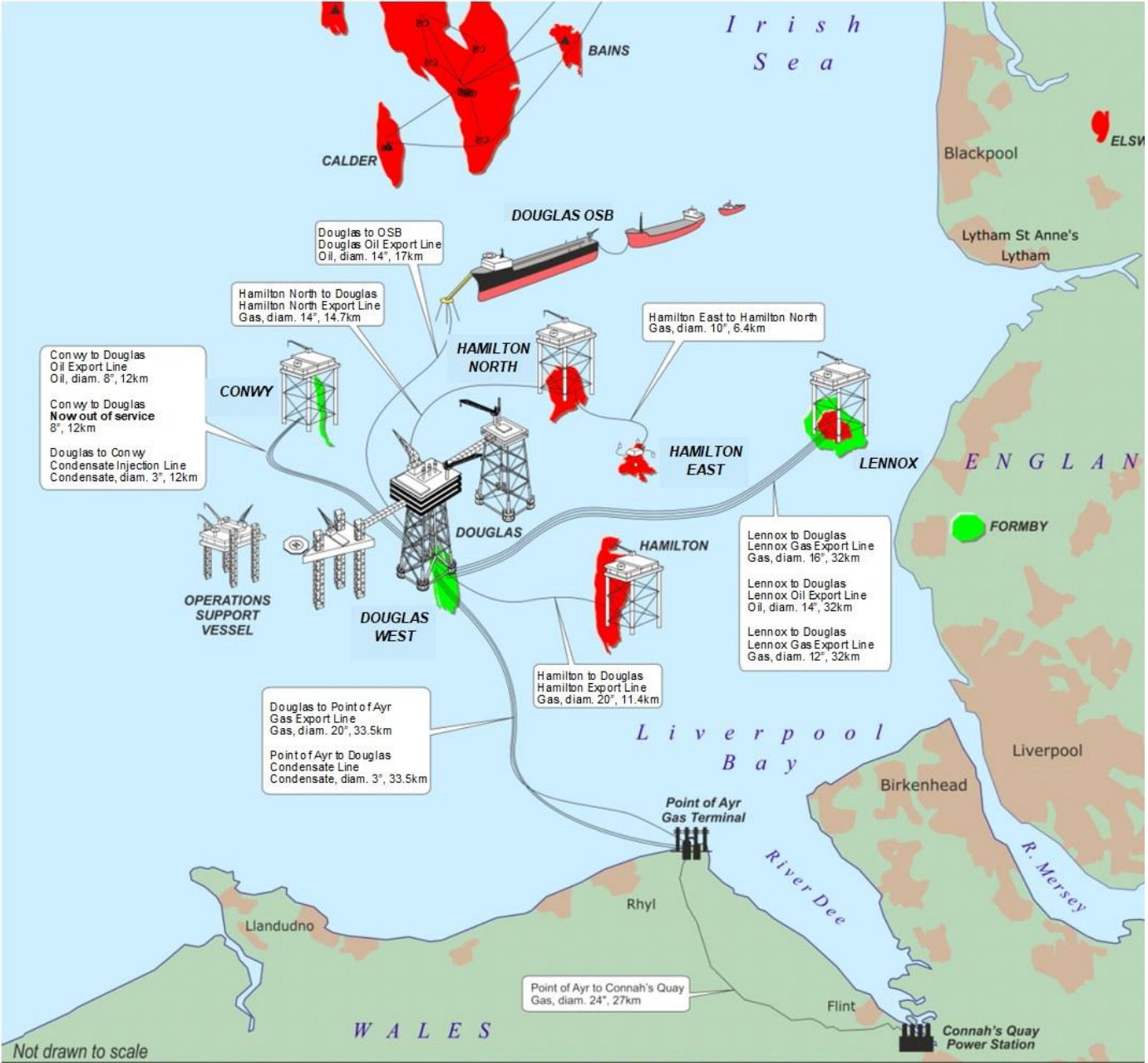




## LIVERPOOL BAY ASSET PARTIAL DECOMMISSIONING PROGRAMMES



**Consultation Draft  
July 2024**

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#### Document Verification

	Name	Signature	Date
Prepared by	EPUK Project Team		xx/xx/xxxx
Reviewed by	Eni UK Project Manager		xx/xx/xxxx
Approved by			xx/xx/xxxx

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00	02/12/2022	68	Pre-Draft submission for discussion with BEIS (OPRED)
01	20/10/2023	67	Revised LBA CCS Project Concept – newbuild NUI at Douglas
02	12/02/2024	80	Updated to address OPRED comments of 18/12/2023
03	25/03/2024	79	Updated to address OPRED comments of 05/03/2024
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07	12/07/2024	83	Updated to address OPRED comments of 12/07/2024

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HOLD	Sheet	Section	Description
1	82	8	Partner Letters will be issued with final version of DP (post public consultation).
2	83	Appendix A	Public Notice yet to be posted.

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### Terms and Abbreviations

Abbreviation	Explanation
BEIS	Department for Business, Energy & Industrial Strategy
CALRAM	Catenary Anchor Leg Rigid Arm Mooring
CAF	Compressed Asbestos Fibre
CCS	Carbon, Capture and Storage
CoP	Cessation of Production
COT	Cargo Oil Tank
CY	Conwy Platform
DA	Douglas Accommodation Platform
DESNZ	Department for Energy Security and Net Zero
DP	Douglas Production Platform
DW	Douglas Wellhead Platform
EA	Environmental Appraisal
E&I	Electrical and instrumentation
EMT	Environmental Management Team
Eng	Engineering
Eni UK	Eni UK Limited: the Section 29 Holder
Eni ULX	Eni ULX Limited: the Section 29 Holder
EPRD	Engineering, Preparation, Removal and Disposal
EU	European Union
EUNIS	European Nature Information System
EWC	European Waste Codes
FEM	Finite Element Model
GMS	Global Marine Systems
HC	Hydrocarbon
HE	Hamilton East (Subsea Well)
HH	Hamilton Platform
HN	Hamilton North Platform

