 2 scored the lowest in risk, and ranked the highest in suitability. See P1841_R6322_Rev1 Wingate Pipeline Decommissioning Comparative Assessment Report for more information.

Table 4-6 - Outcomes of Comparative Assessment

4.4 Pipeline Stabilisation Feature(s)

All concrete mattresses and grout bags will be recovered to shore unless noted otherwise. The Table below shows an overview of the Pipeline stabilisation features.

Pipeline Stabilisation Feature(s)			
Stabilisation feature(s)	**Number** (adjacent to Wingate NUI)	**Option**	**Disposal Route** (if applicable)
Concrete mattresses	Wingate side: 22	It is intended that the stabilisation features situated adjacent to the Wingate NUI will be fully recovered to shore, however in the event of operational difficulties OPRED will be consulted and alternative proposals will be discussed and agreed.	Transport onshore for disposal and/or reuse.
Mattresses: 8.7t each (weight in air), size: 6m x 3m x 0.3m			
Grout bags	Wingate side: 60m^2	It is intended that the stabilisation features situated adjacent to the Wingate NUI will be fully recovered to shore, however in the event of practical difficulties OPRED will be consulted and alternative proposals will be discussed and agreed.	To shore for disposal in landfill.
Grout bags: installed for the length of the straight section of the spool, total 60m^2, 20m length x 3m width			

Table 4-7 - Pipeline Stabilisation Feature(s)

There are grout bags installed below the spool piece connecting the pipeline to the riser section at Wingate NUI to support the connecting spool.

See attachment *WIN-NE-A-D-00242 Wingate Platform Approach* for a clear picture of stabilisation features present and the nature of the pipeline transition from the trench to the Wingate installation.

4.5 Wells

Well Plug and Abandonment
The wells which remain to be abandoned, as listed in Section 3.3 (Table 3.3) will be plugged and abandoned (P&A) in accordance with Oil and Gas UK Guidelines for the suspension and abandonment of wells. Applications under the relevant regulations will be submitted in support of works carried out.

Table 4-8 - Well Plug and Abandonment

4.6 Waste Streams

Waste Stream Management Methods	
Waste Stream	**Removal and Disposal method**
Bulk liquids	Pipeline flushing and cleaning fluids will likely be injected into one the Wingate gas production wells. However, current methodology for the flushing and cleaning of the pipelines has not yet been defined. Bulk liquids removed from process vessels, storage tanks and storage containers will be transported to shore. Vessels, pipework and sumps will be drained prior to removal to shore and shipped in accordance with maritime transportation guidelines. Bulk fluids will be taken onshore for handling at the appropriately permitted facilities prior to onshore treatment and disposal.
Marine growth	Removed onshore. Disposed of according to guidelines.
NORM/LSA Scale	To be taken onshore with the infrastructure identified for removal and decontamination at the appropriately permitted disposal yard prior to onshore disposal.
Asbestos	Asbestos is not anticipated, however if any is encountered, it will be handled and disposed of onshore in accordance with guidelines and company policies.
Paint coating	We do not anticipate encountering any paints containing hazardous material (e.g., lead, cadmium). Painted items will be disposed of onshore at a licensed waste facility with appropriate safety measures in place with full consideration given to any toxic components.
Other hazardous wastes	Will be recovered to shore and disposed of according to guidelines and company policies and under appropriate permit. WINZ always let a contractor company perform a survey regarding hazardous materials as described in the Guidelines for the development of the IHM, mentioned in Resolution MEPC.269(68), adopted on 15 May 2015 and with reference to the Hong Kong Convention, EMSA's Best Practice Guidance on the IHM and EU SRR 1257/2013. The survey includes checks on the presence of the following materials: - Asbestos - PCB's - Ozone Depleting Substances (ODS) - PFOS Samples - HBCDD Samples - Heavy Metals - Radioactive Materials The final survey report will be shared with the removal/dismantling contractor.

	Furthermore, WINZ will submit the following information to the removal/dismantling contractor: - Batteries list - Overview of the presence of firefighting equipment like extinguishers, foam systems, FM200 bottles - Diesel inventory - Presence of high-pressure hoses - Presence of hydraulic oil, lubricants
Onshore Dismantling sites	Appropriate licenced sites will be selected. Facility selected must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver innovative recycling options.

Table 4-9 - Waste Stream Management Methods

Inventory Disposition			
	Total Inventory Weight (t)	**Planned tonnage to shore (t)**	**Planned left *in situ* (t)**
Installations	2,148	1,816	332 (below seabed)
Pipelines	2,657 (1,343.8 UK sector)	UK sector: 150 (riser) + 6.4 (50m pipeline (until sufficient burial depth))	2,500.6 (1,187.4 UK sector)

Table 4-10 - Inventory Disposition

Note Table 4-10:

- *Minor discrepancies due to rounding of numbers.*
- *Total Inventory Weight Installation does include 451 t pile weights.*
- *Planned tonnage to shore Installation does include 119 t pile weights.*
- *Total Inventory Weight Pipelines and Planned left in situ Pipelines excludes stabilisation features.*

5 Environmental Appraisal Overview

5.1 Environmental Sensitivities (Summary)

An Environmental Appraisal (EA) has been prepared by Intertek (2024b) to support these Decommissioning Programmes. The EA defines the existing baseline environment surrounding the decommissioning activities location, identifies the potential activities that may have an impact on the baseline environment, and the severity and likelihood of an impact using the severity classes set out in environmental risk assessment guidance produced by United Kingdom Offshore Operators Association (UKOOA) (1999).

The environmental sensitivities at Wingate are summarised in Table 5-1 below.

