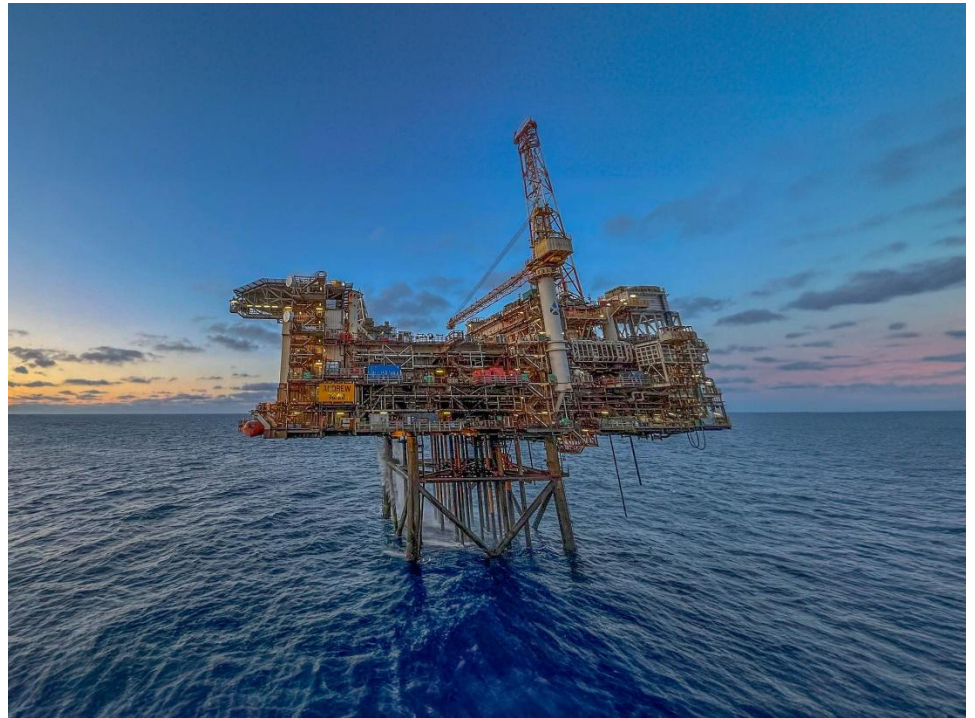




ANDREW TOPSIDES, JACKET & ASSOCIATED RISERS DECOMMISSIONING PROGRAMMES

BP Exploration Operating Company Limited

DC104-MT-REP-040-00001

Consultation Draft

September 2026

Document Control

Approvals

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Contents

1	EXECUTIVE SUMMARY	11
1.1	Combined Decommissioning Programmes	11
1.2	Requirement for Decommissioning Programmes	12
1.3	Introduction	12
1.4	Overview of Installations & Pipelines Being Decommissioned	14
1.5	Summary of Proposed Decommissioning Programmes	16
1.6	Field Location Including Field Layout and Adjacent Facilities	18
1.7	Industrial Implications	27
2	DESCRIPTION OF ITEMS TO BE DECOMMISSIONED	28
2.1	Installation: Surface Facilities	28
2.2	Pipelines Including Stabilisation Features	29
2.3	Wells	32
2.4	Drill Cuttings	34
2.5	Inventory Estimates	35
3	REMOVAL AND DISPOSAL METHODS	38
3.1	Topsides	38
3.2	Jacket	43
3.3	Pipelines	46
3.4	Wells	46
3.5	Drill Cuttings	47
3.6	Waste Streams	48
4	ENVIRONMENTAL APPRAISAL OVERVIEW	50
4.1	Environmental Sensitivities (Summary)	50
4.2	Potential Environmental Impacts and their Management	54
5	INTERESTED PARTY CONSULTATIONS	57
6	PROGRAMME MANAGEMENT	58
6.1	Project Management and Verification	58
6.2	Post-Decommissioning Debris Clearance and Seabed Clearance Verification	58



6.3	Schedule	59
6.4	Costs	60
6.5	Close Out	61
6.6	Post-Decommissioning Monitoring and Evaluation	61
7	SUPPORTING DOCUMENTS	62
8	SECTION 29 NOTICE HOLDERS' LETTERS OF SUPPORT	63
9	PUBLIC NOTICES	64

Abbreviation	Explanation
"	Minute (WGS)
"	Inch
%	Percent
'	Second (WGS)
£M	Million ('000,000) Pounds Sterling
<	Less than
≈	Approximately equal to
°	Degrees
µg/g	Microgram per gram
µm	Micrometre
AAD	Andrew Area Development
BAT	Best Available Technology
BEIS	Department for Business, Energy and Industrial Strategy
BLP	Bridge-linked platform
BPEOC	BP Exploration Operating Company Limited
c.	Circa
CATS	Central Area Transmission System
CCR	Central Control Room
CER	Central Equipment Room
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CoP	Cessation of Production
DES	Drilling Equipment Set
DESNZ	Department for Energy Security and Net Zero
DP	Decommissioning Programme
DSM	Drilling Support Module
E.	East
EA	Environmental Appraisal
ea.	Each
EET	Ecological Effects Threshold
EL.	Elevation
FPS	Forties Pipeline System

Abbreviation	Explanation
FSU	Floating Storage Unit
FT	Farragon Towhead
HAZ	Hazardous Material
HLV	Heavy-Lift Vessel
HSE	Health, Safety & Environment
HVAC	Heating, Ventilation & Air Conditioning
ICES	International Council for the Exploration of the Sea (ICES)
ID	Integrated Deck
INTOG	Innovation and Targeted Oil & Gas (INTOG)
IUTA	Intermediate Umbilical Termination Assembly
km	Kilometre
km ²	Square kilometre
LC	Lower Cretaceous
LQ & H	Living Quarters & Helideck
m	Meters
m ²	Square Meters
m ³	Cubic Meters
MAT	Master Application Template
MBES	Multi-Beam Echosounder
mg/l	Milligram per Litre
mm	Millimetre
MPFM	Multiphase Flow Meter
MW	Mega (1x10 ⁶) Watt
N.	North
N ₂ O	Nitrous Oxide
NCMPA	Nature Conservation Marine Protected Area
NE.	North East
NORM	Naturally Occurring Radioactive Material
NO _x	Nitrogen Oxides
NSTA	North Sea Transition Authority
O.D.	Outer Diameter
ODU	Offshore Decommissioning Unit

Abbreviation	Explanation
OEUK	Offshore Energies UK
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	Oslo-Paris Agreement
ERL	Effects Range Low
PAH	Polycyclic Aromatic Hydrocarbons
PL	Pipeline
PLU	Pipeline Umbilical
ROVSV	Remotely Operated Vehicle Support Vessel
S29	Section 29
SAT	Subsidiary Application Template
SCAP	Supply Chain Action Plan
SFF	Scottish Fishermen's Federation
SO ₂	Sulphur dioxide
SPSAC	Scanner Pockmark Special Area of Conservation
SSCV	Semi-Submersible Crane Vessel
SSIV	Subsea Isolation Valve
THC	Total hydrocarbon
Te	Metric Tonnes
TOS	Top of Steel
TR	Temporary Refuge
TUTU	Topsides Umbilical Termination Unit
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UKHO	United Kingdom Hydrographic Office
UKOOA	UK Offshore Operators Association
VOCs	Volatile Organic Compounds
VSS	Valve Support Structure
W.T.	Wall Thickness
WBS	Work Breakdown Structure
WGS	World Geodetic System

Figures and Tables

Figure 1-1: Andrew Platform

Figure 1-2: Field Location in UKCS

Figure 1-3: Field Layout

Figure 1-4: Andrew Platform & Cyrus, Farragon & Kinnoull Field Layout

Figure 1-5: Adjacent Facilities

Figure 2-2: Cuttings Pile Images (A: MBES Image, B: Pile Boundary)

Figure 2-3: Pie Chart of Estimated Inventories (Topsides)

Figure 2-4: Pie Chart of Estimated Inventory (Substructures)

Figure 2-5: Pie Chart of Estimated Inventory (Andrew / Cyrus Pipelines)

Figure 2-6: Pie Chart of Estimated Inventory (Farragon Pipelines)

Figure 2-7: Pie Chart of Estimated Inventory (Kinnoull Pipelines)

Figure 3-3-1: Photographic Topsides Elevation View Looking West

Figure 3-3-2: Kinnoull (AAD) Process Module in the Foreground During Installation (Note: flotel in background)

Figure 3-3-3: Jacket Isometric and Plan View Drawings

Figure 6-1: Gantt Chart of Project Plan

Table 1-1: Installations Being Decommissioned

Table 1-2: Installations Section 29 Notice Holders Details

Table 1-3: Pipelines Being Decommissioned

Table 1-4: Pipelines Section 29 Notice Holders Details

Table 1-5: Summary of Decommissioning Programmes

Table 1-6: Adjacent Facilities

Table 2-1: Surface Facilities Information

Table 2-2: Pipeline/Flowline/Umbilical Information

Table 2-3: Well Information

Table 2-4: Drill Cuttings Pile Information

Table 3-1: Cleaning of Topsides for Removal

Table 3-2: Topsides Removal Methods

Table 3-3: Jacket Removal Methods

Table 3-4: Pipeline Decommissioning Option

Table 3-5: Well Plug and Abandonment

Table 3-6: Drill Cuttings Decommissioning Options

Table 3-7: Waste Stream Management Methods

Table 3-8: Inventory Disposition

Table 4-1: Environmental Sensitivities

Table 4-2: Environmental Impact Management

Table 5-1: Summary of Stakeholder Comments

Table 6-1: Provisional Decommissioning Programmes Costs

Table 7-1: Supporting Documents

Appendices

Appendix	Description	Page
A	Statutory Consultee Correspondence [HOLD 07]	TBC

Holds

Hold	Section	Description
2	8	S29 Letters will be issued with final version of DP (post-public consultation).
7	7	To be provided post-stakeholder engagement.
8	9	Public Notices to be added in final version of DP (post-public consultation).



1 EXECUTIVE SUMMARY

1.1 Combined Decommissioning Programmes

This document contains six (6) decommissioning programmes (DP) for the Andrew Platform and associated risers operated by BP Exploration Operating Company Limited (herein referred to as “BPEOC”). The first programme addresses the decommissioning of the topsides, jacket and associated platform wells which are covered by one (1) Section 29 (S29) notice. There are a further five (5) pipeline programmes covered by five (5) S29 notices to address the decommissioning of the rigid riser sections, including: 10” Oil Export (PL1078), 8” Gas Export (PL1079), 10” Cyrus Production (PL1080), 4” Cyrus Gas Lift (PL1081), 2” Cyrus Service (PL1082), Cyrus Chemical Injection (PL1083), 18” Kinnoull Production (PL2798.1), 6” Kinnoull Gas Lift (PL2798.2), and 3” Kinnoull Methanol (PL2798.3); and the riser umbilical sections of Farragon Umbilical (PLU2121), 9” Kinnoull Main Umbilical (PLU2798), and SSIV Umbilical (PLU5003), belonging to the Andrew, Cyrus, Farragon, and Kinnoull fields.

The topsides are to be fully removed and the jacket is to be removed to the agreed target elevation (EL.). With respect to the subsea infrastructure, the lengths of rigid risers to be removed shall be approximately equal to the length of linepipe from the topsides emergency shut-down valves (ESDV) to where the protective structure terminates, and the lengths of the riser umbilicals sections to be removed shall be approximately equal to the length from the topsides to where the protective structure terminates.

A summary of the items to be decommissioned are detailed in the Tables in Section 1.4. Notably, the remaining pipeline sections, subsea infrastructure, and the drill template located on the seabed underneath the Andrew jacket, will form part of the Andrew Subsea DPs.

1.2 Requirement for Decommissioning Programmes

1.2.1 Installation

In accordance with the Petroleum Act 1998, the S29 notice holders of the Andrew Field (see Table 1-2) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the installations detailed in Section 2.1 of this combined programme. (See Section 8.)

Dates for the decommissioning of the topside wells is fluid and well decommissioning could commence prior to CoP. It is expected that all topsides and jacket decommissioning activities, including the removal of the drill template and post decommissioning surveys, will be completed by end of 2036.

S29 holder letters of support are included in Section 8.

1.2.2 Pipelines

In accordance with the Petroleum Act 1998, the S29 notice holders of the Andrew, Cyrus, Farragon and Kinnoull Field pipelines (see Table 1-4) are applying to OPRED to obtain approval for decommissioning the pipelines detailed in Section 2.2 of this combined programme. (See also Section 8.)

In conjunction with public, stakeholder and regulatory consultation, the DP is submitted without derogation and in compliance with national and international regulations and OPRED guidelines.

The Andrew field is currently a producing asset and is estimated to reach Cessation of Production (CoP) in March 2027. As this CoP date approaches, BPEOC have commenced preparatory work scopes for the decommissioning project. This document will cover the selection and definition of options for the execution activities following the proposed CoP. The schedule outlined in this document is for an 11 year decommissioning project plan which has already commenced.