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HSE	Health Safety & Environment
ID	Internal Diameter
ISP	Irish Sea Pioneer
ITT	Invitation to tender
km	Kilometre
LAT	Lowest Astronomical Tide
LD	Lennox Platform
m3	Cubic Metre
N/A	Not Applicable
NORM	Naturally Occurring Radioactive Materials
NPS	Nominal Pipe Size
NRW	Natural Resources Wales
NSTA	North Sea Transition Authority
NUI	Normally Unmanned Installation
ODU	Offshore Decommissioning Unit
OEUK	Offshore Energy UK
OGUK	Oil & Gas UK
OPF	Organic Phase Fluid
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
OSB	Oil Storage Barge
PLANCS	Permit, Licences, Authorisations, Notifications and Consents
PLEM	Pipe Line End Manifold
PoA	Point of Ayr
P&A	Plugging and Abandonment
PSR	Pipelines Safety Regulations
PWA	Pipeline Work Authorization
SOW	Scope of Work
SSI	Special Scientific Interest
SSBV	Subsea Barrier Valve
SUTU	Subsea Umbilical Termination Unit

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Te	Metric Tonnes
T&S	Transportation and Storage
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
WBT	Water Ballast Tank
WBM	Water-Based Mud

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## 1.0 EXECUTIVE SUMMARY

### 1.1 Partial Decommissioning Programmes

This document describes the scope covered by the Partial Decommissioning Programmes (PDP) to facilitate the repurposing of the Liverpool Bay Asset into a Carbon Dioxide Transportation and Storage project. This project forms part of the HyNet North West project, aimed at unlocking a low carbon economy for the North West of England and North East Wales.

The term Decommissioning Programmes, plural, has been used throughout the document for consistency, as this document is covering several Section 29 Notices (S29). The relevant installation and pipeline S29s are included below for information:



- Douglas Installation – 12.04.06.06/119C
- Hamilton Installation – 12.04.06.06/162C
- Hamilton North Installation – 12.04.06.06/164C
- Lennox Installation – 12.04.06.06/203C
- Liverpool Bay Complex (Douglas, Lennox & Hamilton fields) Pipelines - 12.04.06.05/225C
- Hamilton Pipelines – 12.04.06.05/137U (electrical power cables PL6424, PL6426)
- Hamilton North Pipeline – 12.04.06.05/138U (electrical power cable PL6423)
- Hamilton East Pipeline – 12.04.06.05/225C (PL1860, PLU1861)
- Lennox Pipelines – 12.04.06.05/141U (control umbilicals PLU6435, PLU6436, PLU6437, PLU6438)
- Douglas Pipeline – 12.04.06.05/150U (umbilical PLU6445)

Liverpool Bay Asset includes the following existing facilities:

- Douglas Complex
- Satellite Platforms (Lennox, Hamilton, Hamilton North)
- Hamilton East Subsea well
- Oil Storage Barge
- Conwy Platform
- Offshore Pipelines
- Subsea Facilities
- Onshore Pipeline
- Point of Ayr onshore Gas Plant
- Connah's Quay Gas Reception Facility

The present Partial Decommissioning Programmes are focused on the scope of the following existing facilities only, identified as necessary for the repurposing of the Liverpool Bay Asset as part of the HyNet North West project:

- Satellite Platforms (Lennox, Hamilton, Hamilton North) – Topsides removal
- Platform wells P&A (Douglas, Douglas West, Hamilton, Hamilton North and Lennox)

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- Removal of expansion spools, umbilicals and exposed stabilisation features (mattresses and grout bags) in the near platform area which do not meet the 0.6 metres depth of burial criterion (at Douglas, Hamilton, Hamilton North and Lennox). A table summarising the pipelines / spools section, control umbilical and cables part of the removal works is included as Table 2-2 in Section 2.2.

Further separate Decommissioning Programmes will cover the following remaining facilities part of Liverpool Bay Asset and out of the present scope:

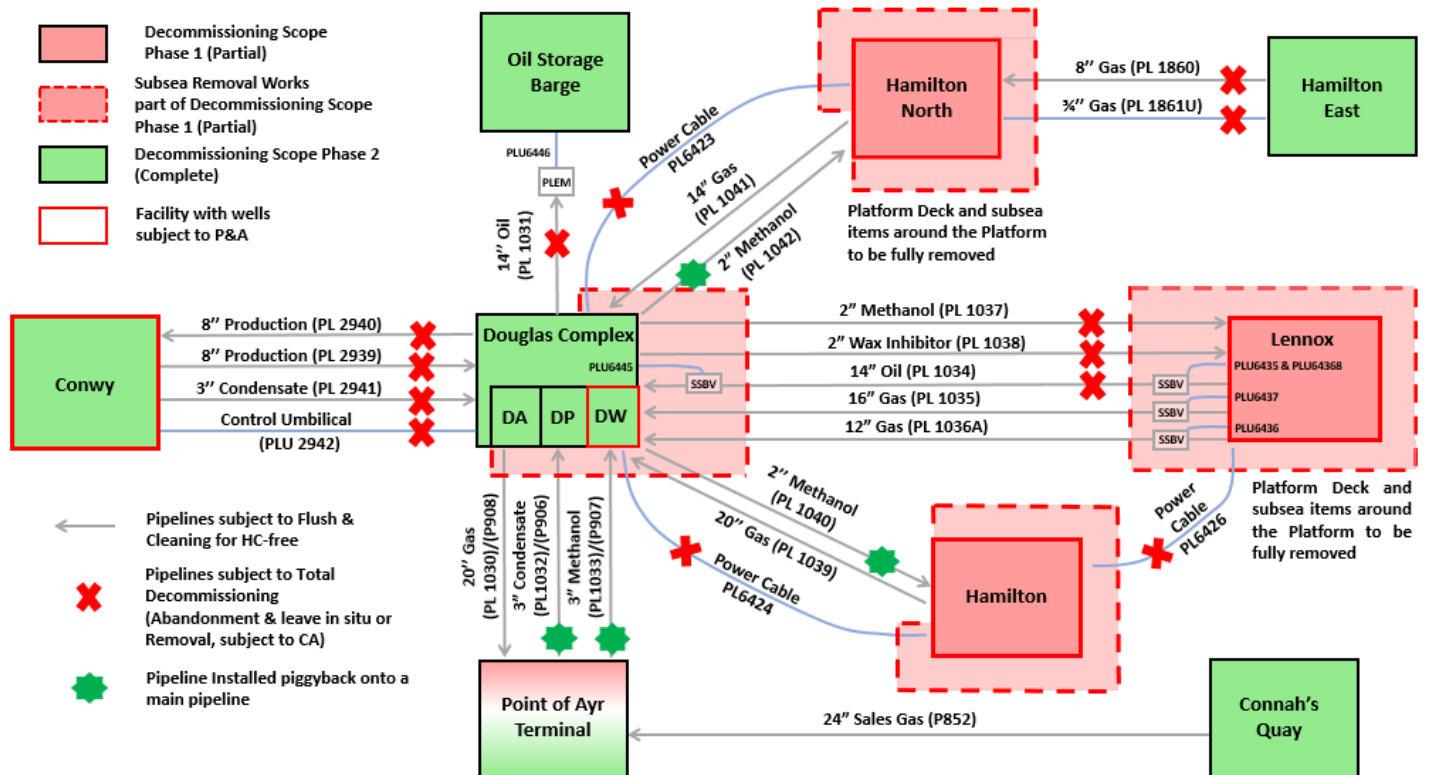
- Oil Storage Barge (unless alternative re-use options are found to be viable and more appropriate)
- Conwy Platform (Jacket, Topsides, Wells, and Pipelines)
- Douglas Production platform
- Douglas Accommodation platform
- Douglas Wellhead platform
- Hamilton East subsea well and integral protection structure
- Offshore Pipelines
- Umbilicals
- Flexible Lines
- Subsea valves and components

