



Rough Alpha Installation - 47/8A Decommissioning Programme



Non-Derogation



Document Control

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Note that the Environmental Appraisal (EA) is separately referenced documents in support of this programme (see Section 7) and are therefore not included within the Decommissioning Programme document.

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Terms and Abbreviations

ABBREVIATION	EXPLANATION
CA	Comparative Assessment
CESL	Centrica Energy Storage Limited
COUKL	Centrica Offshore UK Limited
DESNZ	Department for Energy Security and Net Zero (BEIS - Department for Business, Energy, and Industrial Strategy)
EA	Environmental Appraisal
HLV	Heavy Lift Vessel
HSE	Health and Safety Executive
JUWB	Jack Up Work Barge
LAT	Lowest Astronomical Tide
N/A	Not applicable
NFFO	National Federation of Fishermen's Organisations
NORM	Naturally Occurring Radioactive Material
NTS	National Transmission System
NSTA	North Sea Transition Authority
OGUK	Oil and Gas UK
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
OSPAR	Oslo Paris Convention
P&A	Plug and Abandonment
SARMAC	Sarmac Bituminous Mattresses
SLV	Shear Leg Vessel
SPA	Special Protection Areas
SSSV	Subsurface Safety Valve
Te	Tonne
UKCS	United Kingdom Continental Shelf
WGS84	World Geodetic System 1984
WHPS	Wellhead Protection Structure



1. EXECUTIVE SUMMARY

1.1 Decommissioning Programme

This document contains the Decommissioning Programme, for notice served under Section 29 of the Petroleum Act 1998. The Decommissioning Programme is:

- The Rough Alpha installation – 47/8A (AD, AP platforms and bridge-link) removal.

Although decommissioning of the Rough Alpha Installations are being treated in this document as a standalone project, the operational phase may be executed as part of a wider decommissioning campaign. Centrica Energy Storage Limited (CESL) will continue to explore cost saving synergies with other projects.

1.2 Requirement for Decommissioning Programmes

Installations: In accordance with the Petroleum Act 1998, the Section 29 notice holder of the Rough Alpha installations/fields (see Table 1.2) are applying to the Department for Energy Security and Net Zero (DESNZ) to obtain approval for decommissioning the installations detailed in Sections 2.1.1, 2.1.2, 2.2.1 and 2.2.2 of this document.

In conjunction with public, stakeholder and regulatory consultation, the Decommissioning Programme is submitted without derogation and in compliance with national and international regulations, and Offshore Petroleum Regulations for Environment and Decommissioning (OPRED) Guidance Notes.

The schedule outlined in this document is for a three-to-five-year decommissioning project plan with well abandonment activities completed 2023, following a period of Engineering and execution.

Pipelines: There will be a separate document for the Decommissioning Programme for the Pipelines (PL26, PL151 and PL6255) associated with the Rough Alpha installation. Future use options are currently being considered for these pipelines and the Decommissioning of them will be addressed at a future date.

Note that the pipelines (PL26 & PL151) were flushed during the cold stacking operations using seawater and were then isolated and physically air-gapped where they came onto the Rough Alpha installation. As part of the Rough Alpha installation removal activities the pipelines and Subsea cable (PL6255) will be cut at near seabed level at the base of the risers, outside the jackets and in proximity to the export riser flanged connections.

1.3 Introduction

The Rough Field is wholly owned by Centrica Offshore UK Limited (COUKL) and operated by Centrica Energy Storage Limited (CESL). The Rough Field is located in the UK sector of the



Southern North Sea in Blocks 47/8A and 47/3B, approximately 29 km from the coast of Easington, Yorkshire.

The Rough Field development consists of two multi-platform offshore facilities: one is referred to as 47/8A (Alpha) offshore facilities and comprises of the bridge-linked AD and AP platforms and the 47/3B (Bravo) offshore facilities, which comprises of the bridge-linked BD, BP and CD platforms. All are standing in approximately 36 m water depth, with the 47/8A offshore facilities located approximately 2 km South-East from the 47/3B facilities. Gas is exported to the onshore National Transmission System (NTS) via a 36" subsea pipeline between the 47/3B facility and the Easington onshore terminal.

In 1985, following an assessment of the reservoir's potential, the field was converted to a gas storage facility with gas from the NTS and injected into and exported from the reservoir.

In 2016 CESL announced the permanent removal from service of the 47/8A facilities from the Rough field gas storage operation, effectively triggering the late life operations and decommissioning phase of the asset after 40 years in operation.

In January 2018 the Oil and Gas Authority (OGA, now North Sea Transition Authority (NSTA)) granted consent for CESL to produce indigenous gas and associated liquids from Rough (47/3B only), thereby authorising the transition from a storage operation to one of production.

At the end of the commercial operations, the offshore and onshore infrastructure is required to be decommissioned and the environment returned to a condition that is agreed with the regulatory authorities. The bridge-linked 47/8A platform facilities are air gapped, hydrocarbon free and the AD wells are decommissioned to Phase 2 Abandonment status.

Following public, stakeholder and regulatory consultation, the decommissioning programme is submitted without derogation and in full compliance with OPRED decommissioning guidelines. The decommissioning programme explains the principles of the removal activities and are supported by an environmental appraisal (EA).

1.4 Rough Field – Decommissioning Overview

The 47/8A offshore facilities consist of the bridge-linked AD and AP platforms, two subsea pipelines and a submarine cable. The AD platform supports the helideck, accommodation, pedestal crane and wellhead facility. The AP platform supports the central processing facilities, including the gas processing and secondary muster station. There are a total of 6 wells on the AD platform. Each well consists of production tubing, incorporating a subsurface safety valve (SSSV), three casings and a conductor, all of which terminate at the platform located wellhead. There are a further six redundant conductors severed around lowest astronomical tide (LAT) level. The conductors noted above are excluded from the scope of this decommissioning programme.

Initially, gas was exported from 47/8A via a 16" subsea pipeline which runs between the AP Platform and Easington Onshore Terminal. This pipeline was constructed in 1974 and was taken out of service (mothballed) in 1988. Following conversion of the field to a gas storage



facility, 47/8A gas was imported and exported via an 18” subsea pipeline to the 47/3B facilities, and thence to Easington. Electrical power was supplied to the 47/8A facilities via a buried 4” submarine cable from 47/3B. The subsea infrastructure will be included in a future Decommissioning Programme.

In 2019 all wells were temporarily plugged and disconnected from the platform process pipework, which in turn has been disconnected from associated pipelines connecting the 47/8A platform to the Easington Terminal and the 47/3B platform. All platform equipment has been de-energised, with the exception of navigation aids. The project was subsequently put on hold in 2020 due to COVID-19. The platform condition is periodically monitored utilising drone technology with any noted degradation of the platform structure reviewed and assessed as required.

The project to permanently plug and abandon (P&A) the wells was restarted in September 2021, with the planned offshore commencement 1st August 2022. An early platform visit was completed in June/July 2022 to undertake safety critical maintenance and preparation activities for the interfacing of the Jack up drill rig (JUDR), using a jack up work barge. Due to the late release of the JUDR from the contract prior to CESL and subsequent weather delays as CESL moved into winter months, the P&A program on Rough 478A did not commence till February 2023. The P&A programme was completed in summer 2023, with all six wells having been Phase 2 Abandoned. Phase 3 scope will be undertaken as part of the Installation removal Decommissioning programme.