1.3 Introduction

The Andrew oil field is a hydrocarbon field in the UK sector of the North Sea, 198 kilometres (km) north east of the Scottish coastline. It is produced from a single platform standing in a water depth of 117 meters (m), which also serves as a central hub of the Cyrus, Farragon, Kinnoull and Arundel ¹ subsea developments.

BPEOC originally discovered oil in the Andrew field, which spans licence block 16/27 and 16/28 of the UKCS, in 1974, with further appraisal work conducted by Conoco Philips the following year. At the time, the small size of the field made it uneconomical to develop. It wasn't until c.1994, when BPEOC put together an alliance, that the field was developed, and first oil was subsequently produced from pre-drilled wells in 1996.

The Andrew field is produced from a fixed platform (refer to Section 3), with topsides facilities supported on a four-legged steel jacket with a mix of platform wells and subsea tiebacks and associated field infrastructure. The platform is relatively small, accommodating only 80 people, and contains a full process plant for separating water and gas from the production fluids. Platform power is provided from three 6MW gas turbines, fed principally from produced gas.

There are 17 platform wells: 5 producing oil, one for gas lift, 6 shut-in and 5 plugged (refer to Table 2-2 and Figure 2-1). The well bay has a total well capacity of 24 slots, only 19 of which are occupied (17 with wells; one slot with the umbilical line to Farragon; and one with a proppant filter).

From the Andrew field, processed oil is exported to the Forties Pipeline System (FPS) via the Brae-Forties C pipeline on to Cruden Bay. Natural gas is exported to the Central Area Transmission System (CATS) to Teesside. Indeed, some gas used is used for gas-lift in the Andrew, Kinnoull, Arundel and Cyrus fields, as well as the Kinnoull and Cyrus risers to reduce slugging.

The Andrew field is currently a producing asset and is now in the decommissioning phase. BPEOC have commenced planning for the CoP through the development of this DP. Options to extend field life have been considered, however, following evaluation with input from the NSTA, the fields are to be decommissioned. A principal factor precluding extension of field life is the decommissioning of the Brae Alpha to Forties PL64 which the Andrew export line, PL0178, feeds into. A feasibility study on the reuse of the Andrew facilities was also completed, and no reuse options for the infrastructure in its current location were identified. This has been a key consideration leading to a final decision on the timing of decommissioning.

The decommissioning programme explains the principles of the removal activities and is supported by an Environmental Appraisal (EA). The scope of this DP is to decommission the Andrew topsides and jacket; the associated platform wells; and the pipeline rigid riser sections and flexible umbilical sections at the Andrew platform. Both the topsides and jacket and rigid risers and flexible umbilicals will be removed to shore. The remaining sections of the pipelines, umbilicals and bundles, as well as subsea structures and wells associated with the Andrew Field, and the Cyrus, Farragon, Kinnoull and Arundel tiebacks will be addressed in the Andrew Subsea DP.

Following public, stakeholder and regulatory consultation, as detailed in Section 5 of this document, this DP will be submitted in full compliance with OPRED guidelines. The DP explains the principles of the removal activities and is supported by Environmental Appraisal (EA) including drill cuttings modelling.

¹ Arundel is a subsea tieback to the Kinnoull Field and is out with the scope of this DP.



Figure 1-1: Andrew Platform

1.4 Overview of Installations & Pipelines Being Decommissioned

1.4.1 Installation

Table 1-1: Installations Being Decommissioned			
Fields	Andrew	Production Type	Oil / Gas
Water Depth (m)	117	UKCS block	16/27, 16/28
Distance to median (km)	23 (Median line UK/Norway)	Distance from nearest UK coastline (km)	198
Surface Installation			
Number	Type	Topsides Weight (Te)	Jacket Weight (Te)
1	Fixed Steel-Piled Jacket	10,173	9,713 ²
Subsea Installations		Number of Wells	
Number	Type	Platform	Subsea
-	-	17	-
Drill Cuttings Pile			
Number of Piles	1	Total Estimated volume (m ³)	3,212.93

Table 1-2: Installations Section 29 Notice Holders Details		
Section 29 Notice Holders	Registration Number	Equity Interest (%)
Andrew		
BP Exploration Operating Company Limited	00305943	90.14%
NEO NEXT+ Energy North Sea Limited	01061863	9.86%

² Estimated jacket removal weight. Includes piles, grouted annuli, conductors and jacket marine growth.

1.4.2 Pipelines

Table 1-3: Pipelines Being Decommissioned	
Number of Pipelines	12 (9 Pipelines + 3 Umbilicals)
Total length (km) of Pipelines	≈ 2.00

Table 1-4: Pipelines Section 29 Notice Holders Details		
Section 29 Notice Holders	Registration Number	Equity Interest (%)
Andrew (PL1078 & PL1079)		
BP Exploration Operating Company Limited	00305943	90.14%
NEO NEXT+ Energy North Sea Limited	01061863	9.86%
Cyrus (PL1080, PL1081, PL1082 & PL1083 / PLU5003)		
BP Exploration Operating Company Limited	00305943	100%
Farragon (PLU2121)		
BP Exploration Operating Company Limited	00305943	80%
CNOOC Petroleum Farragon U.K. Limited	05645503	20%
Kinnoull (PLU2798, PL2798.1, PL2798.2 & PL2798.3)		
BP Exploration Operating Company Limited	00305943	100%

1.5 Summary of Proposed Decommissioning Programmes

Table 1-5: Summary of Decommissioning Programmes	
Proposed Decommissioning Solution	Reason for Selection
1. Topsides	
The topsides will be removed and transported to shore for reuse, recycling or disposal in line with the waste hierarchy. It is expected that small volumes of non-recyclable material will be otherwise disposed.	Complies with UK regulations, OPRED guidelines for complete removal.
2. Substructure	
Complete removal and transported onshore for reuse, recycling and disposal in line with the waste hierarchy. Piles will be cut to EL. -3 m below the natural seabed, should shallower cuts be required or there are technical issues with the cuts, this will be discussed and agreed with OPRED. The drill template, located on the seabed underneath the jacket, is out with the scope of this DP and is to be included in the Andrew Subsea DP.	In line with UK and OSPAR regulations.
3. Pipelines	
The rigid riser sections from the topsides ESDV to the riser tie-in spools will be transported onshore for reuse, recycling and disposal in line with the waste hierarchy after being severed at each respective end. The umbilical riser sections from the topsides to where the protective structure (caisson or j-tube) terminates will be transported onshore for reuse, recycling and disposal after being severed at each respective end. Any topsides piping associated with the rigid risers and umbilicals will be removed along with the topsides structure and the remaining portion will be removed either during or prior to jacket removal.	In line with UK regulations.
4. Wells	
Wells will be decommissioned to industry standards which are fully compliant with NSTA and OPRED regulatory requirements. Moreover, the decommissioning solution will comply with “Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996” and align with OEUK Well Decommissioning Guidelines (Issue 7, November 2022). A Master Application Template (MAT) and the supporting Subsidiary Application Template (SAT) will be submitted in support of activities carried out. Additionally, planned work will be reviewed by a well examiner to industry standards then submitted to the HSE for review. Conductors will be cut at EL. -3 m below seabed and returned to shore for reuse, recycling or disposal in line with the waste hierarchy.	Meets regulatory requirements.



Table 1-5: Summary of Decommissioning Programmes	
Proposed Decommissioning Solution	Reason for Selection
5. Drill Cuttings	
The drill cuttings pile at the Andrew platform will be decommissioned in situ following the recovery of the Andrew Jacket structure (subject to this combined DP), drilling template, pipelines & umbilical ends (subject to the Andrew Subsea combined DP). Any drill cuttings piles associated with the subsea wells shall be subject to the Andrew Subsea combined DP.	A BAT assessment was carried out to determine the optimal approach to decommissioning the cuttings pile.
6. Interdependencies	
Modelling studies to assess the impact of disturbance to the cuttings pile has been carried out to support the EA and a drill cuttings management BAT assessment.	