Environmental Sensitivities	
Environmental Receptor	**Main Features**
Physical Environment	
Atmosphere (Meteorology and Air Quality)	The strongest winds occur in the SNS area within winter months (Jan to March), whereas summer months (May to August) are calmer. Air temperatures vary from a mean of 4°C to 6°C between January and February to 16°C at the highest between July and August. Emissions generated will be localised to the worksite and short term. As such, air quality is not considered to be an issue for offshore developments, as they are too remote from onshore receptors to have an adverse impact on them.
Water (Oceanography)	The hydrography of the North Sea is strongly influenced by inputs from North Atlantic waters, with minor inflows from the English Channel and the Baltic Sea (4°C to 6°C between January and February to 16°C at the highest between July and August). The North Sea has a predominately tidal current regime. More specifically, the SNS is characterised by shallow, well mixed waters, which undergo large seasonal temperature variations (OSPAR 2010). Shallow parts of the SNS do not show water column stratification during summer months.
Water Quality	Produced water is the main source of contamination to the water column and may be contaminated with chemicals used downhole. However, it was concluded that there is no evidence for influence on water quality from produced water beyond the immediate vicinity of the source (Defra 2010). Hazardous substances enter the marine environment due to natural processes and as a result of anthropogenic activity (UKMMAS 2010). Water quality in the UKCS generally reflects the sources and modes of transport of potential contaminants to the marine environment. Concerns over water quality in UK waters are largely restricted to industrialised estuaries (DTI 2001; UKMMAS 2010).
Onshore Communities	Materials from decommissioning will be shipped onshore. These materials will be disposed of at appropriately licenced sites, which will be selected based on their ability to demonstrate a proven disposal track record and waste management through deconstruction processes, as well as demonstrating their ability to deliver innovative recycling options.
Seabed	
Bathymetry	The majority of the SNS lies in water depths > 50m with a maximum depth of 98m. Dogger Bank is the highest point, which is 15m below sea level at its shallowest. Water depths range between 27.9m LAT and 40m LAT along the pipeline and platform. Slope gradients along the route are very slight to negligible with a maximum gradient of 12.5% at KP20.6. This is within the immediate vicinity of the D15-FA-1 platform.
Sediments and Seabed Features	The Wingate field consists of shallow soils and slightly muddy sand, of which extends to approximately 35m below the seabed and covers the pipeline. The seabed is generally featureless and smooth. Trawl scars were observed in the western and central areas of the pipeline corridor. Findings from surveys suggest sediments are homogenous very fine brown sand, of which is rippled with shell fragments. Sediments are dominated by sand sized particles,

	with some fine and coarse material present. Publicly available data suggests the habitat surrounding the platform is Atlantic circalittoral sand (MC52) with some Atlantic offshore circalittoral sand (MD52) and Atlantic offshore circalittoral coarse sediment (MD32) along the pipeline.
Sediment Contamination	Surveys show that THC concentrations are similar across the site, with stations close to the exploration well displaying marginally higher concentrations due to the dispersal of drilling muds. N-lkanes concentrations showed a similar pattern however, concentrations were lower during the post-drilling survey compared to the pre-drilling conditions, with the exception of raised levels of a series of alkanes from NC12 19 of which are most likely drilling related. All stations showed elevated levels of Ba post-drilling compared to pre-drill. Two stations had elevated concentrations, with one likely to be related to the drilling muds used for the 44/24b-7z exploration well and another suggesting that drilling muds dispersed at least 200m away from the drilling location with the prevailing current. Concentrations of Cr, Ni, V and Zn were also elevated in comparison to pre-drilling levels. Pb concentrations were generally similar in the pre-drilling and post-drilling surveys but were elevated at one station. Cd, Cu and Tin concentrations were below detectable levels at all stations. All N-alkane, THC and heavy metal concentrations were below expected background levels for the SNS, with the exception of Ba.
Biological Environment	
Plankton	The most abundant phytoplankton in the SNS are dinoflagellates and diatoms. Primary productivity increases in spring, leading to an increase in reproduction, and mixing by storms can lead to a secondary bloom occurs in autumn. Primary productivity over the Dogger Bank occurs throughout the year. Copepods and echinoderm larvae dominate the zooplankton community. The eggs and larvae of commercially important fish species are also present. Increases in zooplankton abundance are related to food supply and generally lag behind phytoplankton blooms by a period of days to weeks. Plankton populations and succession are typical to those in the SNS. Plankton are potentially vulnerable to chemical and hydrocarbon discharges and high intensity sound in the immediate vicinity of the source. However, it is noted that plankton in UK waters are unaffected by anthropogenic influences.
Benthic Communities	Benthic communities observed in the survey were typical of moderately diverse sandy biotopes of the biotope 'Fabulina fabula and Magelona mirabilis with venerid bivalves and amphipods in infralittoral compacted fine muddy sand' (SS.SSa.IMuSa.FfabMag). 75 discrete macrofaunal taxa were recorded including annelids, molluscs, crustacean, echinoderms. No rare or protected species were identified in the baseline survey. Another monitoring survey (Eggleton et al. 2016)) collected a benthic samples in close proximity to the Wingate platform (1.7km) and pipeline (0.4km) with the most abundant species including the polychaetes, bristle worms, amphipods and bivalves.
Fish	Fish species diversity is rich in the SNS, more so compared to the central or northern North Sea (BEIS 2022). The greatest species diversity is observed in the west of the SNS (DECC 2016). The North Sea has been divided into a number of ICES rectangles, the Wingate NUI and associated pipelines are situated within the ICES rectangle 37F2. Within this rectangle, there are spawning or nursery grounds of up to 25 fish and shellfish species of commercial or conservation importance (Ellis et al. 2012).
Seabirds	Seabird distribution in the SNS varies throughout the year. Numbers of seabirds at sea are generally lower in Regional Sea 3 (SNS) compared with waters further north. Seabirds are vulnerable to oil on the sea surface, particularly when moulting at sea, following breeding periods (Marine Scotland 2020). The SOSI indicates that during the operational period, worst-case sensitivity across Block 44/24 and the surrounding blocks is extremely high in January, July, October, November and December, and low the remainder of the year.
Marine Mammals	Overall, the number of species of cetaceans and the frequency of sightings tends to decrease southwards through the North Sea (BEIS 2022). From the cetacean species regularly recorded in the North Sea, those likely to be present within the operational area include harbour porpoise and white beaked dolphin throughout the year and minke whale as a seasonal visitor.