The onshore pipelines, Point of Ayr Gas Plant, and Connah's Quay Gas Reception Facility are not subject to a decommissioning programme, as they fall out of OPRED's remit.

The future Decommissioning Programmes (DP) envisaged are:

- **Installations DP** covering the full removal of three platform production complex of Douglas Accommodation, Douglas Process, and Douglas Wellhead, the Oil Storage Barge and Catenary Anchored Leg Mooring (CALM), and Hamilton East subsea well and protection structure. These assets are not required for the LBA CCS project.
- **Pipelines DP** covering the full decommissioning option for all pipelines (and mattresses and umbilicals) not identified for re-use. These will be subject to a full Comparative Assessment.
- **Conwy DP** covering the topsides, jacket, wells, and pipelines.

The scope of the present Partial Decommissioning Programmes are represented in **Figure 1-1**:



**Figure 1-1 - Liverpool Bay Schematic - Partial Decommissioning Scope**



The decommissioning programmes are submitted without derogation and in compliance with OPRED guidelines.

## 1.2 Requirement for Decommissioning Programmes

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the Hamilton, Hamilton North, Lennox and Douglas Installations (Ref. to Tables 1.3, 1.4, 1.5, and 1.6) are applying to the Offshore Petroleum Regulator for Environment & Decommissioning (OPRED) to obtain approval for decommissioning the Topsides detailed in Section 1.1. Details of the relevant S29 notices are provided in Tables 1.7 to 1.10 below. (See also Section 8 – Section 29 Notice Holder Letter(s) of Support).

Also in accordance with the Petroleum Act 1998, the Section 29 notice holders of the Hamilton, Hamilton North, Lennox and Douglas pipelines (Ref. to Tables 1.3, 1.4, 1.5, and 1.6) are applying to the Offshore Petroleum Regulator for Environment & Decommissioning (OPRED) to obtain approval for decommissioning the Pipelines detailed in Section 1.1. Details of the relevant S29 notice is provided in Tables 1.11 to 1.16 below. (See also Section 8 - Section 29 Notice Holder Letters of Support).

The scope of work described in Tables 1.3 to 1.6 includes the removal of pipelines, spools, control umbilicals and power cables in the near platform areas around Douglas, Hamilton, Hamilton North, Hamilton East and Lennox. A desktop Comparative Assessment has been prepared with the objective of demonstrating that these near Platform removals will not prejudice against the future decommissioning options for the pipelines. The pipeline removals will be the subject of a dedicated Decommissioning Programme and a full Comparative Assessment.

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In conjunction with public, stakeholder, and regulatory consultation, these Decommissioning Programmes are submitted in compliance with national and international regulations and OPRED guidelines.

The schedule outlined in this document is for the Partial Decommissioning of the Liverpool Bay Asset, as described below.

The End of Gas sales (gas from offshore facilities to Point of Ayr) occurred on 30 June 2023, while the Cessation of Oil Production is foreseen at end December 2024, subject to the approval of the North Sea Transition Authority (NSTA).

Hamilton North Platform produced fuel gas until 30 June 2023, whilst Lennox and Hamilton Platforms will continue to end 2024, when also oil production will cease.

The Decommissioning schedule outlined in this document includes both the onshore and offshore facilities subject to the Partial Decommissioning (as described in Section 1.1), as per the expected starting dates:

Onshore facilities (Point of Ayr, Connah's Quay facilities and onshore pipeline) – 2024

Offshore facilities (Topsides and pipelines) – 2024

Currently foreseen major project milestones are provided in **Table 1-1**:

Milestones	Approx. Date
Issue ITT Package for Platform Decommissioning	2023
Award Platform Decommissioning Contract	2024
Start of Platform Decommissioning Preparation Works window	2025
Satellite Platforms (LD, HH, HN) Deck Removal Window Start (First Platform Available)	2026
Platforms Removal & Disposal Window End	2027
Platforms Decommissioning Programmes Close-Out Report Submission	2028

**Table 1-1 - Partial Decommissioning Programmes Milestones**



### 1.3 Introduction

Liverpool Bay Asset is located in the East Irish Sea, in close proximity to the Lancashire, Merseyside and North Wales coastlines:

- Hamilton - block 110/13a
- Hamilton North – block 110/13a
- Hamilton East – block 110/14a
- Lennox – blocks 110/14c and 110/15a
- Douglas and Douglas West – block 110/13b
- Conwy – block 110/12a

The Offshore Installations present in the Liverpool Bay Asset are the following:

- Douglas Complex, including a wellhead platform (DW), a central production platform (DP) and an accommodation platform (DA);

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- Lennox Platform: unmanned oil and gas platform (LD);
- Hamilton Platform: unmanned oil and gas platform (HH);
- Hamilton North Platform: unmanned oil and gas platform (HN);
- Hamilton East subsea well and protection structure (HE);
- Conwy Platform: unmanned oil and gas platform (CY);

Offshore operations are centred on the Douglas complex – a three-platform facility that monitors and controls the development’s four unmanned satellite platforms at Lennox, Hamilton, Hamilton North, and Conwy

Produced oil is exported from Douglas via a sub-sea pipeline to the Oil Storage Barge, which is located 17km north of Douglas. Produced gas is exported from Douglas via a sub-sea pipeline to the onshore terminal at Point of Ayr. It is then sent by onshore pipeline to Uniper’s combined cycle gas turbine power station at Connah’s Quay.

Hamilton East field was developed by a single subsea production well with the gas exported to the Hamilton North, for onward transmission to Douglas DP, and then Point of Ayr.