1.6 Field Location Including Field Layout and Adjacent Facilities

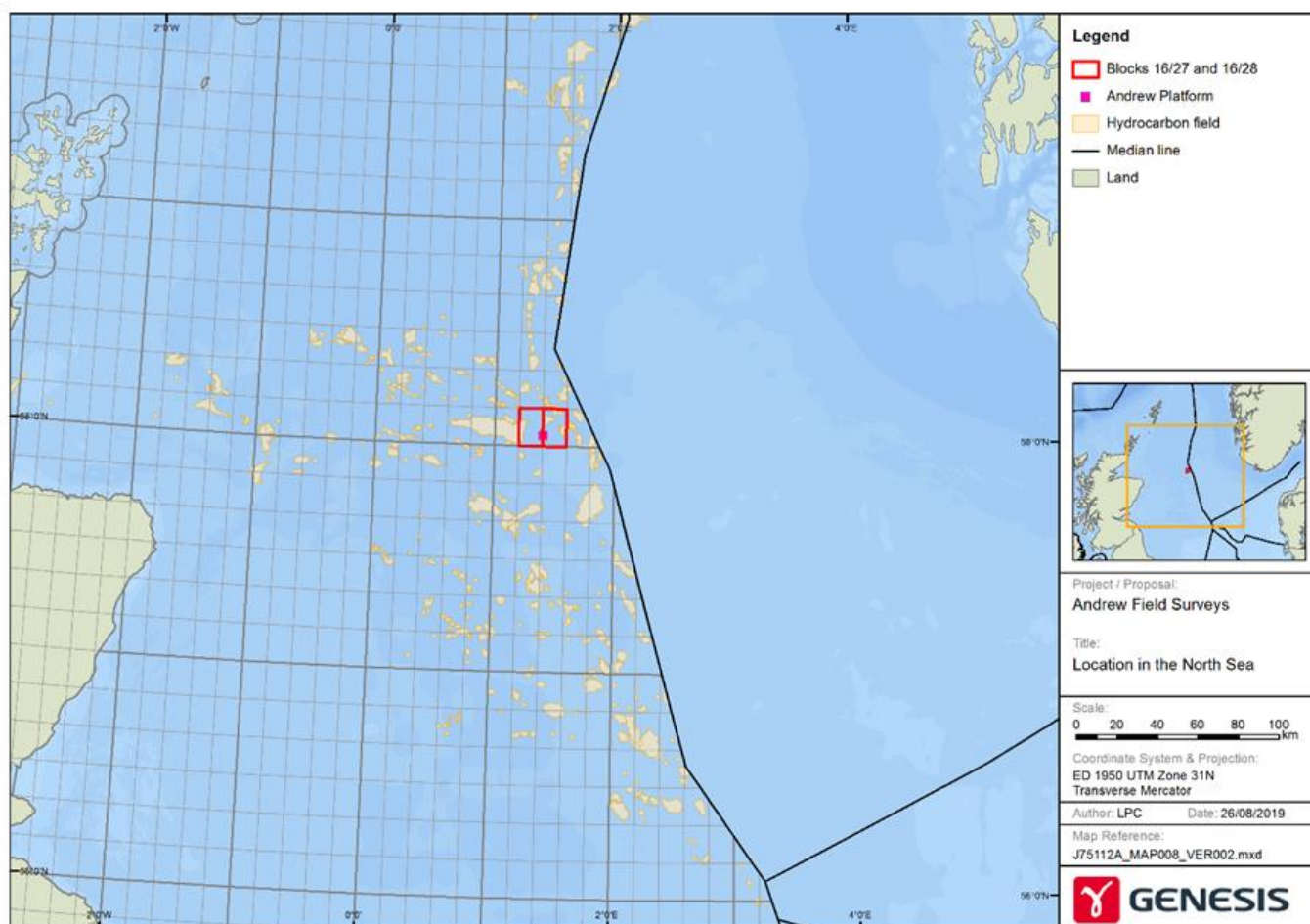


Figure 1-2: Field Location in UKCS

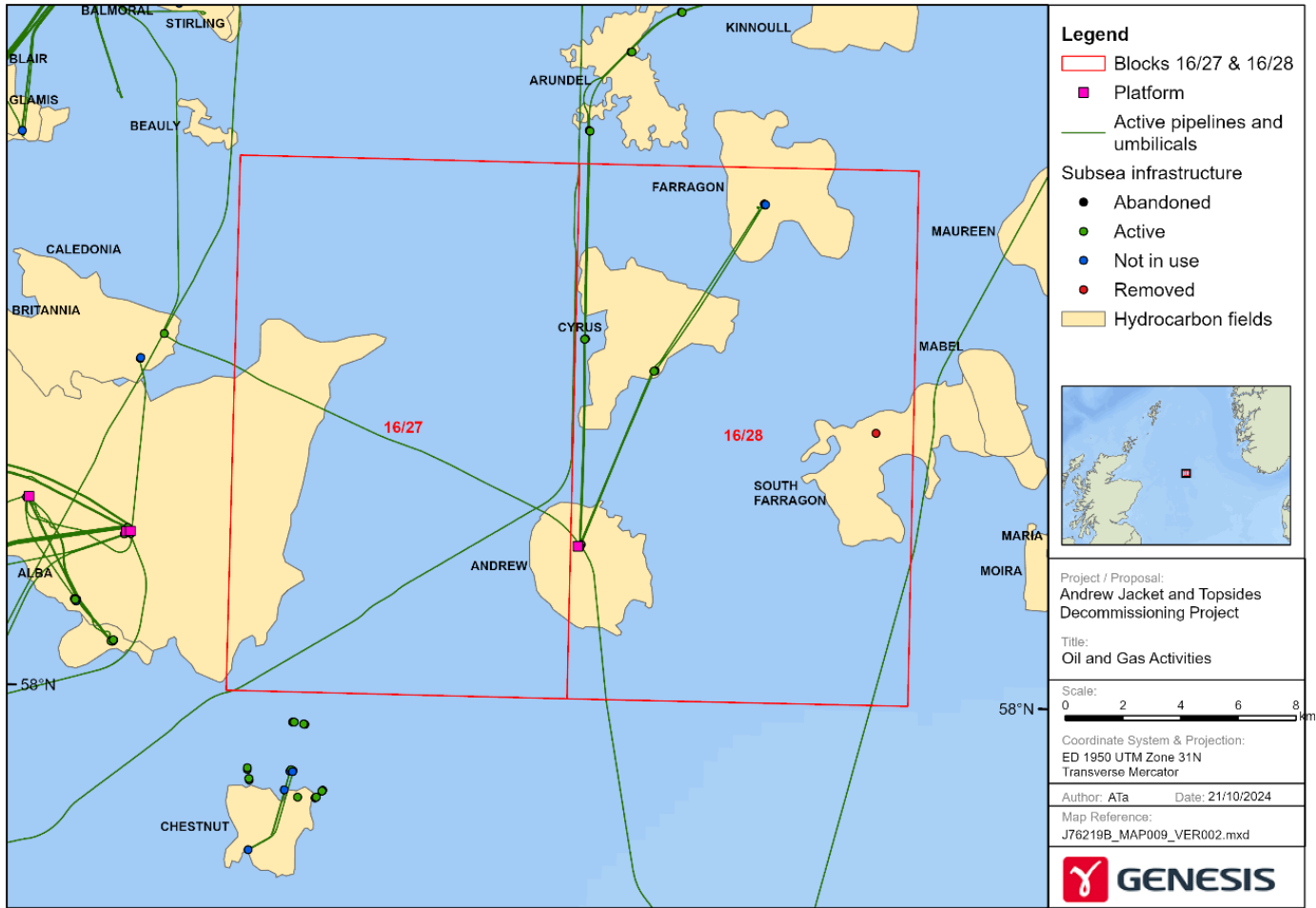


Figure 1-3: Field Layout

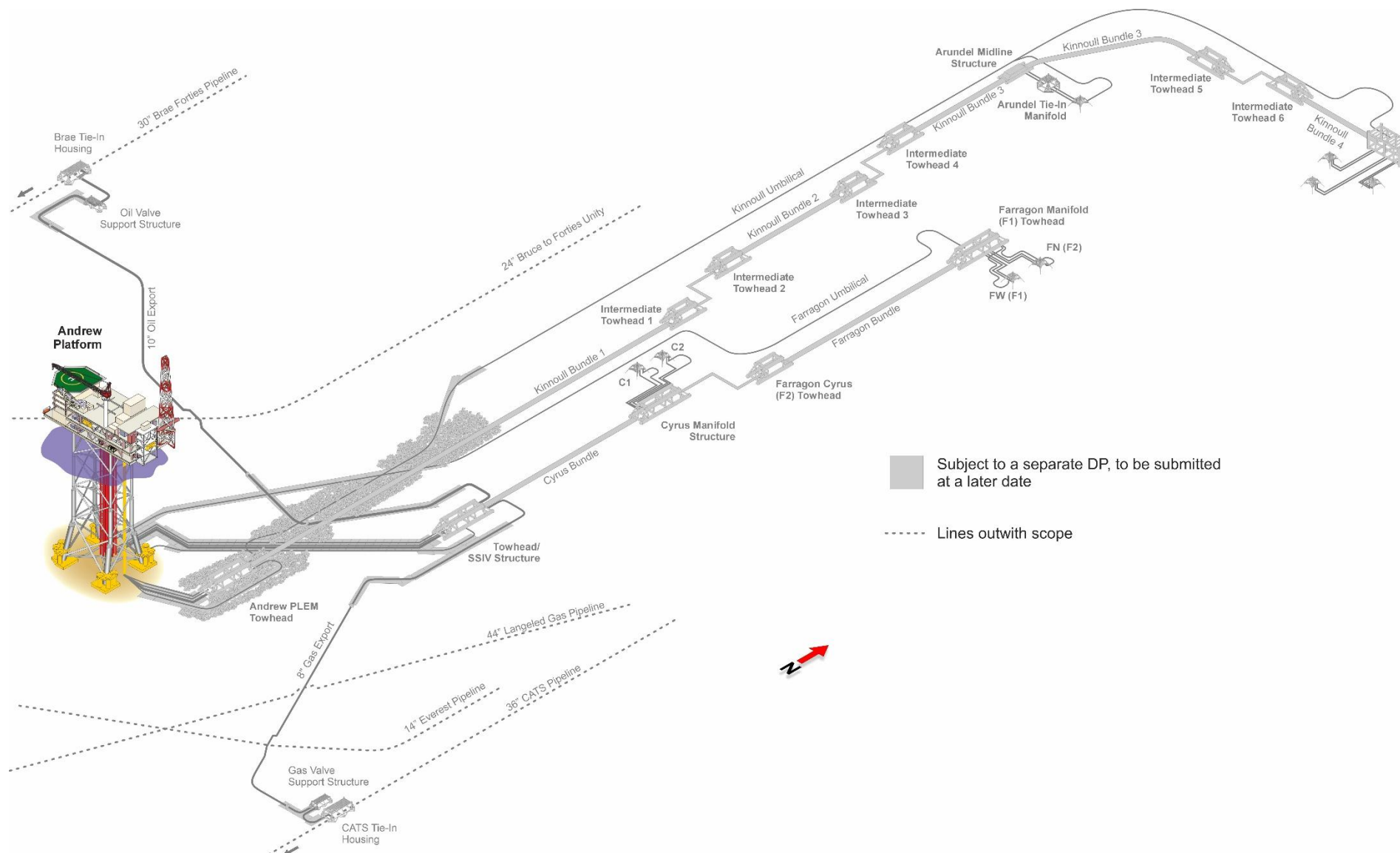


Table 1-6: Adjacent Facilities

Operator/Owner	Name	Type	Distance/Direction	Information	Status
Ithaca Oil and Gas Limited	Alba	FPSO	21.9 km East	Production Vessel	Operational
Ithaca Oil and Gas Limited	Alba North	Platform	19.1 km East	Production Platform	Operational
Harbour Energy plc	Britannia	Platform	15.7 km East	Production Platform	Operational
Harbour Energy plc	Britannia BLP	Platform	15.5 km East	Bridge Linked Platform	Operational
Serica Energy (UK) Limited	PL815	24-inch Condensate	1.9 km North West	Bruce to Forties: PL1078 Crosses over	Operational
Gassco AS	PL2071	44-inch Gas	11.28 km East	Langeled Pipeline: PL1079 Crosses under	Operational
Harbour Energy plc	PL779	14-inch Oil	28.63 km South	Everest to Forties: PL1079 Crosses over	Operational
BP Exploration Operating Company Limited	Andrew Drilling Template	Template	<i>Directly below the Andrew platform</i>	Piled Template	Operational
BP Exploration Operating Company Limited	Andrew CATS Tie-in VSS	Valve Support Structure	42 km South East	Gravity-Based Structure	Operational

Table 1-6: Adjacent Facilities

Operator/Owner	Name	Type	Distance/Direction	Information	Status
BP Exploration Operating Company Limited	Andrew Towhead Export SSIV	Subsea Isolation Valve	126 m North East	Gravity-Based Structure	Operational
BP Exploration Operating Company Limited	Andrew/Brae Tie-in VSS	Valve Support Structure	16.1 km North West	Gravity-Based Structure	Operational
BP Exploration Operating Company Limited	Tie-In Spool Protection Frame	Protection Frame	<i>Within Andrew Platform 500 m zone</i>	Gravity-Based Structure	Operational
BP Exploration Operating Company Limited	Andrew PLEM Towhead	Pipeline Bundle Towhead	81.4 m East	Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Arundel Midline Tie-In Structure	Pipeline Bundle Towhead	17.2 km North	Towhead tie-in structure containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Arundel Multiphase Flow Meter (MPFM)	Multiphase Flow Meter	126 m North East	-	Operational
BP Exploration Operating Company Limited	Pipeline, PL1078	Export Oil Pipeline	126 m North East	Trenched and buried pipeline from Andrew Towhead SSIV to Andrew CATS Tie-In VSS.	Operational

Table 1-6: Adjacent Facilities

Operator/Owner	Name	Type	Distance/Direction	Information	Status
BP Exploration Operating Company Limited	Pipeline, PL1079	Export Gas Pipeline	126 m North East	Trenched and buried pipeline from Andrew Towhead SSIV to Andrew/Brae Tie-In VSS.	Operational
BP Exploration Operating Company Limited	Cyrus Towhead Manifold	Pipeline Bundle Towhead	6.6 km North East	Cyrus Towhead Manifold containing: PL1080, PL1081, PL1082 & PLU1083.1 to PLU1083.5.	Operational
BP Exploration Operating Company Limited	Farragon Towhead (FT1)	Pipeline Bundle Towhead	13.5 km North East	Farragon Towhead containing: PL2118, PL2119 and PL2120.	Operational
BP Exploration Operating Company Limited	Farragon Towhead (FT2)	Pipeline Bundle Towhead	6.6 km North East	Farragon Towhead containing: PL2118, PL2119 and PL2120.	Operational
BP Exploration Operating Company Limited	Farragon Umbilical, PLU2121	Umbilical	From Andrew to FT2	Trenched and buried umbilical from Andrew Platform to Farragon Towhead (FT2).	Operational
BP Exploration Operating Company Limited	Kinnoull Manifold Towhead	Pipeline Bundle Towhead	23.5 km North East	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Intermediate Towhead 1	Pipeline Bundle Towhead	7.2 km North	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational

Table 1-6: Adjacent Facilities

Operator/Owner	Name	Type	Distance/Direction	Information	Status
BP Exploration Operating Company Limited	Intermediate Towhead 2	Pipeline Bundle Towhead	7.2 km North	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Intermediate Towhead 3	Pipeline Bundle Towhead	14.4 km North	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Intermediate Towhead 4	Pipeline Bundle Towhead	14.4 km North	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Intermediate Towhead 5	Pipeline Bundle Towhead	18.9 km North East	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Intermediate Towhead 6	Pipeline Bundle Towhead	18.9 km North East	Kinnoull Towhead containing: PL2798.1, PL2798.2, and PL2798.3.	Operational
BP Exploration Operating Company Limited	Kinnoull 'A' Umbilical, PLU2798	Umbilical	From Andrew to Arundel	Trenched and buried umbilical from Andrew Platform to IUTA (Arundel).	Operational
BP Exploration Operating Company Limited	Kinnoull 'B' Umbilical, PLU2798B	Umbilical	From Andrew to Arundel	Trenched and buried umbilical from IUTA (Arundel) to Kinnoull Towhead Structure.	Operational

Table 1-6: Adjacent Facilities					
Operator/Owner	Name	Type	Distance/Direction	Information	Status
BP Exploration Operating Company Limited	Arundel Control Umbilical, PLU4123	Umbilical	From Andrew to Arundel	Trenched and buried umbilical from IUTA (Arundel) to Arundel Well.	Operational
BP Exploration Operating Company Limited	Andrew SSIV Umbilical, PLU5003	Umbilical	From Andrew to SSIV Towhead	-	Operational
No impacts to adjacent facilities are envisaged as a result of the decommissioning activities outlined in this programme.					