	The distributed of pinnipeds in the North Sea is limited by their need to return to land periodically. Two species of pinniped have been recorded in SNS waters: harbour seal (Phoca vitulina) (BAP) and grey seal (Halichoerus grypus), which are both known to frequent the Dogger Bank area.
Protected Sites	
Special Areas of Conservation (SACs)	The Wingate field is located within the boundaries of the Dogger Bank SAC. The Dogger Bank SAC is protected for 'sandbanks which are slightly covered by sea water all the time', covering an area of 12,388km2 and is the largest single continuous expanse of shallow sandbank in UK waters. The project area is also 5km south of the southern boundary of the southern North Sea SAC, the largest SAC in the UK (IAMMWG 2016). This SAC has been identified for the conservation of harbour porpoises, providing habitat for them during winter and summer.
Marine Conservation Zones (MCZs)	The closest MCZ to the project area is the NG-7 Markham's Triangle MCZ, which is located approximately 37.4km north of this protected site. It is designated for Subtidal coarse sediment, Subtidal sand, Subtidal mud, and Subtidal mixed sediments.
Special Protected Areas (SPAs)	There are no SPAs in the vicinity of the project area.
Annex I Habitats	No Annex I habitats were identified in the project area.
Other Regulatory Issues	
Block 44/24	Other periods of concern including Seismic survey and seabed surveys were included in this section of the baseline. The Decommissioning Programmes will not include either seismic survey or drilling activity.
Other Users of the Sea	
Shipping	Shipping density within Block 44/24 is given as moderate, with 10 shipping routes passing within 10 nautical miles (18.5km) of the Wingate NUI, with the closest approach being 1.5 nautical miles (2.8km). However, as the NUI is within a permanent 500m safety exclusion zone, established when the platform was installed, and all operations during decommissioning will be carried out within this zone, there is no increased risk to navigation.
Commercial Fishing	The Wingate NUI, and associated pipelines, lie within ICES rectangle 37F2. Generally, fishing effort and quantities landed have decreased over the period 2018 to 2022.
Other Marine Users	The Wingate NUI lies: • Within the D323D Southern military defence area of intense aerial activity. • Approximately 9.3km east of the Kelvin platform, 9.5km south of the Katy platform, 17km south of the Tyne platform, 20km east of the Murdoch platform, 25km east of the Munro platform, 30km east of the Ketch platform, 31km east of the Boulton platform, and 35km south of the Cygnus A platform. • Approximately 6.5km south of PL2894, the Katy to Kelvin gas export pipeline. • At the UK/Netherlands median line PL2851/2852 is approximately 5.9km north of the disused Minke to D15 FA 1 gas export pipeline. • Approximately 35km from PL3088, Cygnus to ETS gas pipeline, and PL3086, Cygnus A to cygnus B gas pipeline. Approximately 8.7km southeast of the Tampnet telecommunications cable, 30km south of the BT telecommunications cable, and passes within 10km of the Viking Link Interconnector. • 33km east of the R4 Project 4 (Dogger Bank Southeast) RWE windfarm and 35km north of the Hornsea Round 3 windfarm zone. To the south of a medium use recreational cruising route for yachts.

Table 5-1 - Environmental Sensitivities

Source: See supporting documentation Environmental Appraisal, Intertek, 2024b

5.2 Potential Environmental Impact and their Management

Environmental Impact Assessment Summary

The environmental appraisal determined that there will be some local environmental impact during the decommissioning operations, however long-term environmental impacts from the activities are expected to be negligible. Cumulative impacts from the decommissioning activities and other marine users have been assessed as **acceptable**.

While the pipelines associated with the Wingate NUI (PL2850 and PL2851) cross the UK/Netherlands median line, activities (with the exception of pre-decommissioning surveys which will cover both sectors) will be restricted to the immediate vicinity of the Wingate NUI. Therefore cumulative impacts and transboundary effects associated with the planned decommissioning activities are expected to be **negligible**.

Overview

The main environmental impacts associated with decommissioning operations and management for each are summarized in Table 5-2 below.

Environmental Impact Management			
Aspect/impact	**Decommissioning Activity**	**Impact Assessment summary**	**Management and Mitigation**
Atmospheric emissions and energy use	Topside Removal Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	Emissions during decommissioning activities will comprise greenhouse and other gases emitted as a result of vessel use. Atmospheric emissions will be short term and localised. In addition, under the prevailing metocean conditions of the area, it is anticipated that emissions generated will disperse quickly. Operations will contribute to the generation of greenhouse gases (GHG) including CO2, NOx, SO2 and unburned hydrocarbons. It is predicted that the GHG emissions generated during the proposed decommissioning activities will disperse rapidly, dropping to levels approaching the marine background within a few kilometres of the source. Any contribution to GHG concentrations in the atmosphere must be considered as potentially deleterious; however, the quantity emitted during decommissioning of Wingate NUI and the associated pipelines will not be detectable against background levels. Given the distance to the shore from the decommissioning activities (177.0km) the impact of atmospheric emissions generated by decommissioning vessels on air quality is	Emissions emitted from vessels will be minimised where ever possible following relevant industry best practices to limit atmospheric emissions will be implemented including: • Advanced planning of operations to reduce time required for vessels and ensure efficient operations; • Emissions controlled to MARPOL Annex VI standards via use of cleaner low emission fuels; • Limiting vessel speed to minimise fuel consumption; • Generators will be running on the minimum power required to avoid unnecessary emissions; and • Regular monitoring of fuel consumption. While contractors are yet to be selected during the selection process contractors will be selected that satisfy modern and fuel efficiency standards. Vessels selected will comply with the Merchant Shipping (Prevention of Air Pollution from Ships) Regulations 2008.