The Rough Alpha unmanned Installation and disused pipelines and Submarine Cable which are currently in an accepted Interim Pipeline Regime [IPR] will continue to be surveyed at 3-year intervals. The Platform Installations remaining will be monitored visually weekly by a close visual inspection by the field guard vessel, as it transits around them. The status of the platform facilities will also be monitored by two drone surveys per year.



1.4.1 Installations

Table 1.1: Installations Being Decommissioned				
Fields	Rough	Production Type		Gas
Water Depth (m)	36	UKCS Block		47/8A
Surface Installation				
Asset	Type	Topsides Dry Weight (Te)		Jacket Dry Weight (Te)
Rough AD Platform	Fixed Steel Jacket	1755		752
Rough AP Platform	Fixed Steel Jacket	2439		731
Rough Alpha Bridge-Link	Steel	150		N/A
Subsea Installations		Number of Wells		
Number	Type	Platform		Subsea
0	N/A	AD	6	0
		AP	0	
Drill Cuttings piles		Distance to Median Line (If less than 5km)		Distance from Nearest UK Coastline
Number of Piles	Total Estimated Volume m^3	km		km
None		N/A		29

Table 1.2: Installations Section 29 Notice Holders Details		
Section 29 Notice Holder	Registration Number	Equity Interest (%)
Centrica Energy Storage Limited	03294124	100
Centrica Offshore UK Limited	04248952	
BG International Limited	00902239	0



1.5 Summary of Decommissioning Programmes

Table 1.3: Summary of Decommissioning Programmes		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
1. Topsides		
Complete removal and recycling of topsides and bridge link.	To allow full removal to shore and recycled at an approved and licensed UK/EU facility.	Equipment will be recycled or managed through other disposal routes as appropriate.
2. Jackets		
Removal of Jackets to minimum 3 m below the mudline	Meets OPRED regulatory requirements. To allow full removal to shore and recycled at an approved and licensed UK/EU facility.	AD & AP Jacket proposed removal of the jacket piles within the legs 3 m below the mudline.
5. Wells		
Wells will be plugged and abandoned in accordance with Oil & Gas UK Guidelines for the plugging and abandonment (P&A) of Wells.	Meets OPRED and Health and Safety Executive (HSE) regulatory requirements.	All six wells shall be permanently isolated and plugged at the reservoir and verified by the appropriate authorities.
6. Drill Cuttings		
None	The pre decommissioning survey and environmental sampling have confirmed no drill cuttings are present and therefore no requirement to further assess or address	No solutions necessary
7. Interdependencies		
Platform removal can only occur after Well P&A, Topside's cleaning and isolation and pipelines cleaning and isolation. The battery limits have been identified but is subject to engineering details to confirm.		