A network of power cables provide power to the Satellite Platforms from Douglas Complex. Power cables are currently trenched with a natural back-fill after the installation.

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#### 1.4 Overview of Installations and Pipelines Being Decommissioned

This section provides an overview of the main characteristics of the installations and pipelines covered by these Partial Decommissioning Programmes:

Liverpool Bay Asset – Field Characteristics			
<b>Field</b>	Liverpool Bay Asset	<b>Production Type</b>	Oil & Gas
<b>Water Depth (m)</b>	7.2 to 30.5	<b>Offshore UKCS blocks</b>	110/13a, 110/13b, 110/14c & 110/15a
<b>Distance to median (km)</b>	106	<b>Distance from nearest UK Coastline (km)</b>	23

**Table 1-2 – Liverpool Bay Asset – Field Characteristics**

Surface Installation – Douglas Complex			
Douglas Complex surface installations are not part of this Decommissioning Programme.			
Associated Pipelines		Associated Number of Wells	
Number	Type	Platform	Subsea
17 (Note 1)	Pipelines and spools Sections 13 Control Umbilical Sections 1 Power Cables Sections 2 SSBV 1	22 (Note 2)	Not applicable to this DP

Note 1: Associated Pipelines refers to the number of pipelines approaching the Douglas Complex (ref. to Table 2-2).

Note 2: Associated Number of Wells refers to the number of wells present at Douglas Complex



**Table 1-3 - Installation(s) and Pipeline(s) Being Decommissioned – Douglas Complex**

Surface Installation – Hamilton (HH)				
Name	Type	Water Depth (relative LAT)	Topsides Weight (Te)	Jacket Weight (Te)
Hamilton Platform (HH)	Fixed steel jacket	25.8 m	502	747.4
Associated Pipelines			Associated Number of Wells	
Number	Type	Platform	Subsea	
3 (Note 1)	Pipelines and Spools Sections 1 Power Cable Sections 2	4 (Note 2)	Not applicable to this DP	

Note 1: Associated Pipelines refers to the number of pipelines approaching Hamilton (ref. to Table 2-2).

Note 2: Associated Number of Wells refers to the number of wells present at Hamilton

**Table 1-4 - Installation(s) and Pipeline(s) Being Decommissioned – Hamilton (HH)**

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Surface Installation – Hamilton North (HN)				
Name	Type	Water Depth (relative LAT)	Topsides Weight (Te)	Jacket Weight (Te)
Hamilton North Platform (HN)	Fixed steel jacket	22.1 m	497	712.5
Associated Pipelines			Number of Wells	
Number	Type	Platform	Subsea	
3 (Note 1)	Pipelines and Spools Sections 1 Flexible Line Sections 1 Power Cable Sections 1	3 (Note 2)	Not applicable to this DP	

Note 1: Associated Pipelines refers to the number of pipelines approaching Hamilton North (ref. to Table 2-2).

Note 2: Associated Number of Wells refers to the number of wells present at Hamilton North

**Table 1-5 - Installation(s) and Pipeline(s) Being Decommissioned – Hamilton North (HN)**



Surface Installation – Lennox Platform (LD)				
Name	Type	Water Depth (relative LAT)	Topsides Weight (Te)	Jacket Weight (Te)
Lennox Platform (LD)	Fixed steel jacket	7.2 m	1,194	451.4
Associated Pipelines			Number of Wells	
Number	Type	Platform	Subsea	
12 (Note 1)	Pipelines and Spools Sections 4 Control Umbilical Sections 4 Power Cable Sections 1 SSBV 3	13 (Note 2)	Not applicable to this DP	

Note 1: Associated Pipelines refers to the number of pipelines approaching Lennox (ref. to Table 2-2).

Note 2: Associated Number of Wells refers to the number of wells present at Lennox

**Table 1-6 - Installation(s) and Pipeline(s) Being Decommissioned – Lennox (LD)**



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Douglas Installation Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.06/119C, UKOP Doc Ref:1164914		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0
Woodside Energy (Great Britain) Limited	01064509	0.0



**Table 1-7 – Douglas Section 29 Notice Holders Details**

Hamilton Installation Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.06/162C, UKOP Doc Ref:1164856		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0
Woodside Energy (Great Britain) Limited	01064509	0.0

**Table 1-8 – Hamilton Section 29 Notice Holders Details**



Hamilton North Installation Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.06/164C, UKOP Doc Ref:1164896		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0
Woodside Energy (Great Britain) Limited	01064509	0.0

**Table 1-9 – Hamilton North Section 29 Notice Holders Details**

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Lennox Installation Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.06/203C, UKOP Doc Ref:1164882		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0
Woodside Energy (Great Britain) Limited	01064509	0.0

**Table 1-10 – Lennox Section 29 Notice Holders Details**

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<b>Liverpool Bay Complex (Douglas, Lennox &amp; Hamilton fields) Pipelines Section 29 Notice Holders Details</b>		
OPRED Ref: 12.04.06.05/225C, UKOP Doc Ref:1177415		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0



**Table 1-11 – Liverpool Bay Complex (Douglas, Lennox & Hamilton fields) Pipelines Section 29 Notice Holders Details**

<b>Hamilton Pipeline Section 29 Notice Holders Details</b>		
OPRED Ref: 12.04.06.05/137U, UKOP Doc Ref:1323874		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1

**Table 1-12 – Hamilton Pipeline Section 29 Notice Holders Details**

<b>Hamilton North Pipeline Section 29 Notice Holders Details</b>		
OPRED Ref: 12.04.06.05/138U, UKOP Doc Ref:1323871		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1

**Table 1-13 – Hamilton North Pipeline Section 29 Notice Holders Details**

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Hamilton East Pipeline Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.05/178C, UKOP Doc Ref:1177408		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1
BHP Billiton Petroleum Great Britain Limited	00810819	0.0



**Table 1-14 – Hamilton East Pipeline Section 29 Notice Holders Details**

Lennox Pipeline Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.05/141U, UKOP Doc Ref:1327350		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1

**Table 1-15 – Lennox Pipeline Section 29 Notice Holders Details**

Douglas Pipeline Section 29 Notice Holders Details		
OPRED Ref: 12.04.06.05/150U, UKOP Doc Ref: 1338629		
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
Eni UK Limited	00862823	8.9
Eni ULX Limited	00936223	91.1

**Table 1-16 – Douglas Pipeline Section 29 Notice Holders Details**

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### 1.5 Summary of Proposed Decommissioning Solutions

The decommissioning solutions covered in this section are aimed to achieve the Partial Decommissioning of those Liverpool Bay Asset facilities which will be repurposed for the Liverpool Bay CO2 Transportation and Storage project.