		expected to be minor. They will not contribute to atmospheric contamination at sensitive (terrestrial) sites, such as cities. Given the distance to the median line, between the UK and Netherlands (10km) it is not expected that there will be increases of the atmospheric greenhouse concentrations over the transboundary line. The assessment concluded that impacts from atmospheric emissions were **Tolerable**.	
Disturbance to nesting seabirds	Topside Removal	Offshore platforms have been recognised as potential nesting sites for seabirds, particularly species such as kittiwake and herring gulls. There is no known evidence of nesting seabirds on the Wingate NUI. The Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) secure protection of wild birds, their eggs and nests in the offshore marine area, including offshore marine installations. It is an offence under Regulation 40 to deliberately injure, kill or any wild bird or take, damage or destroy the nest whilst in use or being built or take or destroy an egg. Prior to the commencement of decommissioning activities, assurance will be made that any potential adverse impacts associated with the activities will be minimised with respect to seabirds. Impact of disturbance to nesting seabirds was screened out of further assessment based on available data at the time of the assessment.	• Wintershall have developed a Bird Management Plan for the Wingate Platform. This will be a live document and supported by seabird surveys once a year likely in August/September to monitor for presence of nesting seabirds. This will continue after CoP to ensure that any presence of birds is identified prior to removal of the topsides. • Awareness of the birds utilising the platform will allow Wintershall the opportunity to implement a deterrence strategy, and/or apply for a licence to disturb if operations will lead to disturbance of nests that cannot be mitigated against. • The survey data can be used to inform the planning and scheduling of works in order to avoid the risk of an offence and/or to determine whether a disturbance licence needs to be sought. If possible, Topside removal activities will be planned outside of the breeding bird season. • Wintershall will liaise with DESNZ and JNCC to confirm expectations and licensing requirements based on the nest status and scheduling, as appropriate.
Marine discharges	Topside Removal Jacket Removal Decommissioning Pipelines	Marine discharges will be generated by Well abandonment and cementing activities, Pipeline chemical and residual hydrocarbons and Drainage Water, Food Waste, Sewage and Grey Water.	• Any chemicals identified to be high risk will be substituted for a more environmentally friendly alternative wherever practicable; • All vessels/rigs involved in decommissioning activities will be equipped with suitable

		Discharges from vessels are regulated activities which are managed through existing legislation and compliance controls. All infrastructure will be flushed and cleaned prior to removal. Any discharges from infrastructure occurring during decommissioning activities will be assessed as part of the environmental permitting process. Impact of marine discharges was screened out of further assessment.	containment, treatment and monitoring systems; • Each vessel/rig will have a Garbage Management Plan in place; • All he drains from the rig floor will be directed to a containment tank and the fluids processed/filtered to remove hydrocarbons; • WINZ will ensure that the contractor knows how to react to spills, that the necessary spill kits are available onboard and personnel are trained in their use.
Physical presence of infrastructure decommissioned *in situ*	Topside Removal Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	The proposed decommissioning activities have the potential to impact upon users of the sea due to the physical presence of the pipeline left *in situ*. Sea users, other than commercial fisheries, are unlikely to be affected by the proposed decommissioning solution, therefore the assessment focused on the potential risk for commercial fisheries. Interactions with commercial fishing will be short lived. The safety exclusion zones will be removed when decommissioning activities have been completed, allowing access for users. Details of infrastructure remaining *in situ* will be publicised and marked on navigation and fisheries charts, and an agreed monitoring programme for these will be established. The pipelines have been present in the seabed for over a decade, are charted features and to date there have been no offshore shipping or fisheries related incidents. The potential for significant effects on fisheries from legacy material left *in situ*, following normal operational controls described above, are considered very low. In addition, both the steel pipeline and plastic polymer coating have the potential to degrade over time. This could impact local seabed sediments, benthic communities and protected sites. Assessment concluded that due to the highly	The impacts of the physical presence of infrastructure decommissioned *in situ* will be minimised where ever possible and mitigation will include: • Vessel movements and the heavy lift vessel (HLV), and any other, anchors will be notified to fishermen and others through the normal routes, including publication in Notice to Mariners and in Kingfisher bulletins detailing positionings, activities and timings. In addition, there will be full navigation lighting on HLV and associated vessels. All vessels used in the decommissioning activities will meet applicable national and international standards, for example in terms of signals and lighting. • A post decommissioning survey will be carried out and although not expected, if large seabed depressions or mounds from the decommissioning activities are evident which could potentially be a hazard to fishing gear, these will be notified through the Kingfisher notices system. Inspection surveys will be undertaken after decommissioning to provide a general inspection on the *in situ* status and to assess/check depth of burial status of the pipelines. An agreed monitoring programme with the regulator will be established to identify future exposure of the pipeline decommissioned *in situ*, although this is not expected.

		localised nature of any degradation products and the low concentrations of contaminants being released over an elongated period, it is expected to have a negligible impact on the local environment including seabed sediments, benthic communities and protected sites. As a result the impacts of the physical presence of infrastructure decommissioned *in situ* on seabed sediments, benthic communities, protected sites and commercial fisheries was assessed as **acceptable.**	An over=trawlability verification exercise will also be carried out post decommissioning to ensure that the *in situ* pipeline is over trawlable and does not present a snagging hazard. • The position of the pipeline remaining *in situ* will be charted through normal routes. No specific additional mitigation is considered necessary beyond application of established operational controls.
Physical presence of vessels	Topside Removal Jacket Removal Subsea Installation(s) Removal Decommissioning Pipelines Decommissioning Stabilisation Features	The physical presence of vessels during decommissioning operations can cause disturbance to commercial fishing vessels. The presence of a small number of vessels for a short period (maximum of three weeks) within the 500m safety exclusion zone will not lead to an increased risk or disturbance to other sea users. The assessment determined that presence of vessels undertaking decommissioning will temporarily modify the area of available fishing grounds but this will not lead to a significant impact on the commercial fishing industry. Impact of physical presence of vessels was screened out of further assessment.	• Stakeholder engagement will continue prior to commencement of the decommissioning operations. • Users of the sea will be notified of the presence and intended movements of vessels, the presence of any exclusion zones and the presence of new structures via the Kingfisher Fortnightly Bulletins, Notices to Mariners and very high frequency radio broadcasts. • Appropriate navigation aids will be used in accordance with the Consent to Locate conditions to ensure users of the sea are made aware of the presence of vessels undergoing decommissioning activities. • Automatic Identification System will be used to track all decommissioning vessel activities in accordance with national and international regulations.
Resource use	Topside Removal Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	Resource use from the activities will be limited in terms of use of raw materials. This will be limited to fuel use and rock for rock protection of the cut end of the pipeline. Based on available data the impact of resource use was screened out of further assessment.	• Adherence to the Waste Hierarchy • Vessel management (i.e. control of fuel usage)
Seabed disturbance	Topside Removal Jacket Removal	Decommissioning activities have the potential to impact the seabed through direct impacts, such as the removal of subsea infrastructure and introduction of rock placement, as well as	Impacts of seabed disturbance will be minimised where ever possible and mitigation will include: • Work will be undertaken in an environmentally sound manner with interfaces detailing