1.6 Field Location

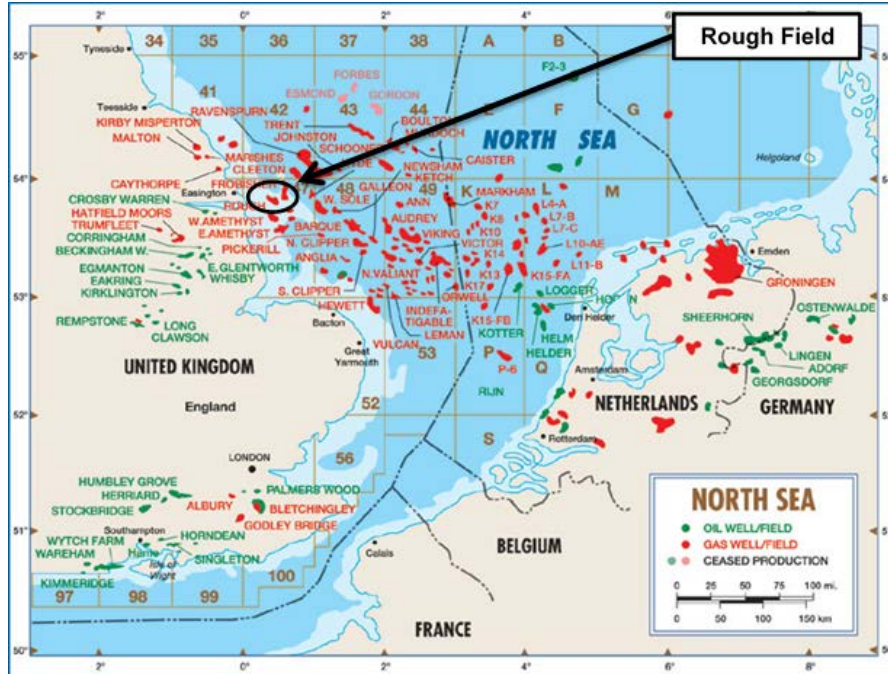


Figure 1.1 Field Location in UKCS

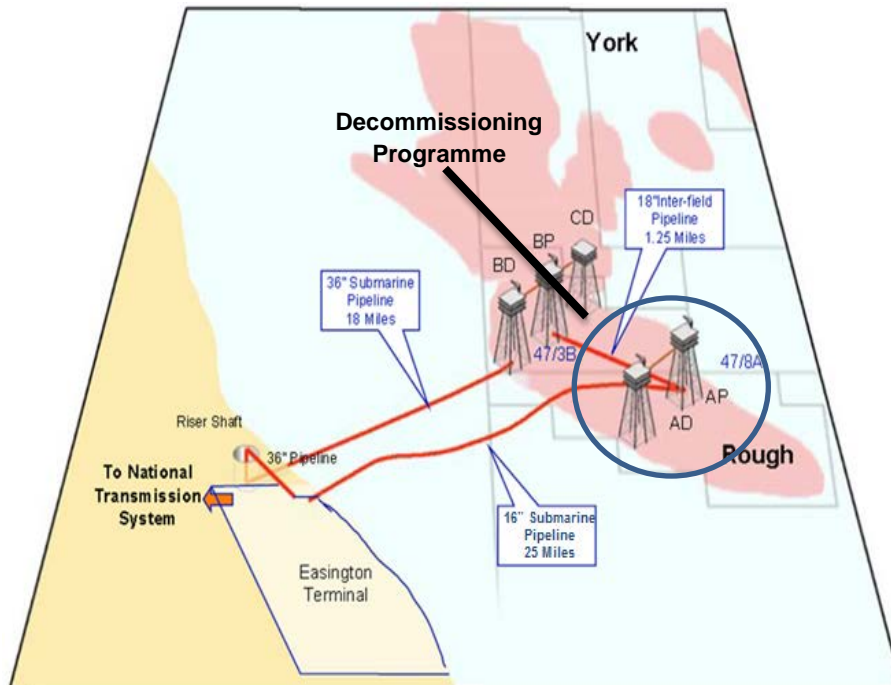


Figure 1.2 Rough Field Layout



Table 1.4: Adjacent Facilities

Owner	Name	Type	Distance/Direction	Information	Status
Centrica	47/3B	Bridge – linked Platform	2km North West of Rough 47/8A	Gas Production	Operating
Centrica	PL150	36" Pipeline	Rough BP Platform to Easington Terminal	Gas	Operating
Spirit Energy	York Platform	Platform	11 km North West of Rough	Gas	Operating
Spirit Energy	Eris	Subsea Tieback	7.9 km East of Rough	Gas	Operating
Perenco UK Limited	Mercury	Subsea Tieback	12.7 km South East	Gas	Operating
Perenco UK Limited	Apollo	Subsea Manifold	9.6 km North East	Gas	Operating
Spirit Energy	Ceres	Subsea tieback	16 km South East	Gas	Operating
Perenco Oil & Gas	Minerva	Platform	21 km North East	Gas	Operating
Perenco Oil & Gas	Amethyst	Platform (s)	22 to 31 km South East	Gas	Operating
Harbour Energy Plc	Tolmount	Platform	24 km North	Gas	Operating
Perenco Oil & Gas	Cleeton	Platform (s)	27 km North East	Gas	Operating
Perenco Oil & Gas	Neptune	Platform	27 km North East	Gas	Operating
Perenco Oil & Gas	Ravenspurn South (A,B, C)	Platform	37 to 39 km North East	Gas	Operating
Perenco Oil & Gas	Hyde	Platform	38 km East	Gas	Operating



Impacts of Decommissioning Proposals
No impacts to other adjacent Facilities are envisaged during the decommissioning of the 47/8A Facilities

2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installations: Surface Facilities

Table 2.1: Surface Facilities Information								
Name	Facility Type	Location	Topsides/Facilities		Jacket (if applicable)			
			Weight (Te)	No of Lifts	Weight (Te)	No of Legs	No of Piles	Estimated Net Weight of piles (MT)
AP	Fixed Steel	53° 49.326'N 0° 24.965'E	2439	1	731	8	8	300
AD	Fixed Steel	53°49.467'N 0° 28.107'E	1755	1	752	8	8	300
Bridge-Link	Steel	-	150	1	N/A	N/A	N/A	N/A



2.2 Wells

Table 2.2: Well Information			
Platform Wells	Designation	Status	Category of Well
47/8a-A1	Gas Production	Phase 2 Abandoned	PL-2-4-4-3
47/8a-A2	Gas Production	Phase 2 Abandoned	PL-2-4-4-3
47/8a-A3	Gas Production	Phase 2 Abandoned	PL-0-4-4-3
47/8a-A4	Gas Production	Phase 2 Abandoned	PL-2-3-4-3
47/8a-A5	Gas Production	Phase 2 Abandoned	PL-2-4-4-3
47/8a-A6	Gas Production	Phase 2 Abandoned	PL-2-4-4-3

2.3 Drill Cuttings

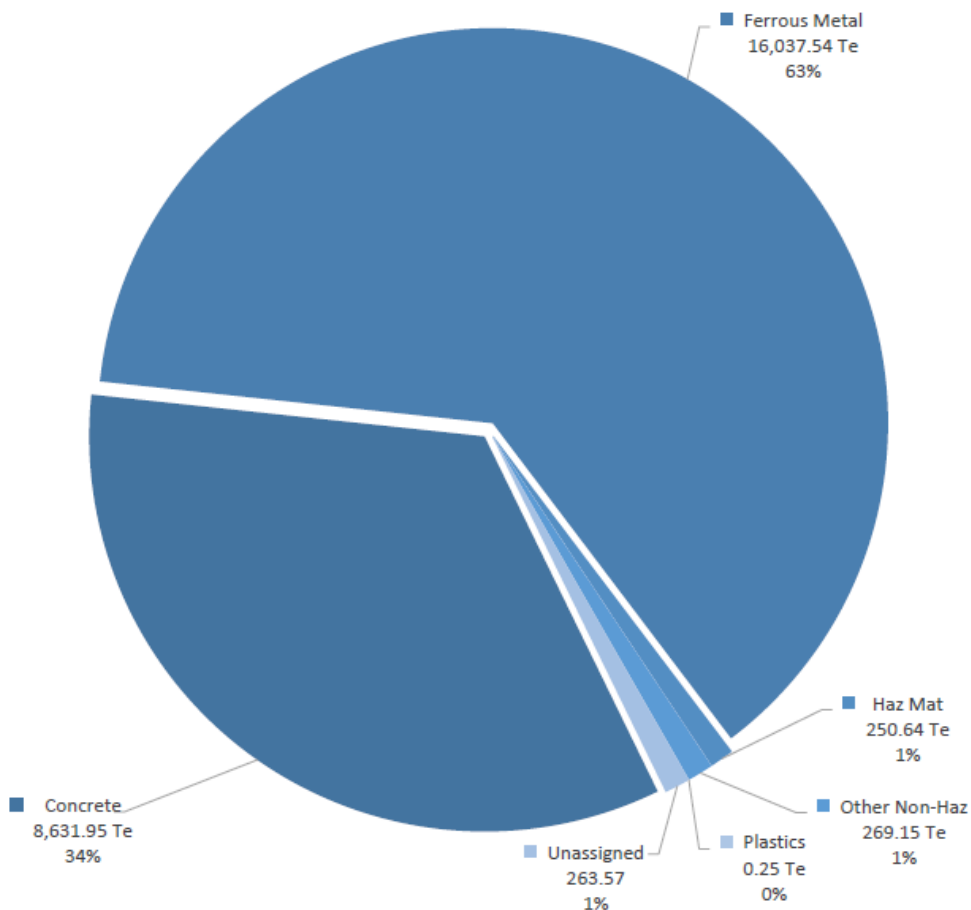
Table 2.3: Drill Cutting Piles Information			
Platform Wells	Designation	Status	Category of Well
The pre decommissioning survey and environmental sampling have confirmed no drill cuttings are present and therefore no requirement to assess or address			



2.4 Inventory Estimates

Table 2.4: Rough 47/8A AD, AP and Subsea breakdown									
Asset	Non-Ferrous Metal (Te)	Concrete (Te)	Ferrous Metal (Te)	Haz Mat (Te)	NORM (Te)	Other Non-Haz	Plastics (Te)	Unassigned (Te)	Total
AD	0	0	2,878.29	38.43	0	104.79	0.20	37.61	3,059.33
AP	0	19.68	1,923.94	212.20	0	133.58	0.05	71.02	2,360.47

Figure 2.3 Waste Quantities (Te) per OPRED Category for Rough 47/8A AD and AP





3. REMOVAL AND DISPOSAL METHODS

In line with the waste hierarchy, the re-use of an installation (or parts thereof) is the preferred decommissioning option. CESL assessed options for extending the producing life of the 47/8A facilities and this was deemed unviable due to the asset age/integrity as well as the commercial viability. Options for the re-use of 47/8A pipelines are currently under investigation. Waste generated during decommissioning will be segregated by type and periodically transported to shore in an auditable manner through licensed waste contractors.