**Table 1-17** provides a summary of the strategy proposed for each facility in order to achieve the above objectives:



Table 1-17: Summary of Decommissioning Programmes		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
<b>1. Satellite Platforms (Lennox LD, Hamilton HH, Hamilton North HN) – Deck Removal</b>		
Platforms Decks Removal  (Partial Decommissioning of the Platforms)	<p>The disconnection and removal of the platforms decks is selected to allow the existing platform jackets to be re-used to support new topsides dedicated for CCS purposes.</p> <p>The replacement of the deck is dictated by the limited capacity of the existing jackets.</p> <p>This complies with UK and international obligations.</p>	<p>The Satellite Platforms topsides and the interconnecting Pipelines will be subject to flushing and cleaning to remove hydrocarbons. Well P&amp;A will also take place to enable Hydrocarbon Safe status.</p> <p>Satellite Platforms decks will be disconnected and removed to allow the installation of a new one for CCS purposes.</p> <p>Preparation works for deck removal will be performed prior to removal by lift vessel. The removed deck will be transported ashore for dismantling, recycling, and disposal at a suitable onshore facility.</p> <p>Pipeline risers, control umbilicals and power cables will be disconnected prior the deck removal.</p> <p>Pipelines to be re-used for CCS purpose will be subject to a dedicated cleaning and preservation process to guarantee the integrity until the CCS start-up.</p> <p>Part of the stabilisation features related to the pipelines will be re-used for CCS purpose, will be retained together the pipelines.</p> <p>Platform's structure will be maintained and re-used to allow new installation for CCS purposes.</p>

## 2. Pipelines and Stabilisation Features

<p>Spools and Control Umbilicals exposed on the seabed in the near platform area to be removed together with stabilization features</p> <p>(Partial Decommissioning of the Pipelines and Stabilisation Features)</p>	<p>The disconnection and removal of pipelines sections and related stabilisation features is selected to allow the existing pipelines network to be partially re-used for CCS purpose.</p> <p>Partial re-use of the stabilisation features is to guarantee protection and stability of the pipelines to be re-used for CCS purpose.</p> <p>Seabed to be cleared from any object not to be re-used and subject to removal, to avoid hazards to the nearby still operating facilities.</p> <p>This complies with UK and international obligations.</p>	<p>Pipelines spools and Control Umbilicals that are exposed on the seabed and to be removed will be flushed and cleaned to achieve Hydrocarbon Safe status and disconnected from platform risers / j-tubes. The disconnected sections will be cut and removed from the seabed, together with related stabilization features (e.g., concrete mattress, grout bags).</p> <p>The removed pipelines will be transported ashore for dismantling, recycling, and disposal at a suitable onshore facility.</p> <p>The material currently present on the spools will be re-distributed to fill the excavated trenches, and so cover the cut ends.</p>
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## 3. Wells

<p>Temporary and Permanent Abandoned in accordance with Offshore Energies UK Guidelines for the Suspension and abandonment of Wells.</p>	<p>All platform wells need to be temporarily and/or permanently abandoned prior to platform removal to meet NSTA and HSE regulatory requirements</p> <p>This complies with UK and international obligations.</p>	<p>Well abandonment will be undertaken in accordance with approved well designs, applicable legislation, Permits Licences, Consents, Notifications and Approvals will be applied for commensurate with the work, and any associated conditions will be complied with and verified.</p> <p><b>Hamilton HH</b> - Conductors will not be decommissioned. All wells will be side-tracked for CCS project.</p> <p><b>Hamilton North HN</b> - Conductors will not be decommissioned. All wells will be side-tracked for CCS project.</p> <p><b>Lennox LD</b> - There are 13 conductors at Lennox. 4 of these will be side-tracked as CO2 injectors or used as sentinel wells for CCS project. The remaining will be cut and recovered from 10ft below mudline. It is possible that 1 of these 9 conductors may be saved for a future well side track.</p> <p>Please note that Douglas and Douglas West wells are included for completeness in Tables 2-4 (Indicative Well P&amp;A sequence) and 2-5 (Wells), but the decommissioning of the Douglas Complex will be the subject of a separate decommissioning programme.</p>
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<b>4. Drill cuttings</b>		
Leave in place to degrade naturally.	Cuttings pile is small, thin and widely dispersed and falls below both of OSPAR 2006/5 thresholds.  This complies with UK and international obligations.	Left undisturbed on seabed
<b>5. Interdependencies</b>		
<p>Flushing of the pipelines will take place as part of the “making safe” work scopes on all platforms. After flushing short spool sections will be removed from both ends of the pipelines and flowlines to ensure isolation of the pipelines from the jackets and subsea wells (water gapping), subject to appropriate consents (e.g., PWA, PSR notifications).</p> <p>After completion of the well P&amp;A campaign, each of the Satellite platforms (LD, HH, HN) will be put into cold stack or lighthouse mode pending preparation for the removal of the existing Topsides and the installation of the new deck for CCS service.</p>		