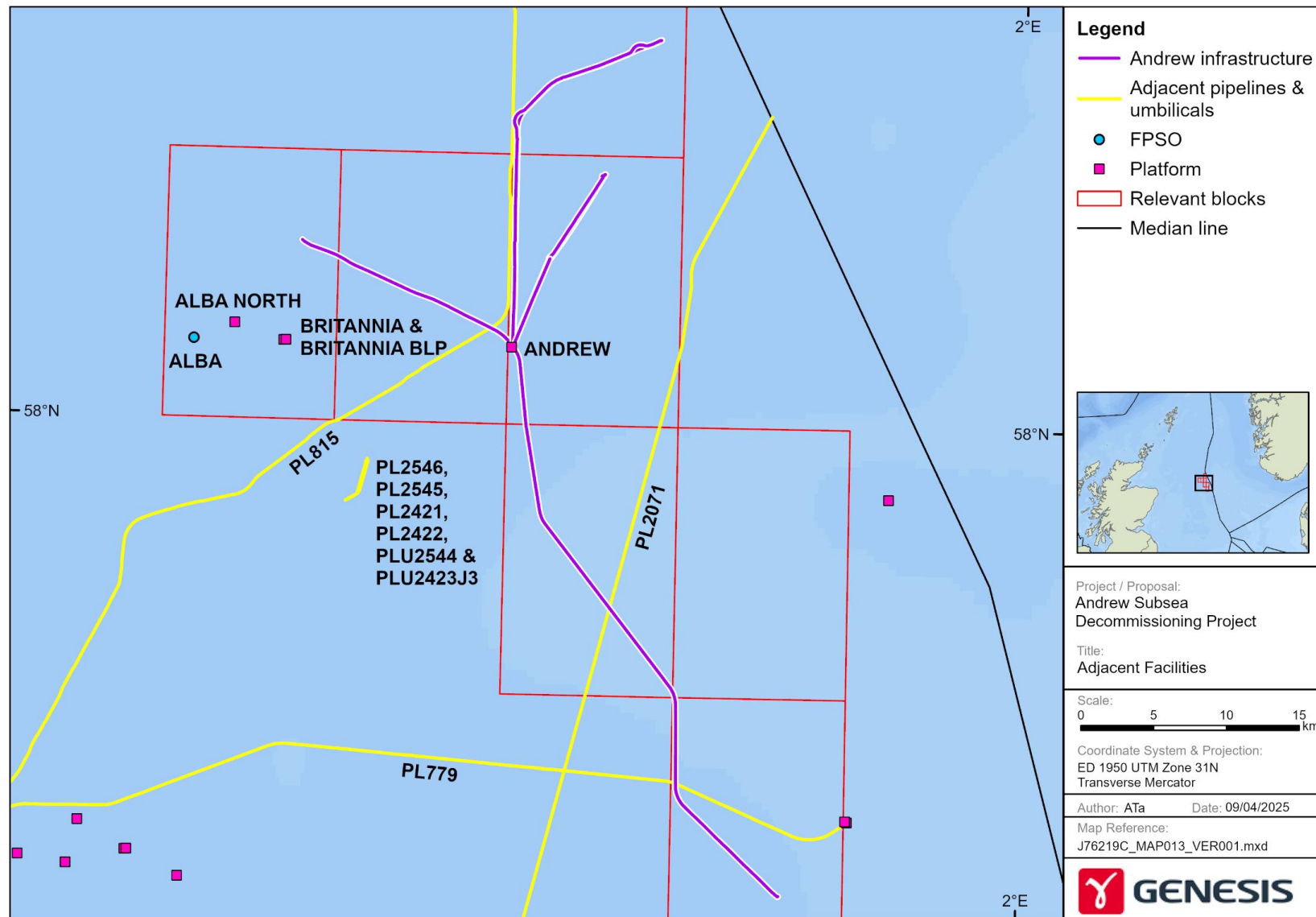


Figure 1-5: Adjacent Facilities

1.7 Industrial Implications

It is BPEOC intention to develop a contract strategy that will result in an efficient and cost-effective execution of decommissioning works. BPEOC are furthermore actively exploring potential synergies, internally and externally, to combine Andrew decommissioning activities with other developments or decommissioning activities to reduce mobilisation and demobilisation costs should the opportunity arise. The decommissioning schedule is intended to allow flexibility for when decommissioning operations are carried out and completed.

BPEOC will demonstrate this intention by:

- Publishing information on the decommissioning project and timelines on its decommissioning website.
- Working closely with OPRED, NSTA and other industry bodies, including engaging directly with disposal yards that serve the North Sea.
- Where feasible, competitively tendering decommissioning scopes associated with this DP.
- Evaluating supply chain and decommissioning activity and, wherever possible, consider aligning with Operators of adjacent infrastructure to optimise efficiencies and cost reduction.
- Development and submission of the Supply Chain Action Plan (SCAP) to the NSTA.



2 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation: Surface Facilities

Table 2-1: Surface Facilities Information									
Name	Facility Type	Location		Topsides/Facilities		Jacket			
				Weight (Te)	No of modules	Weight (Te)	Number of legs	Number of piles	Weight of piles (Te)
Andrew	Small Fixed Steel Jacket	WGS84 Decimal	58.046917 N. 1.402733 E.	10,173	3 ³	9,713 ⁴	4	12	6,143 ⁵
		WGS84 Decimal Minute	58° 2' 48.900" N. 1° 24' 9.840" E.						

³ Topsides is an Integrated Deck (ID) design comprising three (3) distinct modules, including the Kinnoull Module (refer to far left-hand side of Figure 1-1).

⁴ Includes weight of conductors (1,139 Te) and piles & grout (1,313 Te) to EL. -3 and jacket marine growth (512 Te).

⁵ Total weight of piles (to penetration depth – i.e., full length weight).

2.2 Pipelines Including Stabilisation Features

Table 2-2: Pipeline/Flowline/Umbilical Information							
Pipeline Number	Description	Length (km)	Product Conveyed	From – To Location Points	Burial Status	Pipeline Status	Current Content
PL1078	10" Oil Export	0.159	Oil	Topsides ESDV to Riser Tie-In Spool	N/A	Active	Oil
PL1079	8" Gas Export	0.151	Gas	Topsides ESDV to Riser Tie-In Spool	N/A	Active	Gas
PL1080	10" Cyrus Production	0.156	Oil	Topsides Pipework Interface to Riser Base	N/A	Active	Oil
PL1081	4" Cyrus Gas Lift	0.159	Gas	Topsides Pipework Interface to Riser Base	N/A	Active	Gas
PL1082	2" Cyrus Service / Methanol	0.158	Methanol	Topsides Pipework Interface to Riser Base	N/A	Active	Methanol
PL1083	Cyrus Chemical Injection System	0.150	Scale Inhibitor	TUTU to J-Tube Subsea Termination (via Caisson C8)	N/A	Active	Scale Inhibitor
		0.150	Methanol				Methanol
		0.150	Wax Inhibitor				Wax Inhibitor
		0.150	Threshold-Hydrate Inhibitor				Threshold-Hydrate Inhibitor

Table 2-2: Pipeline/Flowline/Umbilical Information							
Pipeline Number	Description	Length (km)	Product Conveyed	From – To Location Points	Burial Status	Pipeline Status	Current Content
PLU5003 ⁶	SSIV Umbilical (Hydraulic and Power Core)	0.150	None	TUTU to J-Tube Subsea Termination (via Caisson C8)	N/A	Active	None
PLU2798	Kinnoull (AAD) 9" Main Umbilical 'A'	0.150	Scale Inhibitor, Wax inhibitor & Hydraulic Fluid	Umbilical Hang-Off to J-Tube Subsea Termination (via Caisson C10)	N/A	Active	Scale Inhibitor, Wax inhibitor & Hydraulic Fluid
PL2798.1	Kinnoull (AAD) 14" Production Riser	0.120	Oil	Topsides ESDV to Subsea Breakout Flange (via Caisson C10)	N/A	Active	Oil
PL2798.2	Kinnoull (AAD) 6" Gas Lift Riser	0.120	Gas	Topsides ESDV to J-Tube Subsea Breakout Flange (via Caisson C10)	N/A	Active	Gas
PL2798.3	Kinnoull (AAD) 3" Methanol Pipeline	0.120	Methanol	Topsides ESDV to J-Tube Subsea Breakout Flange (via Caisson C10)	N/A	Active	Methanol



Table 2-2: Pipeline/Flowline/Umbilical Information							
Pipeline Number	Description	Length (km)	Product Conveyed	From – To Location Points	Burial Status	Pipeline Status	Current Content
PLU2121	Farragon Umbilical	0.150	N/A	TUTU to J-Tube Subsea Termination (via Conductor Slot 1)	N/A	Active	N/A

⁶ Transported via PL1083.

2.3 Wells

Table 2-3: Well Information			
Platform Wells	Designation ⁷	Status	Category of Well
16/28-16z	Oil Production	Plugged	PL1-2-1
16/28-A3	Oil production	Plugged	PL1-2-1
16/28-A4	Oil production	Plugged	PL1-2-1
16/28-A5	Gas Injector	Plugged	PL1-2-1
16/28-A11z	Gas production	Completed (Operating)	PL1-2-1
16/28-A12	Oil production	Plugged	PL1-2-1
16/28-A13	Oil production	Completed (Shut in)	PL1-2-1
16/28-A15y	Disposal	Completed (Shut in)	PL1-2-1
16/28-A16	Disposal	Completed (Shut in)	PL1-2-1
16/28-A17	Oil production	Completed (Operating)	PL1-2-1
16/28-A18	Oil production	Completed (Operating)	PL1-2-1
16/28-A19	Oil production	Completed (Shut in)	PL1-2-1
16/28-A20	Oil production	Completed (Shut in)	PL1-2-1
16/28-A21	Oil production	Completed (Operating)	PL1-2-1
16/28-A22	Oil production	Completed (Operating)	PL1-2-1
16/28-A23	Oil Production	Completed (Operating)	PL1-2-1
16/28-A24	Oil production	Completed (Operating)	PL1-2-1

⁷ For details of well categorisation see the latest issue of OEUK Guidelines for the Suspension or Abandonment of Wells.



Figure 2-1 Andrew platform and Subsea Well Slot Diagram⁸

⁸ Includes subsea wells which are not subject to this combined DP.

2.4 Drill Cuttings

Table 2-4: Drill Cuttings Pile Information		
Location of Pile Centre (Latitude/Longitude)	Seabed Area (m ²)	Estimated volume of cuttings (m ³)
58° 2' 48.900" N. 1° 24' 9.840" E.	5,280.89	3,212.93

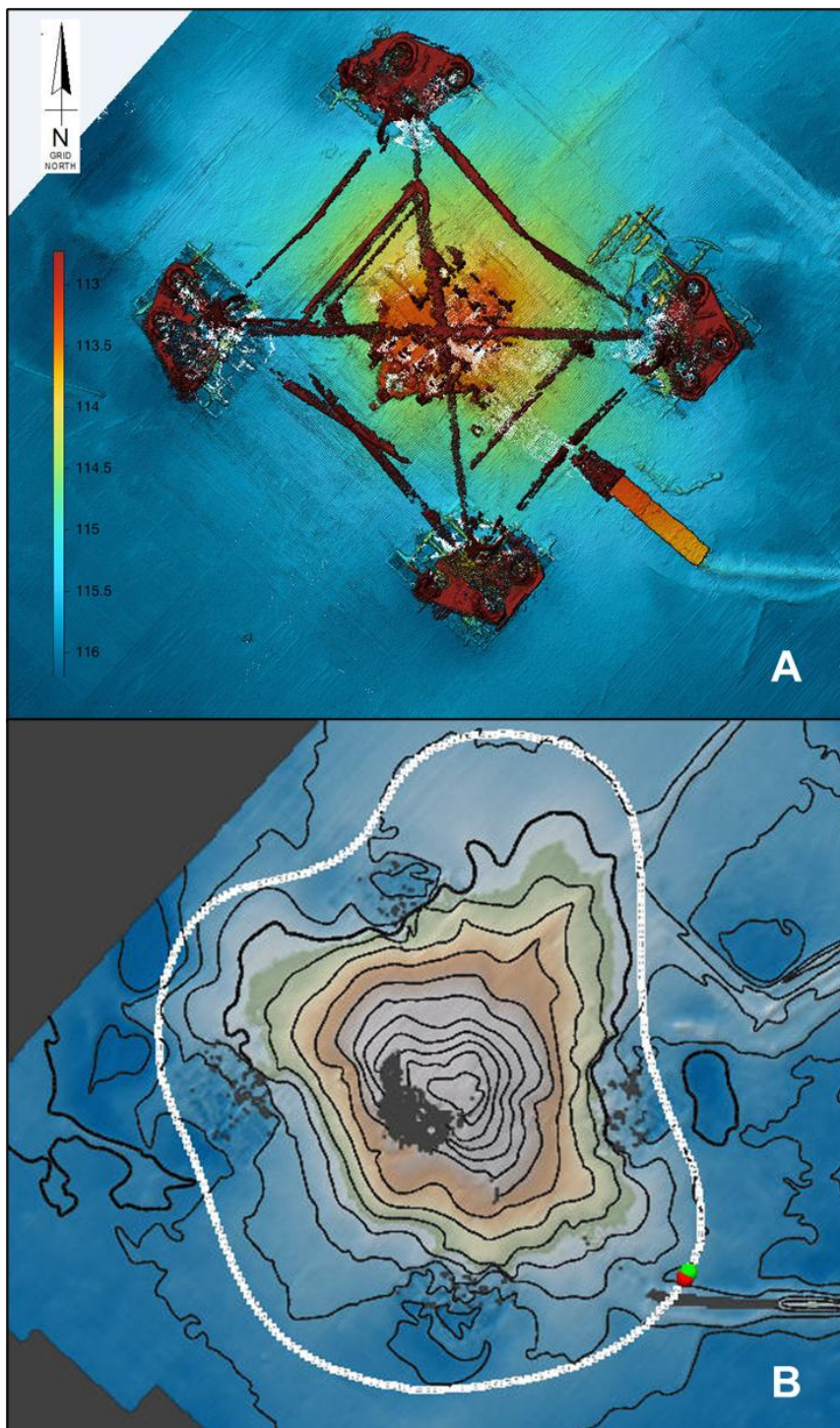


Figure 2-2: Cuttings Pile Images (A: MBES Image, B: Pile Boundary)