A phased approach to Topsides Removal and Disposal has been identified and it can be summarised in the following phases

- Topsides Preparation for Removals Phase
- Topsides & Jacket Removals Phase
- Disposal Phase

Topsides Preparation for Removals Phase

The initial phase of Preparation work plans would consist of removing/ destructing a number of small modules and completing removals preparation activities (Inspection, Access Creation etc) on the Rough Alpha platforms in order to prepare the Topsides for the future, larger, removals phase activities. This phase of works would use a Vessel and/or Jack-Up Work barge with sufficient crane capacity for completing the necessary activities. Completion of the Topsides Preparation for Removals phase will reduce time/cost/ risk of future removal(s) phases. This will allow CESL to explore additional options for alternative Topsides/ Jacket Removal as well as explore synergies with other North Sea operators whilst progression the Rough Alpha Decommissioning Programme.

Topsides & Jacket Removals Phase

Upon completion of the Topsides Preparation for Removals Phase, the 47/8A Facilities (Topsides, Jackets & Bridge Link) will be ready for removal. The Topsides & Jackets Removal phase will remove the 47/8A Topsides & Jacket Structures, including the bridge link between the two platforms. These activities will be vessel based and the structures will be lifted and transported to an authorised disposal yard. Note that the vessels to be used as well as the activity set will be confirmed throughout the engineering. CESL will look to explore synergies with other North Sea operators whilst progressing the Rough Alpha Decommissioning Programme.

Note that Rough Alpha 500m Zone will be monitored by the Rough Field ERRV, as is currently the case, and this will continue throughout (and post) topsides removal preparation project.



3.1 Topside Disposal Phase

Recovered material will be transported to shore for disposal by a contractor. As per the waste hierarchy, components of the 47/8A Topsides & Jackets will be re-used and/or reconditioned where viable with CESL targeting > 95% material recycling rate. In the event that Transfrontier Shipment of Waste is required (TFSW) is required, CESL will liaise with the relevant Environmental and Waste Authority(s) and ensure that all relevant PLANC(s) are in place in accordance with the relevant regulations.

3.1.1 Topside Decommissioning Overview

Topsides Description: The AD platform supports the helideck, permanent and accommodation, pedestal crane and wellhead facility with a weight of 1755 Te. The AP platform supports the central processing facilities, including the gas processing and secondary muster station with a total weight of 2439 Te. There is also a bridge, linking the two platforms with a total weight of 150 Te.

Removal method: the topsides will be completely removed and recovered to shore. Possible methods are described in Table 3.2.

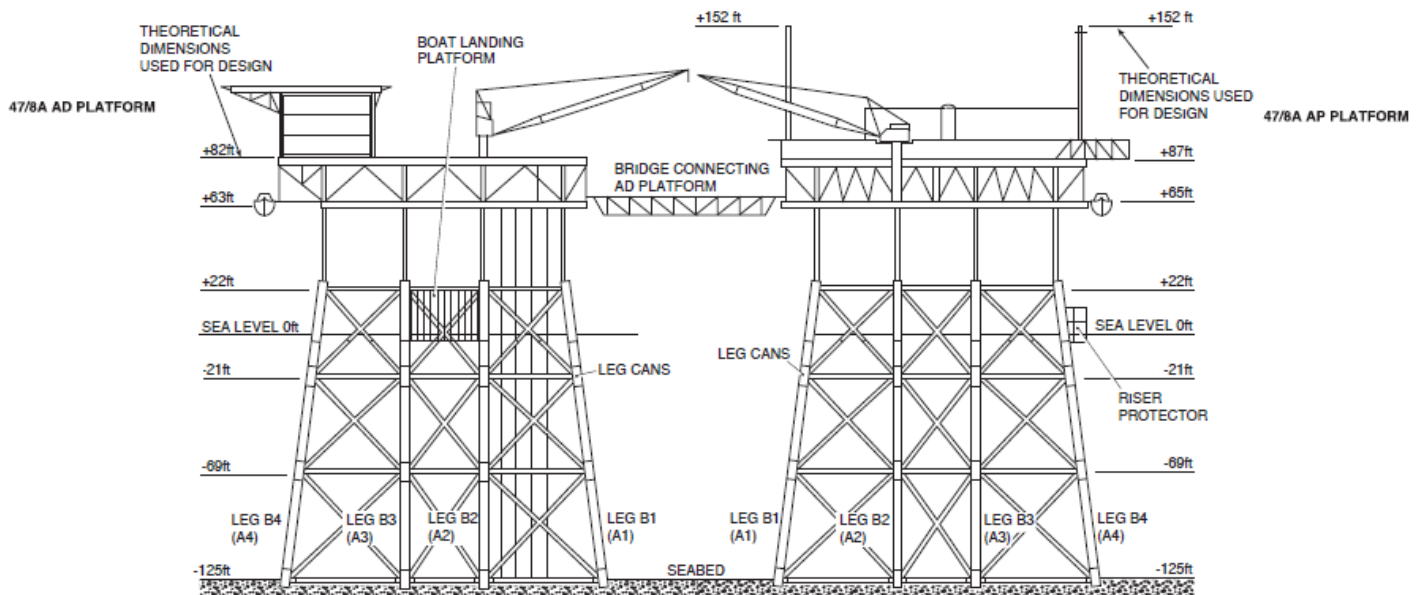


Figure 3.1 Diagram of Topsides

Cleaning/Preparation: The methods that will be used to flush, purge and clean the topsides prior to removal to shore are summarised in Table 3.1.



Table 3.1: Cleaning and Preparation of Topside for Removal

Waste Type	Composition of Waste	Disposal Route
Onboard hydrocarbons	Full recovery	Return to shore for separation and use.
Other hazardous materials	NORM was not present in all samples taken during flush and clean operations.	N/A
Original paint coating	The presence of lead-based paints has been identified to be less than 1% by mass.	May give off toxic fumes / dust if flame-cutting or grinding / blasting is used so appropriate safety measures will be taken. Painted items will be disposed of onshore with consideration given to any toxic components.
Asbestos and Ceramic Fibre	Asbestos register and safety case confirms there is no asbestos present on the installations.	Any asbestos identified throughout decommissioning will be disposed of via an appropriately licenced waste management contractor.

Removal Methods:

Table 3.2: Topsides Removal Methods

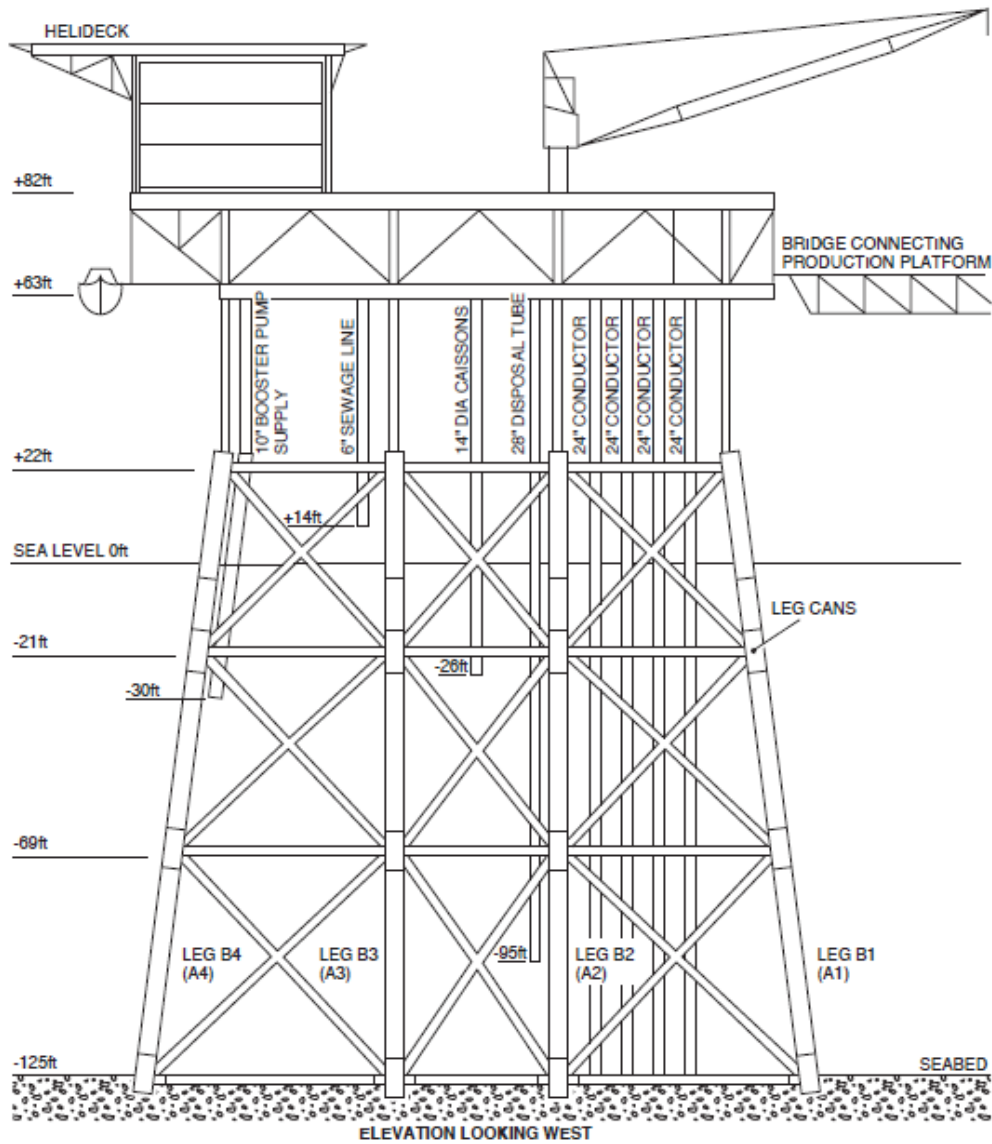
Method	Description
1) SSCV (semi-submersible crane vessel) <input checked="" type="checkbox"/> 2) Monohull crane vessel <input checked="" type="checkbox"/> 3) Shear Leg Vessel (SLV) <input checked="" type="checkbox"/> 4) Jack up Work Barge (JUWB) <input type="checkbox"/> 5) Piece Small <input checked="" type="checkbox"/>	
Single lift removal by HLV	Removal of topsides and jacket as a complete unit followed by transportation to shore for re-use, recycling, and disposal as appropriate. Note that preparation for removals scope using JUWB requires to be completed prior to completing single lift removal by HLV
Modular removal by HLV and re-use/recycle	Removal of topsides as several units/ modules unit followed by transportation to shore for reuse, recycling, disposal as appropriate.
Offshore removal 'piece small' for onshore reuse/disposal	Removal of topsides in a series of smaller sub-units making use of a JUWB, followed by transportation to shore for a programme of re-use, recycling, or disposal as appropriate.
Piece medium deconstruction using HLV	Topsides and Bridge-Link will be removed separately from the jacket followed by transportation to shore for re-use, recycling, and final disposal to landfill as appropriate.

3.2 Jacket

3.2.1 Jacket Decommissioning Overview

The AD jacket installation has a weight of 752 Te. The AP jacket has a weight of 731 Te. It is proposed that the piles will be cut internally circa 3 m below the seabed. Should it not be possible to access the piles internally, external excavation and access will be required. OPRED will be consulted prior to any external excavation or piles cutting. The jacket will be returned to shore for recycling or other disposal routes as appropriate.

Figure 3.2 Typical Elevation of AD Jacket Looking West





3.2.2 Jacket Removal Method

Table 3.3: Jacket Removal Methods	
1) SSCV (semi-submersible crane vessel) <input checked="" type="checkbox"/> 2) Monohull crane vessel <input checked="" type="checkbox"/> 3) Shear Leg Vessel (SLV) <input checked="" type="checkbox"/> 4) Jack up Work Barge (JUWB) <input type="checkbox"/> 5) Piece Small <input checked="" type="checkbox"/>	
Method	Description
Internal Pile cutting and Onshore Disposal using HLV	Piles shall be cut from inside the legs and cut to a minimum of 3 m below seabed and lifted in a single lift followed by recovery to shore for recycling and disposal as appropriate.
External Pile Cutting and Onshore Disposal using HLV	Excavate around the external of each leg and base members (if necessary) and external cut to a minimum of 3m below seabed. Recover as a single lift followed by recovery to shore for recycling and disposal as appropriate.
Onshore disposal using 'piece small'	Removal of Jacket by dismantlement offshore for transportation and onshore disposal and recycling. Jacket Piles cut 3m below seabed (external or internal cutting).
Proposed removal method and disposal route	A final decision on the decommissioning method will be made following an independent option review.

3.2.3 Comparative Assessment Method

No comparative assessment has been necessary with the development and planning of this Decommissioning Programme as it complies to the clean seabed guidance with the planned full removal of the Rough Alpha Installation as described in this Decommissioning Programme submission.

3.3 Wells

Table 3.4: Well Plug and Abandonment
The wells which require to be abandoned, as listed in Section 2.3 (Table 2.3) will be plugged and abandoned in accordance with OGUK Guidelines for the suspension and abandonment of wells. Well Plug & Abandonment activities were completed in 2023 and 6 x AD Wells have been abandoned to Phase 2 abandonment status

3.4 Drill Cuttings

Table 3.5: Drill Cuttings Decommissioning Options	
How many drill cutting piles are present?	none



Table 3.5: Drill Cuttings Decommissioning Options

Tick options examined: <input type="checkbox"/> Remove and re-inject <input type="checkbox"/> Leave in place <input type="checkbox"/> Cover <input type="checkbox"/> Relocate on seabed <input type="checkbox"/> Remove and treat onshore <input type="checkbox"/> Remove and treat offshore <input type="checkbox"/> Other (describe briefly)			
Review of Pile Characteristics	NA		
How has the cuttings pile been screened? (desktop exercise/actual samples taken)			
Dates of sampling (if applicable)			
Sampling to be included in pre-decommissioning survey?	Yes		
Does it fall below both OSPAR thresholds?			
Will the drill cuttings pile have to be displaced in order to remove the jacket?			
What quantity (m^3) would have to be displaced/removed?			
Will the drill cuttings pile have to be displaced in order to remove any pipelines?			
What quantity (m^3) would have to be displaced/removed?			
Have you carried out a Comparative Assessment of options for the Cuttings Pile?			

3.5 Waste Streams

Table 3.6: Waste Steam Management Methods

Waste Stream	Removal and Disposal
Bulk Liquids	Bulk liquids have been removed and taken onshore for handling at the appropriately permitted facilities prior to onshore treatment and disposal.
Marine Growth	To be taken onshore with the infrastructure identified for removal for handling at the appropriately permitted disposal yard prior to onshore disposal.
NORM	No NORMs were present in all samples taken during flush and clean operations.