	Decommissioning Pipelines Decommissioning Stabilisation Features	indirect impacts such as the re suspension of settlement. The assessment determined that although the placement of anchors and anchor chains on the seabed will impact the water column and seabed sediments, by limiting the number of locations for the HLV any effects will be highly localised in nature and therefore the impact on the marine environment is considered to be minor. In addition, the removal of infrastructure, protective material and the burial of pipeline ends will cause seabed disturbance. This could impact water quality, seabed sediments, benthic communities, fish and protected sites. To mitigate these impacts, vessel movements and rock protection quantities will be minimised. The disturbance is likely to be short term and relatively small compared to the surrounding similar habitats present in the Southern North Sea and the areas of impact are expected to recover quickly due to the nature of the local marine environment. The impacts on the Benthic Habitat of the Dogger Bank SAC was also assessed. Seabed disturbance will be highly localised and will not have any impact on the extent, distribution, structure, or function of the sandbank habitat forming the qualifying feature of this site. Decommissioning operations may also result in further permanent impacts, due to deposition of material (e.g. rock dump) which can differ in size from sandbank substrate, which may cause localised changes to the sediment type. The spatial scale of this impact is negligible when considering the spatial extent of the site. Natural conditions within the footprint are expected to rapidly re-establish following completion of the programme. As a result, the impacts on the conservation objectives of the Dogger Bank	responsibilities development, including environmental responsibilities, and regular HS&E meetings, as required. • Rock protection quantity will be minimised and placed as accurately as possible from the vessel. • Project planning includes minimising, as far as practicable, vessel movements, including the use and movement of anchored vessels; the HLV will predominantly be located in close proximity of the Wingate NUI (however, if HLV uses anchors, the footprint will be outside the 500m zone) existing footprint. It also includes assessing the nature and scale of seabed disturbance post decommissioning. • Subsea infrastructure and stabilisation material removal methods will be assessed prior to decommissioning operations beginning, with a view to implement the removal method with the least impact to the seabed. • To avoid the impact of anchors, vessels involved will use Dynamic Positioning, where possible. In addition, the HLV will be positioned in a single location, if possible, during decommissioning to reduce the number of instances that anchors and anchor chains will be deployed on the seabed. No specific additional mitigation was considered necessary beyond application of established operational controls.

		SAC were assessed as **acceptable**. The assessment concluded that the impacts of seabed disturbance on water quality, seabed sediments, benthic communities, fish and protected sites were as **acceptable.**	
Underwater noise emissions	Topside Removal Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	Decommissioning will cause underwater noise emissions from a variety of activities including vessels (including the use of thrusters for positioning), cutting of the Jacket and pipeline (diamond wire or cutting shears) and survey. The assessment determined that the impact to marine organisms are expected to be minor. Shipping density within the area has been described as moderate. This suggests that individuals could already be habituated to reasonably high levels of noise disturbance and therefore operational noise is not anticipated to have a significant effect. Any underwater noise emissions are expected to either be localised, over a short period, or not significantly above ambient levels. The hearing ranges of marine mammals have the potential to overlap with high frequency sounds generated by the diamond wire cutting tool and the multibeam echosounder and side scan sonar used within the pre decommissioning survey. However, based on the locality of cutting, the hearing capabilities and avoidance behaviours of marine mammals, and the duration of operations, any risk of injury or disturbance is expected to be unlikely. The impact of underwater noise emissions from the Wingate decommissioning activities on marine organisms is assessed as acceptable.	Mitigation measures can be used to reduce noise emission impact from decommissioning activities include: • Advanced planning of decommissioning operations so that they don't overlap to reduce cumulative noise emission impacts; • A further noise impact assessment will be submitted to OPRED, which will include noise impact assessments as part of relevant permits were required; • Machinery and equipment will be well maintained; and • Number of vessels involved will be minimised where possible.
Unplanned events	Topside Removal	All wells associated with the Wingate NUI will have been	WINZ will ensure that the contractor knows how to react to spills, that the

	Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	plugged and abandoned prior to decommissioning and there will be no chemical use during the Decommissioning Programmes. As a result, the risk of accidental releases will be restricted to vessel fuel, with a major spill in the event of a collision. Modelling for the Wingate NUI production OPEP considered a potential spill of up to 1.220m3 (1098t) of diesel fuel, from the platform site, based on the fuel capacity of the largest rig likely to be used at Wingate NUI. This represents 22 days fuel for the HLV or 11 days continuous trenching using a trenching vessel. It is therefore regarded as a reasonable maximum fuel load likely to be at risk of release, in the unlikely event of an incident involving loss of vessel fuel inventory. Modelling indicated that there was up to 84% probability of diesel crossing the UK/Netherland median line and a low risk (<2%) of up to 24m3 of diesel beaching on the Norfolk coast. Impact of unplanned events was screened out of further assessment.	necessary spill kits are available onboard and personnel are trained in their use. The Oil Pollution Emergency Plan (OPEP) will be updated to cover the decommissioning operations at Wingate. To reduce the likelihood of collision during installation operations all vessels will follow the International Maritime Organisation (IMO) Standards and will be properly marked, and sound warnings will be broadcast in poor visibility while undertaking the operation. Users of the sea will be notified of the presence and intended movements of vessels, the presence of any exclusion zones and the presence of new structures via the Kingfisher Fortnightly Bulletins, Notices to Mariners and very high frequency radio broadcasts.