2.5 Inventory Estimates

Andrew Topsides Materials Inventory by Material Type (Gross Dry Weight)

Total Weight = 10,173 tonnes

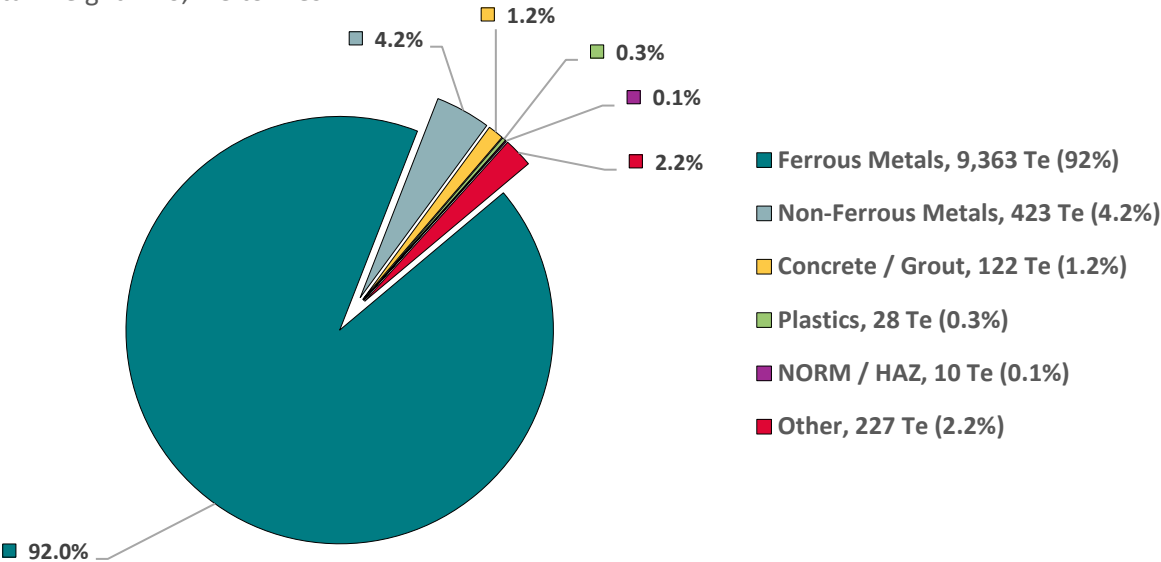


Figure 2-3: Pie Chart of Estimated Inventories (Topsides)

Andrew Substructures Materials Inventory by Material Type (Gross Dry Weight incl. conductors, casings & piles (-)3 meters blw. seabed)

Total Weight = 9,714 tonnes

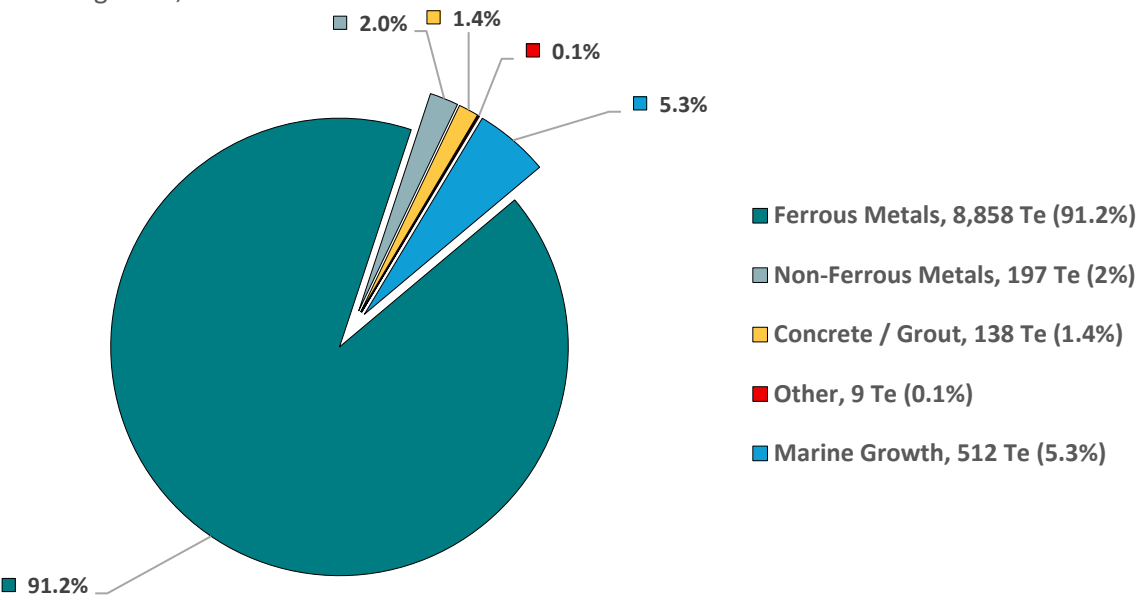


Figure 2-4: Pie Chart of Estimated Inventory (Substructures)



Andrew / Cyrus Pipeline Materials Inventory by Material Type
(Rigid Risers and Flexible Umbilicals)
Total Weight = 77.4 Te

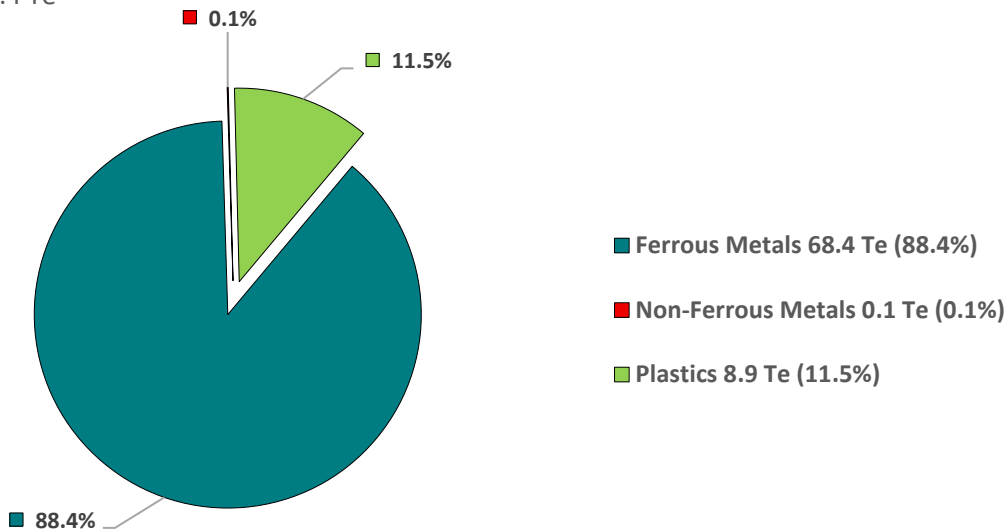


Figure 2-5: Pie Chart of Estimated Inventory (Andrew / Cyrus Pipelines)

Farragon Pipeline Materials Inventory by Material Type
(Farragon Umbilical)
Total Weight ≈ 2.0 Te

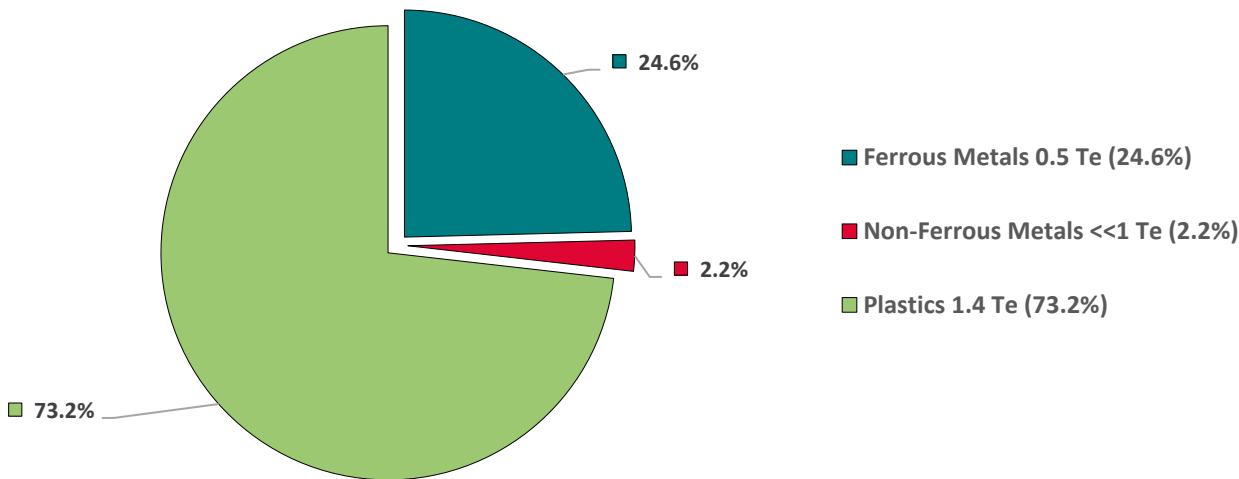


Figure 2-6: Pie Chart of Estimated Inventory (Farragon Pipelines)



Kinnoull Pipeline Materials Inventory by Material Type
(Rigid Risers and Flexible Umbilicals)
Total Weight = 60.0 Te

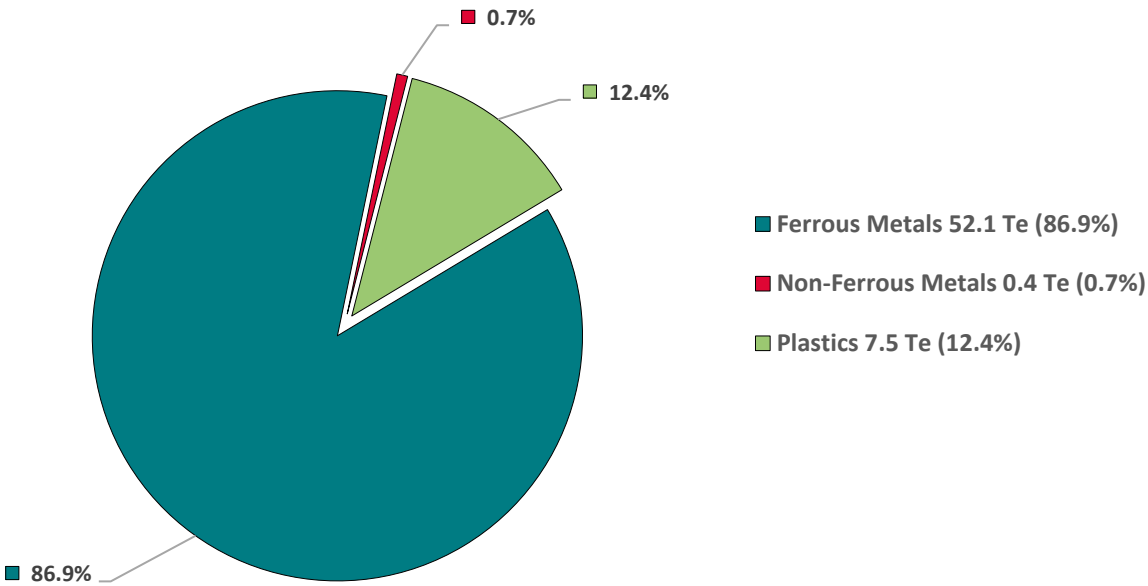


Figure 2-7: Pie Chart of Estimated Inventory (Kinnoull Pipelines)

3 REMOVAL AND DISPOSAL METHODS

In line with the waste hierarchy, BPEOC have considered other potential reuse options for the Andrew infrastructure. Options to reuse the infrastructure in-situ for future hydrocarbon development were assessed, however, none yielded a viable commercial opportunity.

On removal and where practicable, BPEOC will ensure the principles of the waste hierarchy will be met in the handling of materials from the Andrew decommissioning to maximise the amount of material which can be reused or recovered/ recycled.

BPEOC and the selected removal contractor(s) will, monitor and review the disposal route of all materials and waste to the point of final reuse, recycling or disposal and reserves the right to audit to fulfil any Duty of Care responsibilities. As the decommissioning is not scheduled to be completed imminently, BPEOC propose to explore any future advances in technology to aid waste management, including the further reuse, recycle or scrapping of parts of the installations as appropriate. More details of the Andrew waste strategy will be reported in the EA.

3.1 Topsides

3.1.1 Topsides Decommissioning Overview

The Andrew platform is positioned in a water depth of 117 m (from LAT) at 40.3 east of true north. It is comprised of a four-legged jacket with an integrated topside structure that provides production facilities and, prior to removal in 2024, limited drilling services to temporary drilling equipment. Further facilities include a drilling support module (DSM), wellheads, utilities, living quarters and a temporary refuge (TR). A helideck is cantilevered from the living quarters' roof. The platform accommodates 24 well slots and 10 caissons and has a flare tower, crane and two lifeboats. (Refer to Figure 3-1 for an elevation view of the topsides.)

The topsides consist of an integrated deck structure, comprising three primary deck levels, namely:

- Cellar Deck, at EL. +22.0 m (top of steel (TOS) from LAT).
- Intermediate Deck, at EL. +30.0 m (as above).
- Weather Deck, at EL. +38.0 m (as above).