**Table 1-17 - Summary of Decommissioning Solution**

1.6 Field Location Including Field Layout and Adjacent Facilities

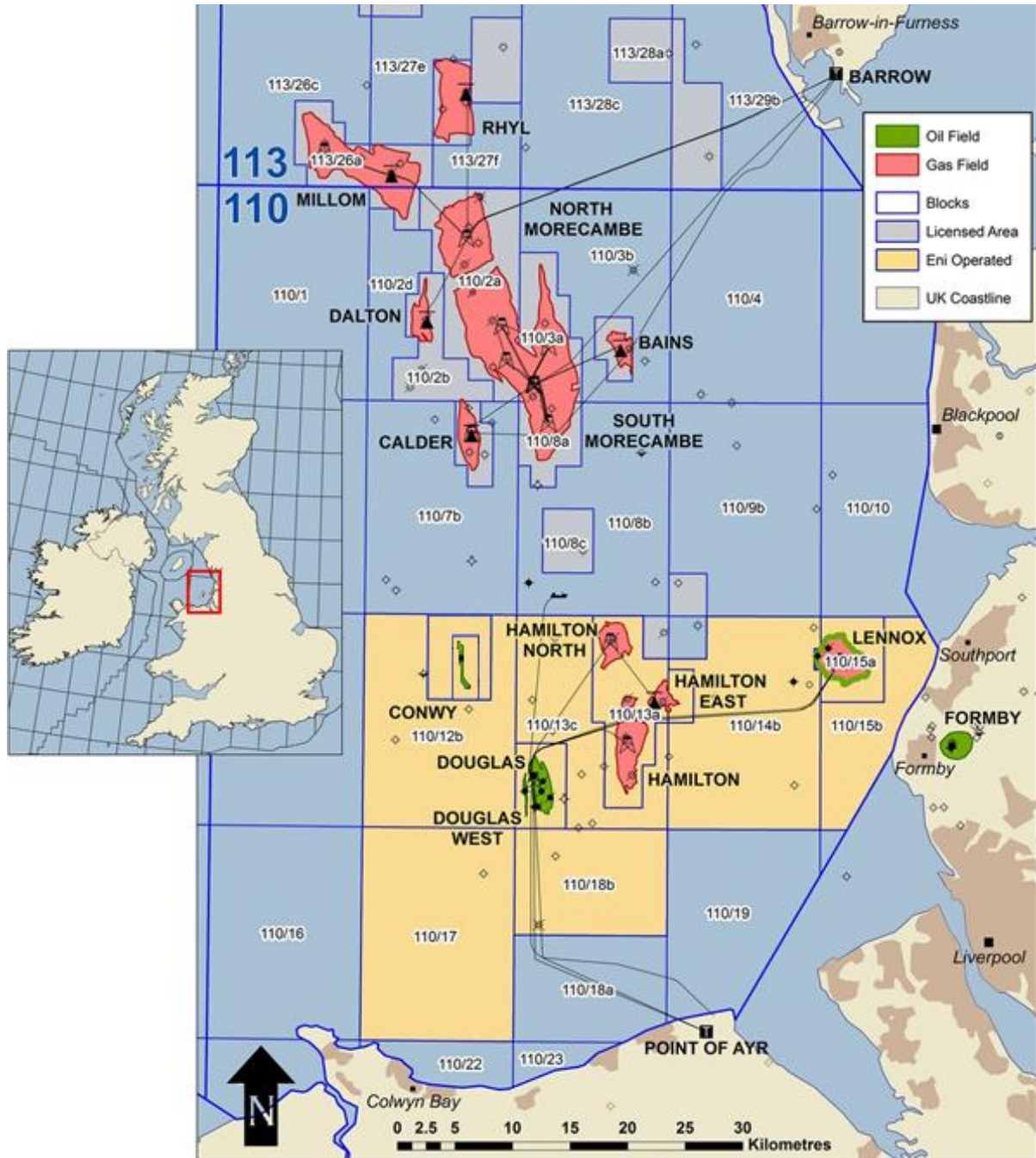
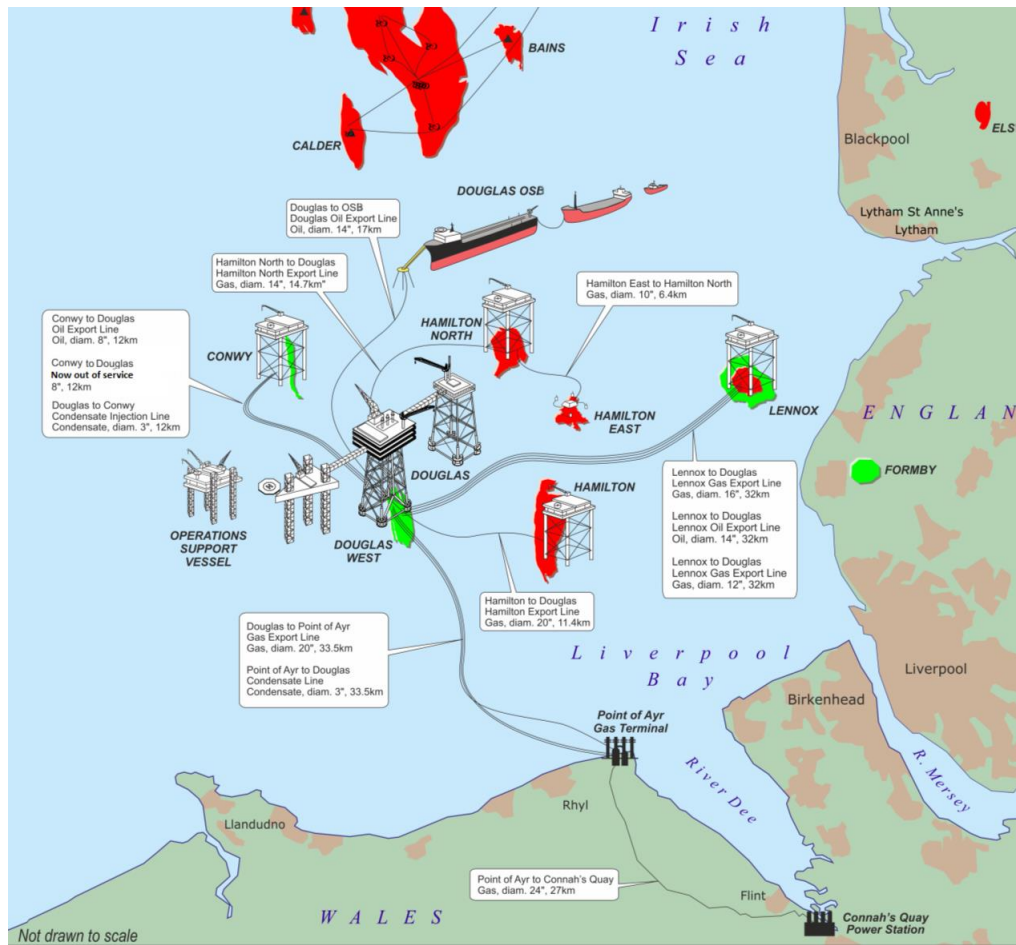


Figure 1-2 – Liverpool Bay Asset Field Location in UKCS





**Figure 1-3 - Liverpool Bay Asset Facilities Schematics**

Any remaining pipelines and umbilicals associated with the LBA fields will be subject to their own Decommissioning Programmes. They will be prepared, isolated and separated from the platforms, but no other impact upon subsea field infrastructure is anticipated.



The listing of relevant adjacent facilities is therefore limited to the pipelines connected to the platforms.