Waste	Topside Removal Jacket Removal Decommissioning Pipelines Decommissioning Stabilisation Features	The decommissioning activities will generate waste that will require onshore disposal. The onshore treatment of waste from the decommissioning activities will be undertaken according to the principles of the waste hierarchy. Bulk liquids removed from vessels are transported to shore. Bulk fluids taken onshore for handling at the appropriately permitted facilities prior to onshore treatment and disposal. There may be elements of infrastructure returned to shore which is contaminated (e.g. by NORM). These will be taken onshore with the infrastructure identified for removal and decontamination at the appropriately permitted disposal yard prior to onshore disposal. Where possible elements of the Jacket and Topside will be recycled. Impact of waste was screened out of further assessment.	• WINZ will ensure that an efficient waste management plan is in place prior to commencement of decommissioning activities, including any NORM. • WINZ will ensure all waste contractors are certified and meet the required legal requirements. • WINZ will seek to minimise the amount of recovered materials sent to landfill.

Table 5-2 - Environmental Impact Management

6 Interested party consultation

Consultations Summary

This section will be completed once the statutory and public consultations have been completed.

Summary of Stakeholder Comments		
Who	**Comment**	**Response**
Informal Consultations		
Public		
Statutory Consultations		
National Federation of Fishermen's Organisations	Mr. Ian Rowe 30 Monkgate, YO31 7PF Tel: 01904 6358432 ian@nffo.org.uk	
Scottish Fishermen's Federation (SFF)	Mr. Fahim Mohammad Hashimi 24 Rubislaw Terrace, Aberdeen Tel: 01224 646944 f.hashimi@.co.uk sff@sff.co.uk	
Northern Irish Fish Producers Organisation	Mr. Harry Wick 1 Coastguard Cottages Portavogie, County Down BT22 1EA Tel: 028 427 71946/71954 harry.wick@nifpo.co.uk	
Global Marine Systems Limited	Ms. Chole Morris Ocean House 1 Winsford Way Boreham Interchange Chelmsford, Essex, CM2 5PD Tel: 01245 702000 Chloe.Morris@oceaniq.co.uk	
NSTA Decommissioning Team	decom.team@nstauthority.co.uk	
Public		

Table 6-1 - Summary of Stakeholder Comments

7 Programme Management

7.1 Project management and Verification

A WINZ Decom Project Management Team has been appointed to manage suitable (sub-)contractors for the P&A of the wells and the removal of the installation. Standard WINZ procedures for operational control and hazard identification and management will be used. Where possible the work will be coordinated with other decommissioning operations in the SNS. WINZ is an active member of Element NL (previously NOGEPA), participating in the Nexstep initiative and member of OEUK.

The Management Team will monitor and track the process of consents and the consultations required as part of this process. Any changes in detail to the offshore removal programme will be discussed and agreed with OPRED.

7.2 Decommissioning cost estimate

Decommissioning cost estimates have been provided to OPRED and NSTA separately. The costs provided cover the scope of decommissioning work outlined in this document.

7.3 Post-Decommissioning Debris Clearance and Verification

A post-decommissioning debris survey will be completed in a 500m radius around the former site of the Wingate installation, as well as a 100m corridor (50m either side) along each existing pipeline route where decommissioning activities have taken place, to identify any oil and gas related debris.

Any seabed debris related to offshore oil and gas activities will be recovered for onshore disposal or recycling in line with existing disposal methods. Verification of seabed clearance will be provided to OPRED following decommissioning activities. Confirmation of seabed clearance will be included in the Close Out Report and sent to the UK Hydrographic Office. The means by which seabed clearance is verified will be discussed and agreed with OPRED.

7.4 Schedule

In the figure below a preliminary plan for the activities before, during and after CoP is given. The economic lifetime of the Wingate field is strongly dependent on the gas price and operating cost share on the D15-FA facility, therefore the actual cessation of unprofitable production may be in a following year.