Table 3.6: Waste Stream Management Methods

Waste Stream	Removal and Disposal
Asbestos	Asbestos register and safety case confirms there is no asbestos present on the installations.
Other Hazardous wastes	All chemicals have been removed from installations have been taken onshore with the infrastructure identified for removal for handling at the appropriately permitted disposal yard prior to onshore disposal. There are no hydrocarbons remaining on the platform. Diesel is the only medium of fuel left on the asset.
Onshore Dismantling Sites	Appropriately permitted UK and/or European sites will be selected through the procurement process. Disposal yard selection has not yet concluded however the selection process will consider proven materials re-use and recycling performance including the use of innovative materials management practices to minimise the quantity of materials disposed of.

Table 3.7: Inventory Disposition

	Total Inventory Tonnage	Planned Tonnage to Shore	Planned left in situ
Installations			

It is not currently possible to predict the market for re-usable materials with confidence however there is a target that >95% of the materials will be recycled.

4. ENVIRONMENTAL APPRAISAL

This section summarises the outcomes of the EA conducted for the proposed decommissioning of the Rough Alpha Installation. The information is based on the EA report (BMT, 2023). The environmental setting and sensitivities of the 47/8A area are summarised in Section 4.1.

An EA is a systematic process of environmental impact assessment that considers how a project will change existing environmental and societal conditions, assesses the consequence and significance of such changes, and identifies any mitigation or remedial works which may be required. It is an iterative process that is generally initiated at project inception and provides an aid to project decision-making throughout the planning and design phases so that, where practical, potentially significant environmental effects can be mitigated at the source. The process also provided an opportunity for consultation with stakeholders at an early stage to ensure that all concerns are identified and can be addressed. The EA was carried out in



accordance with the Petroleum Act and other applicable environmental legislation such as The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 (as amended) and the Offshore Petroleum Production and Pipelines (Assessment of Environmental Effects) Regulations 1999, as amended by the Offshore Petroleum Production.

In addition to the pre-decommissioning environmental survey in 2022, specialist studies were commissioned on commercial shipping traffic and the extent of hydrocarbon contamination of the seabed in the vicinity of the 47/8A Facilities and Pipelines, to provide validation to the information that had informed the EA and assess potential impacts. The activities associated with the decommissioning of the Rough 47/8A platforms have the potential to result in an environmental impact in several different ways. These effects could arise as consequences of the following aspects of the decommissioning programme:

- General decommissioning activities, including onshore disposal;
- Cutting and removal of the Rough AD and Rough AP topside modules;
- Cutting and removal of the Rough AD and Rough AP jackets and piles; and
- Cutting and removal of the bridge-link platform connecting the Rough AD and Rough AP platforms

A scoping exercise was conducted to identify potential environmental impacts and an environmental issues identification (ENVID) workshop was held. During the ENVID, key activities associated with each phase of the project were described with technical input from members of the project team and recorded on a scoring matrix. The environmental aspects associated with these activities were then identified and the physical, biological, and socio-economic impacts on the environment were determined with reference to the local environmental sensitivities.

All aspects that were scored as "significant" were fully assessed as part of the EA. Any aspect that was scored "insignificant" was deemed not to require further assessment. While it is recognised that this approach is subjective to some extent and open to a level of interpretation, it aims to provide consistency and transparency to the overall scoping process.

The following were identified as having the potential to significantly impact the environment:

- Disturbance to the seabed
- Discharges to sea
- Societal impacts
- Energy use and atmospheric emissions
- Underwater noise and vibration arising from the decommissioning operations
- Accidental event from a large hydrocarbon spill
- Waste Management

Impacts or risks that were considered to be low and not of stakeholder concerns during the ENVID were excluded from further investigation in the EA. Stakeholder concerns were also considered within these areas of potential impacts. A detailed assessment of environmental



sensitivities and impacts is contained within the supporting EA and is summarised in the following tables.

4.1 Environmental Sensitivities

Table 4.1: Environmental Sensitivities	
Environmental Receptor	Main Features
<i>Conservation Interests within 40 km of proposed Rough A Decommissioning</i>	
Offshore Marine Protected Areas and Annex I habitats	
Special Area of Conservation (SAC)	Rough A lies within the Southern North Sea SAC, designated for the protection of harbour porpoise. The Humber Estuary SAC lies within 40 km of Rough A.
Marine conservation zones (MCZ)	Rough A lies within the Holderness Offshore MCZ, designated for subtidal coarse sediment, subtidal sand, subtidal mixed sediments, Ocean quahog and North Sea glacial tunnel valleys. The Holderness Inshore MCZ lies within 40 km of Rough A.
Special Protection Areas (SPA)	There are 2 SPAs within the Rough A area, Humber Estuary and the Greater Wash SPA
Annex I habitats	There are both Annex I sandbanks and reef habitats present within 40 km of the Rough A field
Offshore Annex II Species	
Harbour porpoise (<i>Phocoena phocoena</i>)	A very high abundance of harbour porpoise is recorded in Quadrat 47 and adjacent quadrants for March, July, August, September, October, November and December with a moderate abundance the rest of the remaining months.
Grey seals (<i>Halichoerus grypus</i>)	Grey seal densities range from 0 to 150+ seals per 25 km ² in the area.
Harbour seals (<i>Phoca vitulina</i>)	Harbour seal densities range from 0 to 50 seals per 25 km ² in the area. There are no haul-out or breeding sites within the vicinity.
Bottlenose dolphin (<i>Tursiops truncatus</i>)	Bottlenose dolphins are recorded in the vicinity around Rough A in the months of July and August.
<i>Seabed</i>	The Rough A field lies within a widespread seabed area that can be classified into mostly coarse sediment. The UKSeaMap describes the seabed in the subtidal section of the proposed area as a mixture of A5.14 Circalittoral coarse sand and A5.13 Infralittoral coarse sand, A5.43 Infralittoral mixed sediment, and A5.44 Circalittoral mixed sediment.
<i>Fish</i>	The 47/8A offshore facilities are located within ICES rectangle 36F0 and are within the spawning grounds of cod, herring, lemon sole, plaice, sandeels, sole and sprat. ICES rectangle 36F0 is considered a high intensity spawning area for North Sea plaice. There are also nursery grounds for cod and herring, lemon sole, mackerel, plaice, sandeel, sprat and whiting. There is high intensity nursery ground identified for cod, herring, and whiting in ICES rectangle 36F0.