A listing of the adjacent pipeline and surface facilities in the LBA fields, both those directly connected to infrastructure and those which are included for information only, can be found in **Table 1-18**:

Adjacent Facilities					
Owner	Name	Type	Distance / Direction	Information	Status
Eni	Douglas Production (DP)	Jacket Platform	Bridge-connected with DA and DW Part of Douglas Complex	Production Platform of Douglas Complex	Operating
Eni	Douglas Wellhead (DW)	Jacket Platform	Bridge-connected with Douglas Production (DP) Part of Douglas Complex	Wellhead Platform of Douglas Complex	Operating
Eni	Douglas	Jack-up	Bridge-connected with	Accommodation	Operating

	Accommodation (DA)		Douglas Production (DP) Part of Douglas Complex	for Douglas Complex	
Eni	Conwy (CY)	Jacket Platform	Located 12km on the north-west of Douglas Complex	Wellhead Platform	Operating
Eni	Hamilton East (HE)	Subsea X-Tree	Located 17km on the south-east of Hamilton North (HN)	Subsea X-Tree	Not Operating
Eni	Oil Storage Barge	Floating Installation	Located 17km on the north of Douglas Complex	Purpose-built barge permanently moored	Operating
Eni	Catenary Anchor Leg Mooring (CALM)	Floating Installation	Located 17km on the north of Douglas Complex	Purpose-built buoy permanently moored	Operating
Eni	Irish Sea Pioneer (ISP)	Offshore Service Vessel	LBA Offshore field	Offshore Service Vessel	Operating
Eni	PL1030	Offshore Pipeline	Douglas Platform (DP) to Point of Ayr (PoA)	Gas Pipeline	Operating
Eni	PL1032	Offshore Pipeline	Point of Ayr (PoA) to Douglas Platform (DP) — piggybacked to PL1030	Condensate Pipeline	Operating
Eni	PL1033	Offshore Pipeline	Point of Ayr (PoA) to Douglas Platform (DP) — piggybacked to PL1030	Methanol Line	Operating
Eni	PL2940	Offshore Pipeline	Conwy Platform (CY) to Douglas Platform (DP)	Production Line (was former Water Injection)	Operating

Eni	PL2939	Offshore Pipeline	Douglas Platform (DP) to Conwy Platform (CY)	Production Line	Non-operational
Eni	PL2941	Offshore Pipeline	Douglas Platform (DP) to Conwy Platform (CY)	Condensate Line	Operating
Eni	PLU2942	Umbilical	Douglas Platform (DP) to Conwy Platform (CY)	Power and Control	Operating
Eni	PL1031	Offshore Pipeline	Douglas Platform (DP) to Oil Storage Barge	Oil Export Pipeline & Flexible Riser	Operating
Eni	PL1041	Offshore Pipeline	Hamilton North Platform (HN) to Douglas Platform (DP)	Gas Export Pipeline	Operating
Eni	PL1042	Offshore Pipeline	Douglas Platform (DP) to Hamilton North Platform (HN)	Methanol Line	Operating
Eni	PL1037	Offshore Pipeline	Douglas Platform (DP) to Lennox Platform (LD)	Methanol Line	Operating
Eni	PL1038	Offshore Pipeline	Douglas Platform (DP) to Lennox Platform (LD)	Wax Inhibitor Line	Operating
Eni	PL1034	Offshore Pipeline	Lennox Platform (LD) to Douglas Platform (DP)	Oil Pipeline	Operating
Eni	PL1035	Offshore Pipeline	Lennox Platform (LD) to Douglas Platform (DP)	Gas Export Pipeline	Operating
Eni	PL1036	Offshore Pipeline	Lennox Platform (LD) to Douglas Platform (DP)	Gas Export Pipeline	Non-operational
Eni	PL1036A	Offshore Pipeline	Lennox Platform (LD) to Douglas Platform (DP)	Gas Production Pipeline	Operating
Eni	PL1039	Offshore Pipeline	Hamilton Platform (HH) to Douglas Platform (DP)	Gas Export Pipeline	Operating
Eni	PL1040	Offshore Pipeline	Douglas Platform (DP) to Hamilton Platform (HH)	Methanol Line	Operating
Eni	PL1860	Flexible Line	From HE to HN	Flexible Line	Non-operational
Eni	PL1861U	Umbilical	From HE to HN	Transfer Line	Operating
Eni	PLU6445	Umbilical	From DP to SSBV (PL1034)	Production Umbilical	Operating
Eni	PLU2942	Umbilical	From DP to Conwy	Control Umbilical	Operating
Eni	PLU6435	Umbilical	From SUTU (LD area) to SSBV (PL1034)	Control Umbilical	Operating
Eni	PLU6436	Umbilical	From SUTU (LD area) to SSBV (PL1036A)	Control Umbilical	Operating
Eni	PLU6437	Umbilical	From SUTU (LD area) to	Control Umbilical	Operating

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			SSBV (PL1035)		
Eni	PLU6438	Umbilical	From LD Platform to SUTU (LD Area)	Control Umbilical	Operating
Eni	PL6423	Cable	From DP to HN	Electrical Power Cable	Operating
Eni	PL6424	Cable	From DP to HH	Electrical Power Cable	Operating
Eni	PL6426	Cable	From HH to LD	Electrical Power Cable	Operating

#### Impacts of Decommissioning Proposals

Decommissioning Proposals are specifically designed to facilitate the repurposing of assets for the CO2 Transportation and Storage project, including the removal of expansion spools, umbilicals, and exposed stabilisation features in the near platform areas.

The decommissioning proposals will not impact any of the adjacent facilities listed in the table above. A Comparative Assessment has been prepared to demonstrate that the seabed removals proposed in this programme will not prejudice against subsequent removal options.

Oil Cessation of Production is planned for end December 2024. The only activities planned ahead of this time are the P&A of those wells which are not contributing to oil production, or fuel gas production.



**Table 1-18 - Adjacent Facilities**

### 1.7 Industrial Implications

The procurement needs of the Partial Decommissioning phase have been combined with the LBA CO2 Transportation and Storage project requirements, such that the work packages (WP) has been tendered as follows:

- WP1 – Drilling rig, P&A plus CCS development sidetracking and recompletion
- WP2 – Offshore Decommissioning for CCS, CCS & Cable Installation EPC Package
- WP3 – Onshore Decommissioning and CCS EPC Package at Point of Ayr

It is anticipated that this approach will achieve synergies which will result in a cost-effective execution of the decommissioning works.