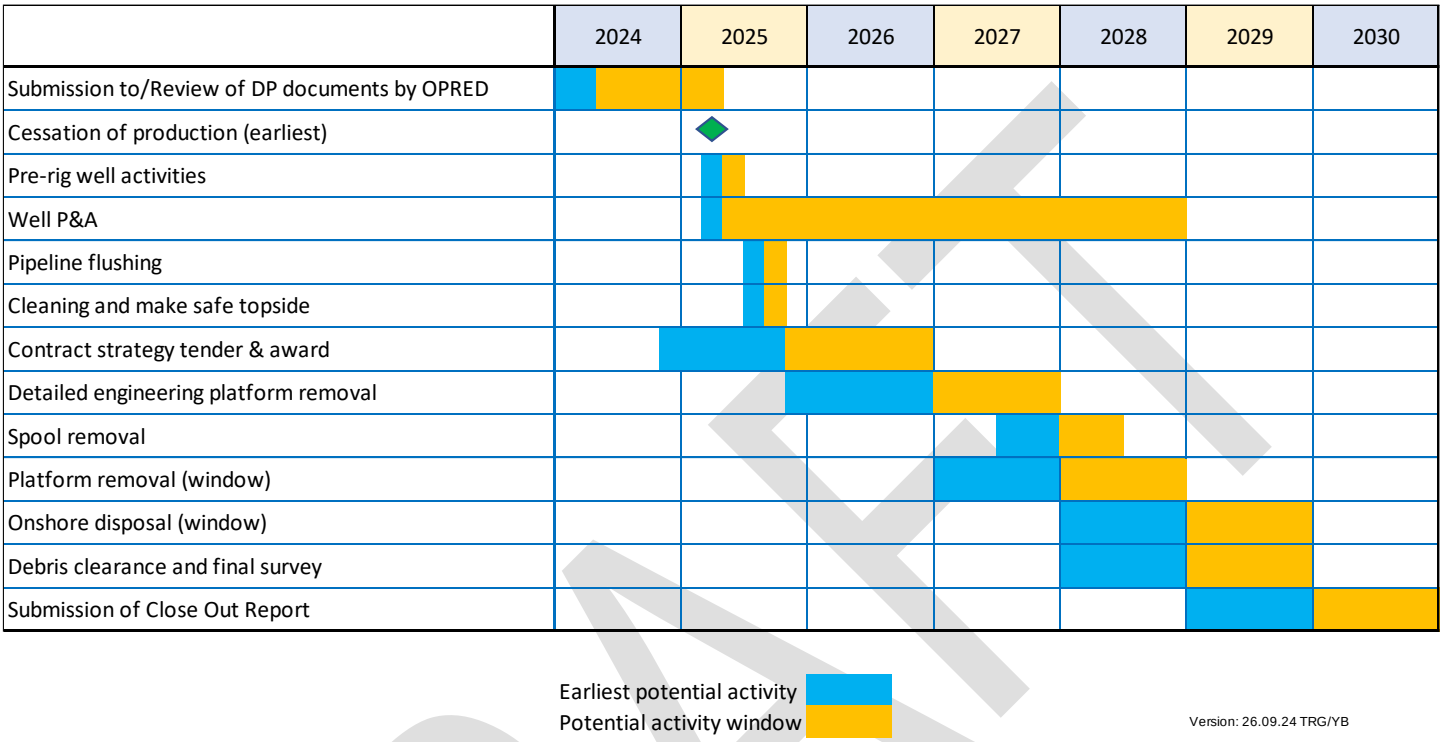


Figure 7-1 - Scheme Planning

Note:

- *WINZ intention is to P&A the Wingate Platform wells to AB2 status as part of a campaign in 2025, where the conductors will be cut to a depth of at least -3m. The wells cannot be fully abandoned to AB3 status until the well conductors are removed; this will be achieved following removal of the Wingate platform via HLV in 2027 earliest.*

7.5 Close-out

A Close Out report will be submitted to OPRED within 12 months of the completion of the offshore decommissioning work including debris clearance, verification of seabed clearance and the results of the first post-decommissioning environmental and pipeline surveys, as required in OPRED guidelines. The report will detail the outcomes of the surveys and explain any variation from the Decommissioning Programmes.

7.6 Post-Decommissioning Monitoring and Evaluation

A post-decommissioning environmental seabed survey will be completed for a 500m radius from the Wingate installation, and along the existing pipeline route where decommissioning activities have taken place. The survey will be compared with the pre-decommissioning environmental seabed baseline survey.

An as-left post-decommissioning pipeline survey along the existing pipeline routes will be completed. Results of the environmental surveys, and the as-left pipeline survey, will be provided to OPRED as part of the Close Out report. A risk-based post-decommissioning monitoring programme will then be discussed and agreed with OPRED.

Liability will remain with the Section 29 holders identified in Table 1.2 and Table 1.4. Unless agreed otherwise in advance with OPRED. WINZ will remain the focal point for such matters, such as any change in ownership.

8 Supporting Documents

The supporting documents will be shared as an attachment to the DP.

Supporting Documentation	
Document Number	**Title**
HSE-02-R010.00	Wingate Field Development Environmental Statement
ET0550-WIN-IP-2010-11-0687	Pipeline trenched alignment sheet
WIN-NE-A-D-00242	Wingate Platform Approach
P1841_R6328_Rev0_OPRED	Environmental Appraisal, Intertek, 2024b
P1841_R6322_Rev1	Comparative Assessment, Intertek, 2024a