The make-up of the Andrew Topsides is:

- Flare Tower.
- Integrated Deck (ID) and Living Quarters & Helideck (LQ & H).
- Kinnoull AAD Process Module.

When the topside was installed, the integrated deck was towed to the Andrew field by conventional transportation barge and installed in one lift consisting of the integrated deck complete with accommodation & helideck; drilling equipment set (DES)⁹ and articulated arm; and drilling module. The flare structure was installed as a separate lifting operation.

The Andrew Area Development (AAD) Project commenced in 2011 to allow for the exploitation of the Kinnoull field which incorporates the Arundel tie-in. The project accessed additional reserves in Block 16/23c, lying to the north of the existing facilities, based on the hub strategy developed for Andrew.

The AAD Process module (an additional 750 Te) was installed later in 2012 as a single lift. All installation work, including the AAD modification, was carried out by Saipem using the S7000 SSCV.

⁹ Includes the drilling Skidbase, substructure and mast.

Decommissioning planning commenced in 2018 and was paused whilst the Lower Cretaceous (LC) formation was assessed for development. Decommissioning planning recommenced in 2023 after it was determined that the LC formation was not viable for development.

Due to the condition of the existing DES, drilling substructure and articulated arm, and in preparation for well decommissioning, these structures were removed in July 2024 from the topsides by Heerema Marine Contractors using the Sleipnir Semi-Submersible Crane Vessel (SSCV) with the weight of associated structures removed being c. 783 Te.

Andrew plant and equipment (e.g., power generation, utilities and cranes) will require to be maintained prior to CoP and the early phases of the decommissioning project. Existing power generation will require to be supplemented prior to CoP to provide sufficient power to the well decommissioning equipment and supporting drilling modules.

Currently the Andrew installation is supported by a single crane, that undergoes maintenance to maintain reliability levels. There are supplementary gantry cranes that will be required to be upgraded to support all well decommissioning activities as well as additional pipe handling capabilities.



Figure 3-3-1: Photographic Topsides Elevation View Looking West

Topsides Description:

Flare Tower:

The flare tower is a vertical structure supported on the NE corner of the platform at Weather Deck level. The tower extends from its base support at Weather Deck EL. +38.000 m TOS up to the flare tip platform at EL. +128.600 m TOS – a total height of 90.600 m (excluding flare tip).

The primary structure comprises trusses fabricated from seamless tubulars, with chord and brace members selected to avoid overlapping joints. At the top of the flare tower is the flare tip platform, decked with heat shielding panels.

Integrated Deck:

The topsides facilities consist of an integrated deck housing the production and utilities equipment.

Although the Living Quarters (LQ) are not part of the Temporary Refuge (TR), it provides the main route to the refuge in the event of an incident. The LQ & H module is supported at the intermediate level. The TR is located below the main accommodation facilities at cellar deck level and comprises the Central Control Room (CCR), Central Equipment Room (CER) and Heating, Ventilation, & Air Conditioning (HVAC) plant room at the cellar deck level with offices, telecommunications, locker rooms (muster area(s)) at EL. +26.500 m.

The accommodation facilities between EL. +30.800 m and EL. +41.550 m are above the TR. All levels of the TR and accommodation are linked by one internal and two external stairways. The stairway on the west face of the accommodation is considered part of the TR and protected accordingly. The accommodation module is welded to the deck without anti-vibration mounts.

The Helideck is located on the West side of the installation, immediately above the TR and above the accommodation block. It has a braced support frame below the deck with bolted connections, which is also tied back to the accommodation module steelwork via bolted connections. Both the helideck and support frame are of aluminium construction.

Kinnoull AAD Process & Brownfield Modules:

In order to access additional reserves in Block 16/23c (the Kinnoull oil field), lying to the north of the existing facilities, the AAD project required an additional process module, brownfield modifications and the installation of a new 44" diameter caisson. The additional 750 Te process module was installed in October 2012. An image of the AAD Process module during the installation is shown in Figure 3-3-2.



Figure 3-3-2: Kinnoull (AAD) Process Module in the Foreground During Installation (Note: flotel in background)

Preparation/Cleaning:

Table 3-1: Cleaning of Topsides for Removal		
Waste Type	Composition of Waste	Disposal Route
Onboard hydrocarbons	Hydrocarbons and other chemical agents.	Return to shore for separation and reuse.
Other hazardous materials	NORM / Scale. Batteries containing lead and lead compounds. Smoke detectors (containing small amount of radioactive material).	Return to shore for disposal and reuse where appropriate. NORM / scale will be disposed of in accordance with the appropriate permit. Batteries and smoke detectors will be disposed of onshore with consideration given to any toxic components.
Original paint coating	Heavy metal paints (including lead- and Chromium VI-based paints) present on a small number of topsides structures.	Return to shore for disposal with consideration given to any toxic components. During decommissioning, paint coatings may give off toxic fumes and dust if flame-cutting or grinding/blasting is used, so appropriate safety measures will be taken.
Asbestos and Ceramic Fibre	Small quantity of asbestos (Chrysotiles) has been identified within gaskets in the topsides. None found to exceed hazard thresholds. Presence of ceramic fibre not identified.	Return to shore for disposal. Asbestos will be disposed of via an appropriately licenced waste management contractor.

Removal Methods:

Table 3-2: Topsides Removal Methods	
1) HLV (semi-submersible crane vessel) ☒ 2) SLV ☐ 3) Jack up Work barge ☐ 4) Piece small or large ☐ 5) Other ☒ Single Lift	
Method	Description
Reverse Installation Removal by SSCV and returned to shore for disposal.	Using a SSCV, the topsides will be removed where by the flare stack will be removed first followed by the Integrated Deck (which includes the Living Quarters, the helideck and the Kinnoull Module) which will be removed in a single lift. During transportation to shore it is expected that the flare stack will be placed on the weather deck of the SSCV and sea fastened. The Integrated Deck will be transported whilst suspended on the vessel cranes (i.e., “on-hook”) at the bow of the vessel. BPEOC note that there is potential flexibility on the topsides removal methodology. All structures will be returned to shore for reuse, recycling and disposal in line with the waste hierarchy.

3.2 Jacket

3.2.1 Jacket Decommissioning Overview

The overall dimensions of the jacket (see Figure 3-3-3) top are 24 m x 28 m. The dimensions were dictated by topsides requirements and for an efficient conductor layout. The base dimensions are 40 m x 45 m, measured between leg centres.

The overall height of the jacket is 136 m. The legs are cross braced at the plan elevations and on the face frames. Perimeter bracing is limited to EL. +14 m with partial perimeter bracing at EL. -75 m (where the legs batter commences) and at EL. -113 m.

The jacket is fixed to the seabed by 12 identical piles of 2,446 mm OD x 70 mm W.T. (cluster of three per leg) driven to 102 m penetration. All piles have an upstand of 10 m above the height of the pile sleeves for installation purposes. The total weight of the jacket, excluding piles, is 7,261 tonnes.

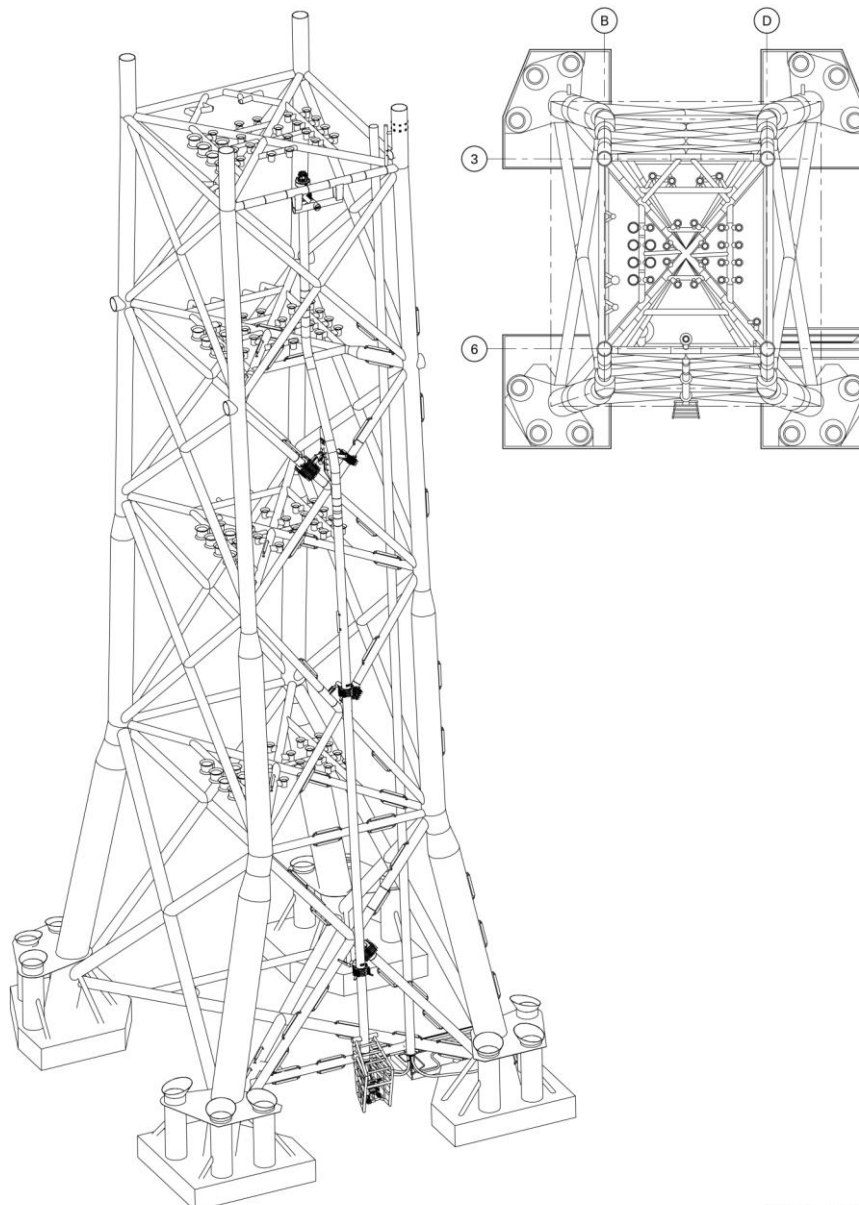


Figure 3-3-3: Jacket Isometric and Plan View Drawings

The jacket is located over a pre-drilled template containing six well slots. The drilling template is supported independently from the jacket by three 762 mm external diameter piles that have a penetration of 41 m below seabed. There is no structural connection between the jacket and the template. The jacket and piles were installed in 1994 by the Saipem 57000 SSCV. This DP only considers the Andrew Jacket structure, the Drilling Template will be considered in a separate DP alongside other subsea infrastructure in the Andrew area.

The jacket provides support to 10 caissons and 17 conductors (including the Farragon umbilical j-tube) within 24 well slots. When the jacket was installed in 1994, it was lifted, upended and docked into position over the pre-drilled template.

Since installation, it has been identified that several pile sleeve cones on Leg D6 are vertically severed and deformed in more than one location. This is considered to be installation damage and does not pose an ongoing threat to structural integrity.

3.2.2 Jacket Removal Methods

Table 3-3: Jacket Removal Methods	
1) HLV (semi-submersible crane vessel) ☒ 2) SLV ☐ 3) Piece small or large ☐ 4) Other ☐	
Method	Description
Removal by SSCV and returned to shore for disposal.	Separate to topsides removal activities, the jacket will then be removed by an SSCV in a single lift. The jacket will be removed in a single lift with a single cut. This will involve the severing of the 12 jacket piles via internal cutting tools. Prior to this, each pile will be internally dredged to allow for insertion of the tool. It is expected that any dredged material from within the jacket piles will be deposited on the seabed during the jacket lift operation. During transportation to shore it is expected that the jacket will be transported whilst suspended on the vessel cranes (i.e., “on-hook”) at the bow of the vessel.
The jacket will be fully removed and returned to shore for reuse, recycling and disposal in line with the waste hierarchy. Note: - The jacket removal methodology detailed above is the chosen decommissioning method as a result of competitive tendering. - If there is a delay between jacket and topsides removal activities, appropriate navigational aids shall be in place as per Consent to Locate (CtL) requirements. - The actual jacket cut elevations carried out during execution of jacket decommissioning may slightly differ to those outlined in this DP, however the regulatory requirement will be met. Should technical issues be encountered during the severing of the piles, OPRED will be consulted by BPEOC. - No explosives will be used during the removal of the Andrew jacket.	

3.3 Pipelines

Decommissioning Options:

The sole decommissioning option considered for the risers and umbilical risers was full removal to shore for reuse, recycling and disposal in line with the waste hierarchy. The basis for this is that, once disconnected from each respective subsea tie-in spool, the risers and umbilicals risers are de facto part of the substructure. Accordingly, the risers and umbilicals risers were not subject to Comparative Assessment (CA).