Table 4.1: Environmental Sensitivities

Environmental Receptor	Main Features
<i>Fisheries</i>	<p>The fishing effort, value and quantity of live weight has ranged from 3,821 tonnes landed in 2017 at value of £11,139,815 to 3,147 tonnes landed in 2020 at value of £9,012,544. Traps, dredges, trawls and sein nets have been used between 2016 to 2020 in ICES rectangle 36F0 (UK, 2020; MMO, 2021).</p> <p>No shellfish water protected areas or active aquaculture sites occur in the vicinity of the Rough A area.</p>
<i>Marine Mammals</i>	<p>The main marine mammal species occurring in the area are minke whale (<i>Balaenoptera acutorostrata</i>), Bottlenose dolphin, Common dolphin (<i>Delphinus delphis</i>), white-sided dolphin (<i>Lagenorhynchus acutus</i>), white-beaked dolphin (<i>Lagenorhynchus albirostris</i>) and harbour porpoise, with most sightings occurring in the summer months.</p> <p>Given that the Rough Field is located within 40 km of the coastline, it is likely that grey or harbour seals might be found in this vicinity.</p> <p>Based on the available information, Block 47/8A is not considered to be significant for feeding, breeding, nursery or migrating marine mammals.</p>
<i>Birds</i>	<p>Species commonly found in offshore North Sea waters in the vicinity of Rough A are Fulmar (<i>Fulmarus glacialis</i>), Gannet (<i>Morus bassanus</i>), Guillemot (<i>Uria aalge</i>), Razorbill (<i>Alca torda</i>) and Kittiwake (<i>Rissa tridactyla</i>); and Herring (<i>Larus argentatus</i>), Great Black-backed (<i>Larus marinus</i>) and Lesser Black-backed (<i>Larus fuscus</i>) Gulls</p> <p>In general, Kittiwakes can be found breeding at low densities from April-September, predominantly during the spring/ summer months (May, June, July). Seabird sensitivity in the region of UKCS Block 47/8 and in the vicinity of the Rough Field installations are considered overall very low between October and March.</p> <p>The decommissioning projects of the 47/8A are located approximately 29km from the nearest UK coast. Sensitive onshore breeding areas (Spurn Point & Bempton Cliffs) are located 31km and 65km away respectively.</p> <p>Offshore activities will take consideration of seabird presence throughout duration of decommissioning activities. Mitigation of seabird disturbance is currently ongoing and is anticipated to continue throughout the duration of the decommissioning activities.</p>
<i>Onshore Communities</i>	<p>The impact of the disposal of waste on onshore communities would be beneficial as it will contribute to the continuation of jobs.</p>
<i>Other Users of the Sea</i>	<p>AIS 2014 data shows moderate to high shipping activity in the block 47/8A. Key vessels associated with this traffic are: Fishing vessels, Port service craft, Dredging or underwater activities, Military and law enforcement, Cargo vessels, Tankers and oil and gas services and other vessels.</p> <p>BEIS block data for shipping supplied during licencing rounds has classified vessel activity between high and very high within the blocks of interest.</p>



Table 4.1: Environmental Sensitivities

Environmental Receptor	Main Features
<i>Offshore Renewables</i>	There are 2 renewable energy sites in production within 40 km of Rough 47/8A.
<i>Telecommunications</i>	There is one cable in the Rough A vicinity: TGN Northern Europe 37 km northwest and one planned cable 23 km southeast, NGVL Northern Europe.
<i>Atmosphere</i>	Energy use and emission were calculated for the proposed program. Emissions are not expected to result in a significant increase to the current UKCS emissions attributed to oil and gas activities and general vessel movements in the area.

4.2 Potential Environmental Impacts and their Management

Environmental Impact Assessment Summary: Although there is expected to be some environmental impact during the decommissioning of the Rough Alpha Installation, long term environmental impacts from the decommissioning operations are expected to be negligible. In addition, incremental cumulative impacts and transboundary effects associated with the planned decommissioning operations are expected to be negligible. There will be no planned use of explosives during these activities. We acknowledge that there will be a requirement for an updated environmental protection assessment to be produced and submitted to OPRED should this program change. Removal of the 47/8A facilities will in the long-term result in a positive impact to the environment through the removal of the 500 m exclusion zone and the associated platforms.

Table 4.2: Environmental Impact Management

Activity	Main Impacts	Management
Topsides Removal	Dropped objects, Accidental release of contaminants, and use of landfill space.	<ul style="list-style-type: none"> • Minimise residual content of any vessels. • All tanks drained and nitrogen purged prior to removal operations. • Solid contaminants skipped and shipped to shore. • Remove all hazardous waste as far as reasonably practicable. • Recycle or reuse as much material as possible.
Jackets Removal	Seabed disturbance from anchoring & dredging to cut piles	<ul style="list-style-type: none"> • Internal cuts to minimise seabed disturbance, where this is not possible the minimum amount of dredging will be planned. • Mooring analysis • Anchor management plan • Post operation seabed survey • Consent to locate • Ensure proper anchoring equipment is being used for seabed type



Table 4.2: Environmental Impact Management

Activity	Main Impacts	Management
Subsea Cutting and Removal	Seabed disturbance, accidental release of contaminated material, use of landfill space	<ul style="list-style-type: none"> • Pipelines and umbilicals flushed prior to cutting • Minimal dredging where possible • Wells plugged and minimise any residual material by flushing or purging if required • Recycle or reuse whenever possible
Offshore activities	Physical presence of decommissioning vessels causing potential interference to other users of the sea	<ul style="list-style-type: none"> • Prior to commencement of operations, the appropriate notifications will be made, and maritime notices posted • All vessel activities will be in accordance with national and international regulations • Appropriate navigation aids will be used in accordance with the consent to locate conditions to ensure other users of the sea are made aware of the presence of vessels • Use of designated transit routes for all decommissioning vessels. • Continual use of AIS vessel identification • 24-hour manned bridge policy
Post decommissioning	Damage to or loss of gear as a result of subsea obstructions, posing potential snagging risks	<ul style="list-style-type: none"> • Consultation with fisheries representatives • Post-decommissioning seabed clearance • Overtrawlability assessment following decommissioning, upon agreement with the regulator
Vessels and helicopters onshore and offshore transportation and operations	Energy use & GHGs emissions	<ul style="list-style-type: none"> • Vessels will be audited as part of selection and pre-mobilisation. • All generators and engines will be maintained and operated to the manufacturers' standards to ensure maximum efficiency. • Vessels will use ultra-low sulphur fuel in line with MARPOL requirements. • Work programmes will be planned to optimise vessel time in the field. • Fuel consumption will be minimised by operational practices and power management systems for engines, generators and other combustion plant and maintenance systems.

5. INTERESTED PARTY CONSULTATIONS

5.1 Consultations Summary

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



Table 5.1: Summary of Stakeholder Comments

Who	Comment	Response
Informal Consultations		
<p>OPRED/BEIS-ODU 09/02/2022</p>	<ol style="list-style-type: none"> 1. Please check S29 holders for both installations and PLs. We will also eventually require letters of support from exited S29 holders. 2. Please consider taking forward full removal for consideration in the CA. 3. Please confirm if spans on PL are reportable, if so would remediation/removal of spanned sections be most appropriate rather than rock placement. Potential for more frequent surveys post DP if spanning continues. 4. Consider presence of nesting birds on installation and engage early with EMT and Spirit if possible. 5. Over trawls may not be necessarily required. Non-intrusive post decom survey may be acceptable. Statement can be added to cover both eventualities into the DP. 6. Please remove sections that are N/A such as subsea installations. 7. Please request a PL number for the submarine pl from OGA (NSTA). 	<p>S29 Holders has been updated and A copy will be share with holders in request of support letter.</p> <p>CA will be undertaken as part of the Pipeline removals when the programme is issued, this programme is fully aligned to clean seabed.</p> <p>Will be address in pipelines DP, at this time pipelines are managed under IPR.</p> <p>Worked with Spirit Energy and other SNS Operators to understand nesting birds learnings and have taken next steps to address potential issues.</p> <p>Over trawl steps in this DP have been removed.</p> <p>Un-used sections have been removed</p> <p>Subsea cable PLU number has been addressed with the submission of Cat 2 to the NSTA (OGA) – New Pipeline Number PL6255</p>



Table 5.1: Summary of Stakeholder Comments

Who	Comment	Response
Informal Consultations		
Statutory Consultations		
National Federation of Fishermen’s Organisations (NFFO)		
Scottish Fishermen’s Federation (SFF)		
Northern Irish Fish Producers Organisation		
Global Marine Systems Limited		
Public		

6. PROGRAMME MANAGEMENT

6.1 Project Management and Verification

CESL Standard 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 Southern North Sea. 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.