Table 8-1 - Supporting Documentation

WIN-NE-A-D-00242 - Wingate Platform Approach

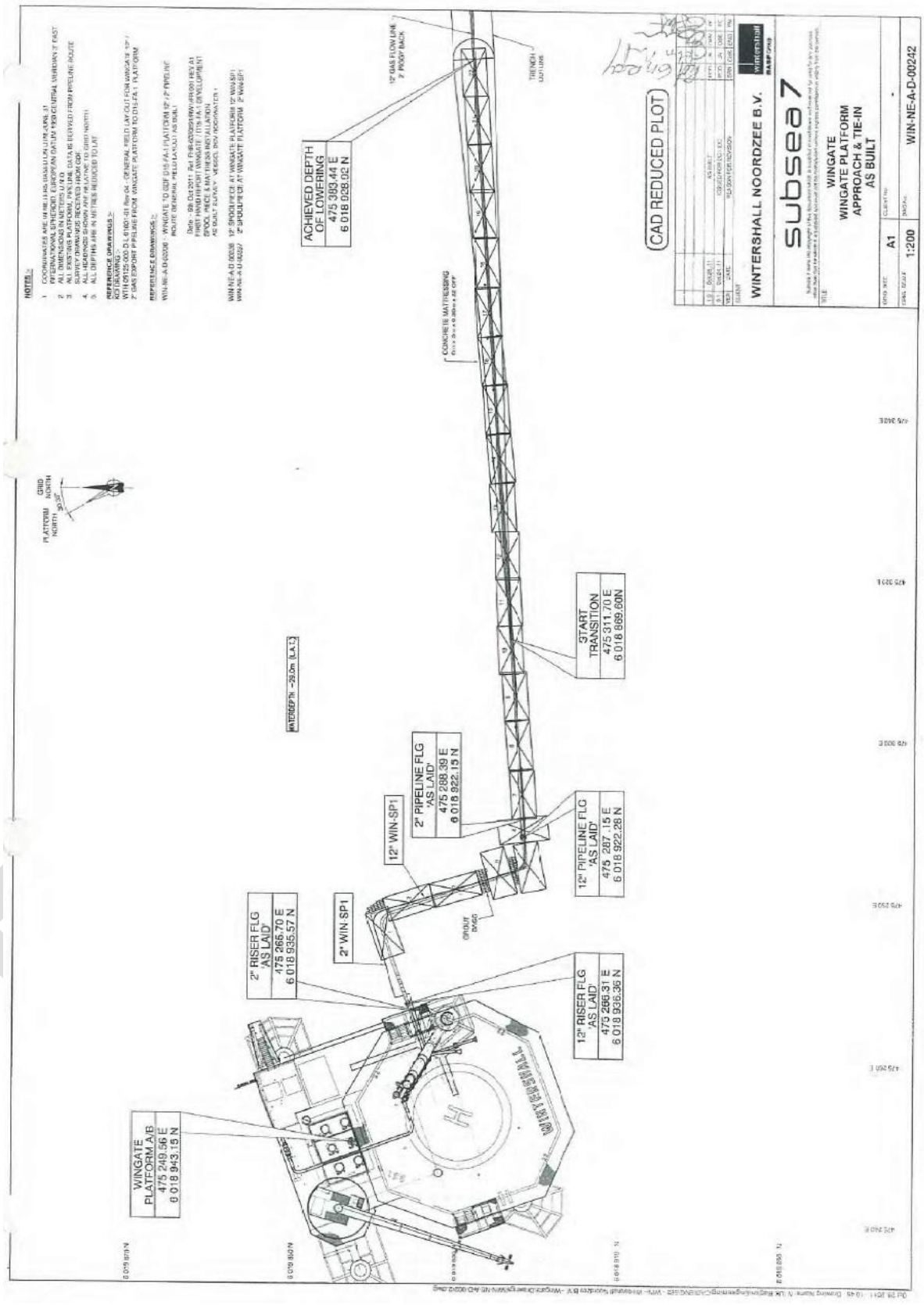


Figure 8-1 - WIN-NE-A-D-00242 - Wingate Platform Approach

ET0550-WIN-IP-2010-11-0687 - Pipeline trenched alignment sheet

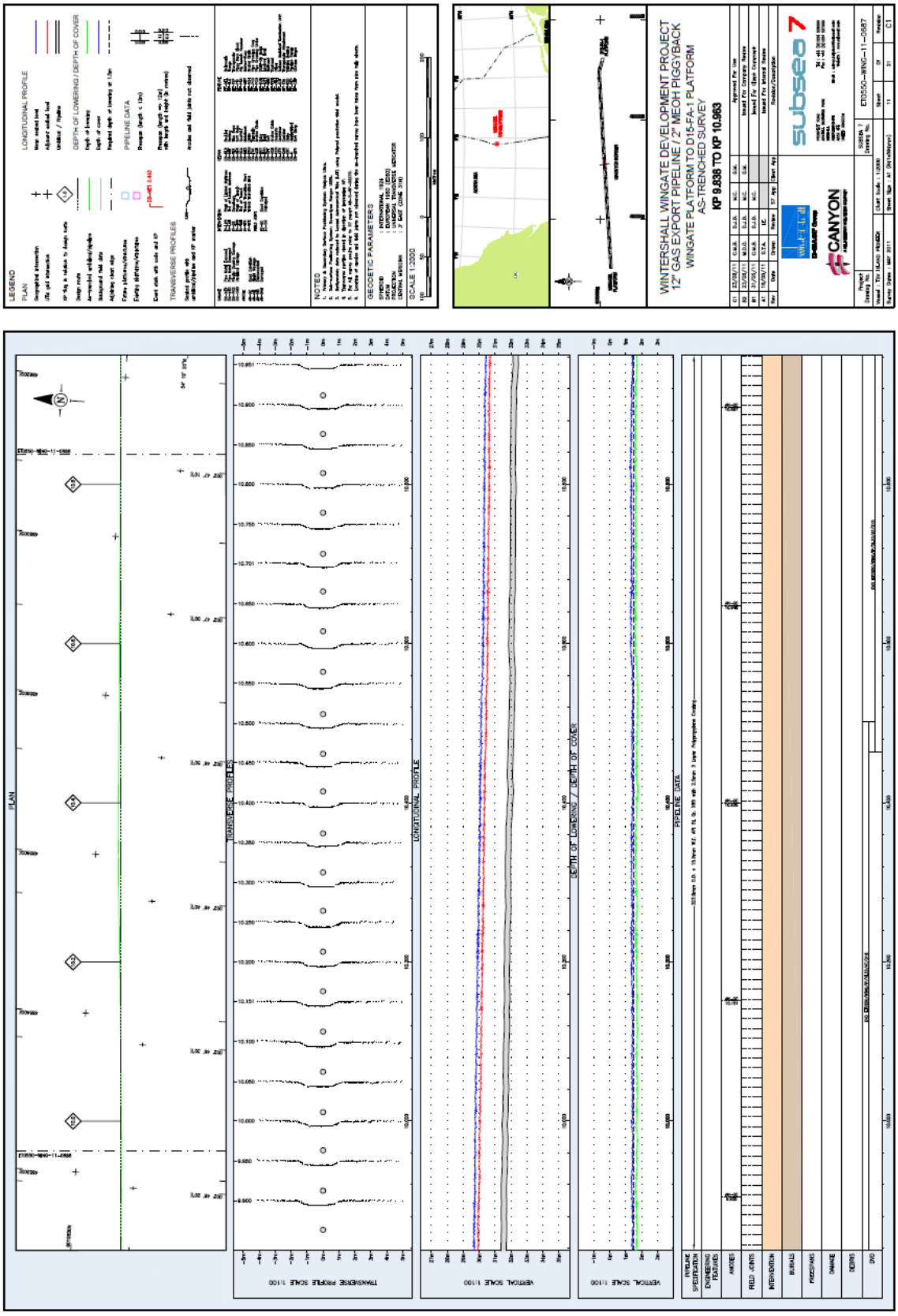


Figure 8-2 - ET0550-WIN-IP-2010-11-0687 - Pipeline trenched alignment sheet

9 Section 29 Holders Letter(s) of Support

Copies of Section 29 Holders Letter(s) of support will be included in the final Decommissioning Programmes.