Table 3-4: Pipeline Decommissioning Option			
Pipeline	Condition of line/group	Whole or part of pipeline/group	Decommissioning Option
Rigid risers 10" Oil Export PL1078 8" Gas Export PL1079 10" Cyrus Production PL1080 4" Cyrus Gas Lift PL1081 2" Cyrus Service / Methanol PL1082 Cyrus Chemical Injection PL1083 18" Kinnoull Production PL2798.1 6" Kinnoull Gas Lift PL2798.2 3" Kinnoull Methanol PL2798.3	Integral to jacket (risers go through riser-caisson structures)	Part: riser section only.	Full removal to shore for reuse, recycling and disposal in line with the waste hierarchy.
Umbilicals 9" Kinnoull Main Umbilical PLU2798 SSIV Umbilical PLU5003 Farragon Umbilical PLU2121	Integral to jacket (pass through caissons and j-tubes)	Part: riser section only.	Full removal to shore for reuse, recycling and disposal in line with the waste hierarchy.



3.4 Wells

Table 3-5: Well Plug and Abandonment
The Andrew well bay has a total well capacity of 24 slots and comprises 17 platform wells: 7 completed operating wells (6 oil and 1 gas producer), 5 completed shut-in and 5 plugged. Two well slots (A15y and A16) are candidates for use as disposal (donor) wells during decommissioning. The wells (listed in Table 2-3) are to be permanently decommissioned with due consideration to be given to the latest <i>OEUK Well Decommissioning Guidelines</i> and demonstrable compliance with relevant UKCS regulations Drilling module and well bay preparation and pre-well decommissioning activities will commence before the CoP date, or in the event of wells decommissioning commencing post-CoP, after this date. Scopes will include engineering within the Andrew topsides well bay which will enable “phase zero” well decommissioning scopes. Some of this work, completed as recently as 2025, has been focussed on non-producing wells prior to CoP. Further engineering scopes will continue within the drilling module to prepare for the installation of the wells decommissioning unit and the provision of the associated drilling services to allow the well decommissioning scopes to be delivered.

3.5 Drill Cuttings

A pre-decommissioning environmental survey was carried out in May 2019 which included sampling and imaging of the drill cuttings pile.

Drill Cuttings Decommissioning Options:

Table 3-6: Drill Cuttings Decommissioning Options	
How many drill cuttings piles are present?	1
Tick options examined: ☐ Remove and re-inject ☒ Leave in place ☐ Cover ☐ Relocate on seabed ☐ Remove and treat onshore ☐ Remove and treat offshore ☐ Other	
Review of Pile characteristics	Pile 1
How has the cuttings pile been screened? (desktop exercise/actual samples taken)	Samples taken.
Dates of sampling (if applicable)	21-May-2019.
Sampling to be included in pre-decommissioning survey?	Yes. Pre-decommissioning survey was carried out in 2019 and samples were taken.
Does it fall below both OSPAR thresholds?	Yes.
Will the drill cuttings pile have to be displaced in order to remove the jacket?	Yes.
What quantity (m ³) would have to be displaced?	1,285.17 m ¹⁰
Will the drill cuttings pile have to be displaced in order to remove any pipelines?	Yes.
What quantity (m ³) would have to be displaced/removed?	<i>Included in 1,285.17 m³ disturbance</i>
Have you carried out a Comparative Assessment of options for the Cuttings Pile?	Not required as below OSPAR thresholds. However, a BAT assessment was completed.

¹⁰ This equates to the relocation of 40% of the total cuttings pile (3,212.93 m³) where the plan is to cut the jacket legs internally with negligible disturbance to the cuttings pile. The disturbance to 40% of the pile arises from the cuttings falling off each mud mat during the jacket lifting operation followed by suction dredging the cuttings at the two pipeline tie in points and the drilling template to facilitate the removal of the drilling template. These latter activities will be captured in the Andrew Subsea DP.

3.6 Waste Streams

As part of the Contracting Strategy, BPEOC will ensure the selection of waste competent Contractor(s), experienced in the handling of all wastes associated with the decommissioning of oil and gas infrastructures.

The waste management provider's/disposal yards shall follow the waste management hierarchy in the handling of materials from the Andrew Decommissioning Project to maximize the amount of material from the project which is reused or recovered/recycled. Geographic locations of potential disposal yard options may require the consideration of Trans Frontier Shipment of Waste (TFSW), including hazardous materials. Early engagement with the relevant waste regulatory authorities will ensure that any issues with TFSW are addressed.

OPRED will be notified when an appropriate licensed dismantling site is selected by BPEOC.

Table 3-7: Waste Stream Management Methods	
Waste Stream	Removal and Disposal method
Bulk liquids	Bulk and residual hydrocarbons will be removed from topsides, although small quantities of residues may remain. Any closed systems will be identified and managed before the topsides is removed. Further cleaning and decontamination will take place onshore prior to re-use or recycling. The risers will be flushed and left filled with seawater as appropriate prior to being disconnected at the ends. Any residual fluids from within these pipelines will be released to marine environment under permit. Further cleaning and decontamination will take place onshore prior to reuse, recycling or disposal.
Marine growth	Where necessary and practicable to allow access and inspection, some marine growth will be removed offshore. The remainder would be brought to shore for disposal should a recycling route (e.g., potential for use as a fertiliser) not be identified.
NORM/LSA Scale	Tests for NORM will be undertaken offshore, and work will be carried out in full compliance with all relevant regulations.
Asbestos	If identified, Asbestos will be disposed of in full compliance with all relevant regulations.
Other hazardous wastes	Will be recovered to shore and disposed of in full compliance with all relevant regulations.
Onshore Dismantling sites	Appropriate licensed sites will be selected. Dismantling sites must demonstrate waste stream management throughout the deconstruction process and the ability to deliver innovative reuse and recycling options. Existing sites would need a proven track record. OPRED will be advised when an appropriate licensed site is selected by BPEOC.

Table 3-8: Inventory Disposition			
	Total Inventory Tonnage	Planned tonnage to shore	Planned left <i>in situ</i>
Topsides	10,173	10,173	<i>None</i>
Jacket & Foundation (incl. piles, conductors & associated casings)	14,543	9,713 ¹¹	≈ 4,830 ¹²
Pipelines	139	139	<i>None</i>

¹¹ Includes piles -3 m below seabed and conductors.

¹² Remaining piles from -3 m below seabed to pile penetration depth.



4 ENVIRONMENTAL APPRAISAL OVERVIEW

4.1 Environmental Sensitivities (Summary)

Table 4-1: Environmental Sensitivities	
Environmental Receptor	Main Features
Conservation interests	The Andrew infrastructure is located c. 15 km west of the Norwegian Boundary Sediment Plain Nature Conservation Marine Protected Area (NCMPA), which is designated for ocean quahog (<i>Arctica islandica</i>) and the associated offshore subtidal sands and gravels habitat. The next closest protected area is the Scanner Pockmark Special Area of Conservation (SAC) located c. 35 km northwest of the Andrew infrastructure and designated for submarine structures made by leaking gases. Elements of the Oslo Paris Convention (OSPAR) (2008) listed threatened and/or declining habitat 'sea pens and burrowing megafauna communities' habitat were present throughout the Andrew survey area, with sea pens (<i>Pennatula phosphorea</i> and <i>Virgularia mirabilis</i>), the Norway lobster (<i>Nephrops norvegicus</i>) and burrows observed (Fugro, 2019a).

Table 4-1: Environmental Sensitivities

Environmental Receptor	Main Features
Seabed	The seabed within the Andrew field area was found to comprise muddy sand and shell fragments, that were predominantly classified as circalittoral muddy sand (A5.26; SS.SSa.CMuSa). Small areas of circalittoral mixed sediment (A5.44; SS.SMx.CMx) were also identified where shells formed more dense aggregations were also observed. Sediments across the Fugro (2019a,b) Andrew survey area had a mean particle size ranging from 63 µm at station 11 (500 m west of the platform) to 76 µm at station 4 (300 m, north) with a mean of 70.7 µm and low variation. The sediment type across the survey area was described as very fine sand (Wentworth, 1922). Sand was the dominant fraction at all stations and comprised between 72.9 % at station 11 (500 m, west) and 79.1 % at station 4 (300 m, north) with a mean of 77.0%. Fines content ranged from 20.8% at station 4 (300 m, north) to 26.8% at station 11 (500 m, west), mean 22.9% and was above the UK Offshore Operators Association (UKOOA) mean background concentration for the CNS (17.4%; UKOOA, 2001). Gravel content was low and ranged from <0.01% at three stations to 0.44% at station 2 (1,000 m, north), mean 0.11%. Silt was the main component of the fines fraction, with a mean value of 17.4%, whereas the mean value of clay across the survey area was 5.50% (Fugro, 2019a,b). Total hydrocarbon (THC) concentrations ranged from 8.4 µg/g at station 2 (1,000 m, north of the Andrew platform), to 20.6 µg/g at station 5 (300 m, south), with a mean of 14.7 µg/g and low variability across the Andrew survey area. The THC concentrations reported were higher than the CNS mean background concentration (9.51 µg/g; UKOOA, 2001) and the Fladen Ground regional mean concentration (10.0 µg/g; FRS, 2002). The total 2 to 6 ring polycyclic aromatic hydrocarbons (PAHs) concentrations ranged from 0.157 µg/g at station 2 (1,000 m, north) to 0.215 µg/g at station 6 (500 m, south) with a mean of 0.189 µg/g and low variation. Environmental tests and microscopy assessments were performed on a selection of samples collected around the platform footprint. Samples were also taken from areas of drill cuttings and around the platform jacket at seafloor. The objective of the testing was to determine the potential for contaminants within the drill cuttings and assess any risk of these being activated during decommissioning activities at the site. The overall area of the Andrew drill cuttings pile was 5,280.89 m² and the volume 3,212.93 m³ (Fugro, 2019a). The Andrew cuttings pile is considered to be a “small cuttings pile” (<5,000 m³) according to the Norwegian Oil and Gas Association Guidance (Norsk Olje & Gass, 2016). Fugro (2019) reported that the sediment type across the five stations showed low to moderate variability and ranged from coarse silt to fine sand. The physico-chemical data obtained from the analysis of the cuttings pile samples indicated that the sediments were heavily modified compared to background sediment in the CNS. The concentrations of THC, PAH, heavy metals and nonylphenol exceeded their respective OSPAR Ecological Effects Threshold (EET), OSPAR Effects Range Low (ERL) value or extensive toxic effects threshold value.

Table 4-1: Environmental Sensitivities

Environmental Receptor	Main Features
Fish	The Andrew infrastructure is situated within the International Council for the Exploration of the Sea (ICES) rectangle 45F1. Within this rectangle, there are spawning or nursery grounds of up to 22 fish and shellfish species of commercial or conservation importance (Coull <i>et al.</i>, 1998; Ellis <i>et al.</i>, 2012). The area is also known to be a high intensity spawning ground for Norway Pout. Juvenile species which may occur in the area include anglerfish, European hake, haddock, Norway pout and whiting (Aires <i>et al.</i>, 2014).
Marine Mammals	Cetacean species likely to occur within the area include Atlantic white-sided dolphin (<i>Lagenorhynchus acutus</i>), white-beaked dolphin (<i>Lagenorhynchus albirostris</i>), minke whale (<i>Balaenoptera acutorostrata</i>), killer whale (<i>Orcinus orca</i>), harbour porpoise (<i>Phocoena phocoena</i>) and beaked whale (<i>Mesoplodon</i> spp.) (Reid <i>et al.</i>, 2003). When present, monthly densities range from high to low. Harbour seals are not likely to be present in the area whilst grey seals may occur in low numbers with > 0 to 0.001% of the UK and Ireland at-sea grey seal population potentially present in the area (Carter <i>et al.</i>, 2022).
Birds	A number of seabird species are likely to occur in the area over the summer breeding season and winter months. Many species overwinter outwith the area whilst other seabirds e.g., little auks (<i>Alle alle</i>), move to the area from more northerly breeding grounds to overwinter. For all species combined, a maximum of nine seabirds are predicted to occur per km² during the breeding season (March to September), maximum of six seabirds predicted to occur per km² during summer months (July to August), whilst during the winter months (November to March) a maximum of 12 seabirds are predicted to occur per km². Additionally, drone surveys and visual inspections of the Andrew platform revealed no evidence of any bird nests, however there was evidence of bird guano. The sensitivity of seabirds to surface pollution within the area varies throughout the year. For the majority of Blocks, sensitivity is low to medium throughout the year. Sensitivity is high in April and May for Block 16/28.
Onshore Communities	Onshore communities are potentially sensitive to disturbance from cleaning, dismantling and disposal activities. Appropriate licenced sites will be selected. Facility chosen by removal contractor must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver re-use and recycling options.
Fisheries	Fishing effort, between 2019 and 2023, in ICES rectangle 45F1 ICES rectangle accounted for an average of 0.8% when compared against effort across all ICES rectangles. Fishing effort within this rectangle is therefore considered Moderate. Shellfish contributed the highest landings, in 45F1, in terms of value and weight between 2019 and 2022. In 2023 demersal catches were higher weight, however shellfish catches remained the highest in terms of value.