The execution of this project will follow CESL Management System and requirements, which will include the timely management of all applicable consents, licences and permits required for the work. This will include, but not be limited to, the relevant environmental permits, waste management and disposal consents, and notifying other users of the sea of the offshore activities, as well as any associated reporting requirements.

The project will be subject to internal peer reviews at key stages. This will involve CESL and other stakeholders. Key technical decisions are also subject to approval from the CESL internal ‘technical authorities’.

The well abandonment programme will be examined under Regulation 18 of the Offshore Installation and Well Design and Construction Regulations (DCR, 1996) and will be verified by CESL’s well examiner.



All wastes generated during decommissioning operations will be handled in accordance with the CESL Waste Management Strategy, and a project-specific Waste Management Plan will be developed. CESL will ensure that waste management and minimisation during the planned operations comply with the existing regulatory framework. Waste will be segregated and stored in suitable containers on the various vessels involved in operations, and its subsequent transportation, treatment and ultimate fate will be monitored.

CESL will ensure that all waste contractors are appropriately registered, and all waste managers are appropriately authorised for the activities and types of waste being treated or disposed of. This will be achieved through following established CESL procedures and will include a requirement for the contractor to provide HS&E policy statements, ISO registration certificates, waste management licences and registered waste carriers certificates. No waste from the decommissioning project is expected to be shipped across frontiers. CESL will ensure compliance with their legal "Duty of Care" with regard to the management, treatment and disposal of all waste equipment and materials retrieved onshore during the programme. CESL intends to recycle >95% of the recyclable material that is returned to shore. If it is possible to reuse or sell any recovered equipment, CESL will evaluate the opportunity on a case-by-case basis.

Upon approval of the Decommissioning Programmes, OPRED will be given regular progress reports which will continue during the offshore removal operations.

6.2 Post-Decommissioning Debris Clearance and Verification

A post decommissioning site survey will be carried out around 500 m radius of installation sites in consultation with OPRED. Any seabed debris related to offshore oil and gas activities will be recovered for onshore disposal or recycling in line with existing disposal methods.

Within six to eight months of completion of the work, CESL will provide the following information to OPRED:

- Post-decommissioning survey report
- Seabed Sampling analysis and Debris clearance survey reports
- Project close-out report



6.3 Schedule

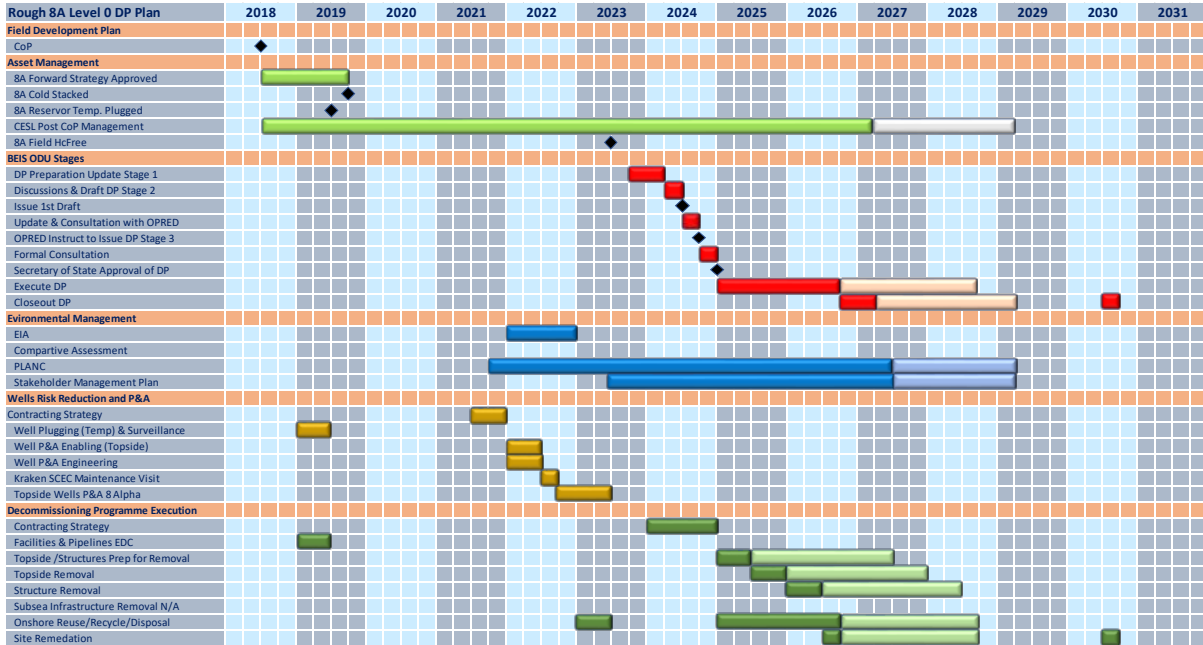


Figure 6.1 Gantt Chart of Project Plan

6.4 Costs

Table 6.1: Provisional Decommissioning Programme Costs	
Item	Estimated Cost (£m)
Platforms /Jackets - Preparation / Removal and Disposal	Provided to DESNZ in confidence under separate cover
Well Abandonment	Provided to DESNZ in confidence under separate cover
Continuing Liability – Future Pipeline and Environmental Survey Requirements	Provided to DESNZ in confidence under separate cover
TOTAL	Provided to DESNZ in confidence under separate cover

6.5 Close Out

A close out report will be submitted to OPRED within six to eight months of the completion of the offshore work, including debris clearance and post-decommissioning surveys, as required in the OPRED guidelines. The report will explain any variance from the Decommissioning Programmes.



6.6 Post-Decommissioning Monitoring and Evaluation

A post decommissioning environmental seabed survey, centred on the sites of 47/8A installations, will be carried out. The survey will focus on chemical and physical parameters of the decommissioning and be compared with the pre decommissioning survey. Results of this survey will be available once the work is complete, with a copy forwarded to OPRED.



7. SUPPORTING DOCUMENTS

Table 7.1: Supporting Documents	
Document Number	Title
A21008/A000/31/01/369/00005	Environmental Appraisal
A21008/A000/31/01/369/00008	Material Inventory Report
210641-EDS-015 (02) _8A	Rough 47/8A Pre-Decommissioning Environmental Baseline Survey
210641-EDS-013 (02) _8A	Rough 47/8A Habitat Assessment