Table 4-1: Environmental Sensitivities

Environmental Receptor	Main Features
Other Users of the Sea	The vessel density in the area ranges from c. 0 to 15 hours per km² per month. The smaller areas of higher vessel activity in the near vicinity of the proposed Project are associated with oil and gas activities, either drilling or provision of support to existing installations. The Andrew platform is situated within a well-developed area of the North Sea, featuring a lot of oil and gas infrastructure and activity. There are several oil and gas installations within 40 km of the Andrew platform, the closest of which is the Britannia platform and bridge-linked platform (BLP) located c. 15.5 km to the west. There are no protected wrecks or sites in the vicinity of the Andrew platform. The closest is the non-dangerous wreck of the Persimon located c. 5.5 km to the northwest. The Hywind Scotland wind farm is the closest operational windfarm to the Andrew platform. It is located off the coast of Peterhead, over 150 km southwest of the Andrew area. The closest successful Innovation and Targeted Oil & Gas (INTOG) site is located c. 12 km to the east and the closest CO₂ appraisal and storage licence is c. 14 km to the north. There are no known military activities, power cables, offshore aggregate extraction sites or aquaculture sites in the vicinity of the Andrew platform. The Tampnet CNSFTC is the closest telecommunication cable located c. 29 km to the south.
Atmosphere	Atmospheric emissions will be produced during the proposed Andrew decommissioning activities as a result of the fuel consumed by offshore vessels, diesel-powered equipment and generators. It is predicted that these emissions will only result in localised and short-term impacts on air quality, with prevailing metocean conditions expected to lead to the rapid dispersion and dilution of the emissions. The contribution to UKCS and global atmospheric emissions will be negligible.



4.2 Potential Environmental Impacts and their Management

An initial screening of the potential impacts to environmental and societal receptors from the proposed Andrew decommissioning activities concluded that the only aspects considered to be potentially significant or to be of particular interest to stakeholders and therefore requiring further assessment were seabed disturbance, legacy impacts and atmospheric emissions. Therefore Table 4-2 focuses on these three aspects. Note that following further assessment and upon implementation of the identified mitigation measures, the Environmental Appraisal report concluded that there are no significant impacts resulting from the proposed activities.

Table 4-2: Environmental Impact Management		
Activity	Main Impacts	Management
Topsides Removal	<u>Seabed Disturbance</u> N/A.	No anchored vessels involved such that there will be no seabed disturbance associated with removal of the topsides.
	<u>Legacy Impacts</u> N/A.	Topsides fully recovered such that no legacy impacts.
	<u>Atmospheric Emissions</u> Emissions of CO ₂ , NO _x , N ₂ O, VOCs, CO and SO ₂ associated with vessel operations will contribute to a reduction in air quality and impact on climate change.	As part of the tendering process, proposed vessels will go through a detailed assurance process which will include a review of generator and engine maintenance which leads to better efficiency in line with manufacturer's specifications. Decommissioning vessel schedules and survey vessel schedules will be planned to minimise vessel use. Prior to the contract award, the Project will audit the decommissioning yards to ensure suitable permits are in place and that atmospheric emissions are being managed. Activities will be carried out in line with Duty holder's environmental policy which includes minimising emissions, where possible.



Table 4-2: Environmental Impact Management

Activity	Main Impacts	Management
Jacket	<u>Seabed Disturbance</u> Disturbance to the seabed/drill cuttings during jacket removal.	Limit the footprint of disturbance due to jacket piles being cut internally. Excavation of drill cuttings or seabed sediments will not be required to lift the jacket and the driven piles from the seabed since internal cutting will be utilised. No anchored vessels involved in the recovery operations. BAT assessment completed to determine the optimal approach to decommissioning the cuttings pile. Minimise disturbance of the cuttings pile, with no plans to do any remediation of seabed depressions. Further monitoring program will be agreed with OPRED post completion.
	<u>Legacy Impacts</u> Legacy impact of the cuttings pile decommissioned in situ in relation to other sea users Legacy socio-economic impacts associated with decommissioning of the drill cuttings pile in-situ.	Consultation with the Scottish Fishermen's Federation (SFF) in relation to the drill cuttings pile being decommissioned <i>in situ</i>. The extent of the Andrew drill cuttings pile remaining <i>in-situ</i> will be marked on FishSafe. As left seabed surveys to ensure a safe seabed. No over trawl trials are required.



Table 4-2: Environmental Impact Management

Activity	Main Impacts	Management
	<u>Atmospheric Emissions</u> Emissions of CO₂, NO_x, N₂O, VOCs, CO and SO₂ associated with vessel operations will contribute to a reduction in air quality and impact on climate change.	Mitigation measures are the same as those identified for topsides removal above.



5 INTERESTED PARTY CONSULTATIONS

[HOLD 07]

Consultations Summary:

As part of the informal stakeholder engagement process BPEOC will issue a Scoping Report to a number of stakeholders.

The Scoping Report provides an overview of the Andrew field, the proposed decommissioning activities and an overview of the impacts to be assessed in this EA. Recipients of the scoping report are invited to comment on the Scoping Report with respect to any concerns they may have.

The second part of Table 5-1 will summarise the main concerns that the stakeholders have and will identify who received the Scoping Report. Table 5-1 will be updated in a subsequent version of the DP with a summary of the comments received, whilst full details will be provided in the EA Report.

Table 5-1: Summary of Stakeholder Comments		
Who	Comment	Response
1. Informal Stakeholder Consultations		
2. Public		
3. Statutory Consultations		
North Sea Transition Authority (NSTA)	BPEOC has engaged with NSTA under S29(2A) of the Petroleum Act 1998.	
National Federation of Fishermen's Organisations		
Scottish Fishermen's Federation		
Northern Ireland Fish Producers Organisation		
Global Marine Group		



6 PROGRAMME MANAGEMENT

6.1 Project Management and Verification

BPEOC has established a multi-disciplinary team lead by a project manager responsible for the implementation of activities and co-ordination of all services. An execution plan has been put in place which aligns with established BPEOC Health, Safety and Environment policies and meet all relevant legislative requirements.

BPEOC, applying learning from decommissioning activities in the US, will focus on allowing competent contractors to deliver safe and value driven decommissioning and BPEOC will maintain oversight on delivery and compliance with the decommissioning programmes.

BPEOC will report regularly on the execution of the DP to OPRED. If any changes to the decommissioning programmes are required, these will be discussed and agreed with OPRED in advance.

6.2 Post-Decommissioning Debris Clearance and Seabed Clearance Verification

BPEOC will endeavour to recover seabed debris related to offshore oil and gas activities with any recovered debris sent onshore for recycling or disposal in line with existing waste management policies. Validation of debris recovery will be completed during the subsea decommissioning scope (as detailed in the Andrew Subsea DP) during which any further debris identified will be recovered.

Upon completion of the activities in both the Topping & Jacket and the Subsea DP's, visual / as-left surveys will be carried out by BPEOC.

This DP details that the jacket structure will be removed. The Drilling Template beneath the jacket, and subsea infrastructure associated with the Andrew area subsea fields will form part of a separate subsea DP subject to a public consultation at a later date.

Depending on when decommissioning execution occurs, the lifting execution may be completed over multiple seasons. In anticipation of such events appropriate navigations systems will be assessed for deployment as mitigations of hazards for other users of the sea. Acceptable mitigations will be discussed and agreed with OPRED and the other relevant stakeholders prior to the topsides removal. Post-topsides removal, the Andrew Consent to Locate will be revised to reflect the change in structure and appropriate navigational aids will be fitted in accordance with requirements of the amended Consent to Locate

When decommissioning activity has been completed, updated information will be made available to update Admiralty Charts and *Kingfisher* / *FishSAFE* systems. In addition, and where applicable, the safety zone around the offshore infrastructure will be removed. The drilling template will remain on Admiralty Charts and *Kingfisher* / *FishSAFE* systems until removed and a subsea safety zone will be applied for to mitigate any risks to other users of the sea.

Removal of the jacket as defined in this DP will be validated by a post-decommissioning as-left survey (as the drilling template will be left in situ until later decommissioning). This will be followed by a statement of clearance to the UK Hydrographic Office (UKHO).

This should detail proposals for identification and removal of oil and gas debris following decommissioning works. There is no size specification - if the debris is visible there should be an attempt to remove it.

6.3 Schedule

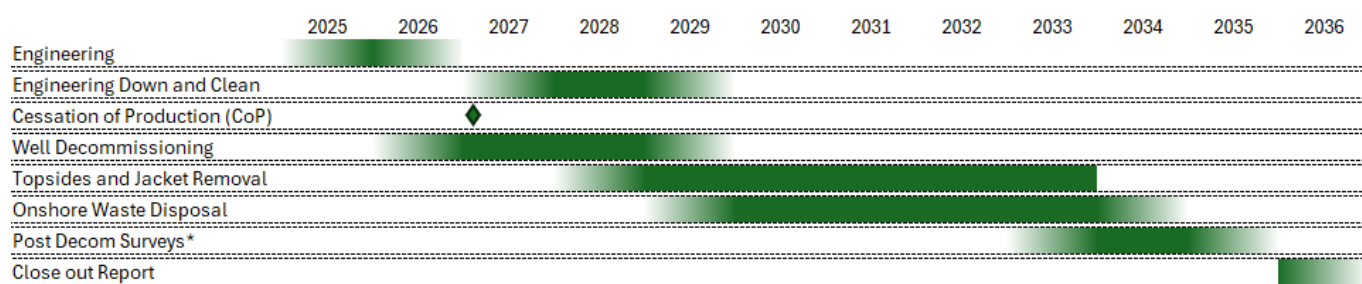
The main milestones on the Andrew DPs will be:

- Cessation of Production (CoP).
- Topsides removal.
- Pipelines (rigid riser and umbilical riser sections) removal.¹³
- Jacket removal.
- Well Decommissioning.
- Post removal survey.

This schedule may change to maximise economic recovery or to exploit opportunities to minimise impacts of the decommissioning process or by combining with other decommissioning activities within the BPEOC portfolio into campaigns, or by combining Andrew decommissioning operations with third party decommissioning.

The schedule for the Andrew DP's is outlined in Figure 6-1 below.

Project Plan:



*Linked to Andrew Subsea Decommissioning Programme, as Drill Template removal is part of the Subsea DP

Figure 6-1: Gantt Chart of Project Plan

¹³ Pipeline removal (risers and umbilicals) expected to be included as part of the *Topsides and Jacket Removal* phase.



6.4 Costs

The costs associated with the decommissioning of the Andrew Topsides and Jacket are noted in Table 6-1 with respect to the OEUK Decommissioning Cost Estimating Guidelines Work Breakdown Structure (WBS)¹⁴. Note that the costs are omitted and are instead to be submitted to OPRED internally.

Table 6-1: Provisional Decommissioning Programmes Costs	
Item	Estimated Cost (£m)
Project Management	Provided to OPRED
Well Abandonment (Platform Wells)	Provided to OPRED
Making Safe	Provided to OPRED
Platform / Jacket – Preparation/Removal and Disposal	Provided to OPRED
Pipelines (Rigid Riser and Umbilical Sections) Decommissioning	Provided to OPRED
Subsea Installations and Stabilisation Features	<i>Part of separate DP</i>
Site Remediation	Provided to OPRED
Continuing Liability – Future Pipeline and Environmental Survey Requirements	Provided to OPRED
TOTAL	Provided to OPRED

¹⁴ Offshore Energies UK. *Guideline on Decommissioning Cost Estimation - Issue 3 (September 2023)*.



6.5 Close Out

BPEOC will endeavour to follow the close out process requirements as detailed by OPRED ¹⁵:

“At the conclusion of decommissioning operations the operator will be required to satisfy OPRED that the approved programme has been fully implemented. This will involve the submission of a close out report within one year of the completion of offshore work, including debris clearance and post-decommissioning surveys.”

BPEOC will furthermore follow any relevant OPRED guidance regarding close out activities at the time of completion of the offshore works including post decommissioning surveys.

6.6 Post-Decommissioning Monitoring and Evaluation

BPEOC will follow the post-decommissioning monitoring and evaluation process requirements as detailed by OPRED including appropriate post-decommissioning surveys and chemical and physical disturbances with any results forwarded to OPRED to enable a post monitoring survey regime to be agreed by both parties.

Upon completion of the decommissioning activities detailed in this combined programme, at a minimum, BPEOC will commit to a post-decommissioning environmental, drill cuttings, debris clearance and seabed clearance survey. The result of these surveys will be discussed and agreed with OPRED.

Infrastructure currently shown on Admiralty Charts and the *FishSAFE* system shall be removed where appropriate.

¹⁵ Department for Business, Energy & Industrial Strategy (BEIS). *Guidance Notes - Decommissioning of Offshore Oil and Gas Installations & Pipelines*. November, 2018.



7 SUPPORTING DOCUMENTS

Table 7-1: Supporting Documents	
Document Number	Title
DC104-EV-REP-040-00004	Andrew Environmental Appraisal

Supporting website URL:

https://www.bp.com/en_gb/united-kingdom/home/where-we-operate/north-sea/north-sea-decommissioning/Andrew.html



8 SECTION 29 NOTICE HOLDERS' LETTERS OF SUPPORT

[HOLD 02]



9 PUBLIC NOTICES

[HOLD 08]



APPENDIX