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## 2.0 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED



### 2.1 Installation(s): Surface Facilities

Surface Facilities Installations									
Name	Facility Type	Location (WGS84)		Topside		Jacket Weight			
				Weight to be removed (Te)	No of modules	Weight (Te)	Nr. of legs	Nr. of piles	Weight of piles (Te)
Hamilton Platform (HH)	Topsides Jacket Platform	53°33.958 N	03°27.270' W	502	1	747	4	4	406
Hamilton North Platform (HN)	Topsides Jacket Platform	53°38.782' N	03°28.686' W	497	1	713	4	4	633
Lennox Platform (LD)	Topsides Jacket Platform	53°37.881' N	03°10.595' W	1,194	1	451	4	4	425

**Table 2-1 - Surface Facilities Installations**

Notes on **Table 2-1**:

The overall weight to be removed represents the complete weight of the Topsides. The Jackets and Piles are not part of this Decommissioning Programme.

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### 2.1.1 Hamilton (HH) Platform

Hamilton (HH) platform has been installed in 1995 in a water depth of about 25.8 m LAT. Its substructure is a skirtpile type steel jacket with four (4) legs. Jacket base and top dimensions are 14 m x 10 m and 12 m x 10 m, respectively.

Hamilton (HH) platform topside is composed of four decks:



- Weather Deck El. +33,500
- Access Platform Deck El. +30,300
- Cellar Deck El. +27,000
- Underdeck Platform El. +23,500

The elevations are referred to Platform Level Datum (+0.00) coinciding with Lowest Astronomical Tide (LAT).

Platform foundation is provided by four 60 skirt-piles. Penetration depth is 26.4 m for all piles. There are six conductors (20"), two risers (20" & 2), one 28 caisson and two 10 J-tubes. The Topsides are composed by a two levels integrated deck (cellar deck and a weather deck) with an underdeck platform, with a helipad located on the main deck.



**Figure 2-1 - Hamilton (HH) Platform Overview**

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### 2.1.2 Hamilton North (HN) Platform

Hamilton North (HN) platform has been installed in 1995 in a water depth of about 22.1 m LAT. Its substructure is a skirt-pile type steel jacket with four (4) legs. Jacket base and top dimensions are 14 m x 10 m and 12 m x 10 m, respectively.



Hamilton North (HN) platform topside is composed of four decks:

- Weather Deck El. +33,500
- Access Platform Deck El. +30,300
- Cellar Deck El. +27,000
- Underdeck Platform El. +23,500

The elevations are referred to Platform Level Datum (+0.00) coinciding with Lowest Astronomical Tide (LAT). Platform foundation is provided by four 60" skirt-piles. Penetration depth is 24 m for all piles. There are six conductors (20"), two risers (14" and 10"), one 28" caisson and two 10" J-tubes. The Topsides are composed by a two levels integrated deck (cellar deck and a weather deck) and an underdeck platform, with a helipad located on the main deck.



Figure 2-2 - Hamilton North (HN) Platform Overview

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### 2.1.3 Lennox (LD) Platform

Lennox (LD) platform has been installed in 1995 in a water depth of about 7.2 m LAT. Its substructure is a mainpile type steel jacket with four (4) legs. Jacket base and top dimensions are 16 m x 16 m.

Lennox (LD) platform topside is composed of four decks:

- Weather Deck El. +35,700
- Access Platform Deck El. +32,500
- Cellar Deck El. +29,200
- Underdeck Platform El. +25,700



The elevations are referred to Platform Level Datum (+0.00) coinciding with Lowest Astronomical Tide (LAT).

The Topsides are composed by a two levels integrated deck, with a helipad located on the main deck. It provides wellhead and processing facilities, with the separated oil and gas being exported to the Douglas Complex.



Figure 2-3 - Lennox (LD) Platform Overview



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## 2.2 Pipelines and Stabilisation Features

Located in the seabed areas surrounding the platforms (see Section 2.1) are pipelines spools, control umbilicals, SSBVs and cables sections.

These pipelines and related stabilisation features such as concrete mattresses are summarised in **Table 2-2**, showing 'Existing Total Quantities', 'Quantities to be retained' for re-use as scope of CCS project, and 'Quantities to be removed' as scope of Partial DP:

Pipelines and Stabilisation Features									
Progr. Nr.	Item	Status	Burial Status	Description	Type	Existing Total Quantities	Quantities to be retained	Quantities to be removed	Removal Location
01	PL1030	Operating	Buried	20" from Point of Ayr to Douglas	Pipeline section	32,120m	31,935m	130 m	Douglas Complex approach
					Spools			55m	
					Concrete Mattress (6m x 3m each)	26	0	26	
					Grout bags	Unknown	Unknown	Unknown	
02	PL1032	Operating	Buried	3" Condensate Pipeline Point of Ayr to Douglas	Pipeline section	32,110m	31,912m	162m	Douglas Complex approach
					Spools			36m	
					Concrete Mattress (6m x 3m each)	11 across PL1032 and PL1033	0	11 across PL1032 and PL1033	
					Grout bags	Unknown	Unknown	Unknown	
03	PL1033	Operating	Buried	3" Methanol Pipeline Point of Ayr to Douglas	Pipeline section	32,110m	31,903m	170m	Douglas Complex approach
					Spools			37m	
					Concrete Mattress (6m x 3m each)	11 across PL1032 and PL1033	0	11 across PL1032 and PL1033	
					Grout bags	Unknown	Unknown	Unknown	
04	PL1034	Operating	Buried	14" Oil Pipeline Lennox to Douglas	Pipeline section	31,772m	31,273m	228m	Douglas Complex approach
					Spools			135m	
					Concrete Mattress (6m x 3m each)	40 across PL1034 and PL1037	0	14 across PL1034 and PL1037	
					Grout bags	Unknown	Unknown	Unknown	
					SSBV DD-ESV-20002	1	0	1	
					Pipeline section	As above	As above	23m	Lennox Platform approach
					Spools			113m	
Concrete Mattress (6m x 3m each)	As above	As above	26 across PL1034 and PL1037						

					Grout bags	Unknown	Unknown	Unknown	
					SSBV DD-ESV-20001	1	0	1	
05	PLU6445	Operating	Buried	Control Umbilical for PL1034 SSBV	SSBV Control Umbilical	205m	0m	205 m	Douglas Complex approach
					Concrete Mattress (6m x 3m each)	(incl. in PL1034)	(incl. in PL1034)	(inc. in PL1034)	
					Grout bags	Unknown	Unknown	Unknown	
06	PLU6435	Operating	Buried	Control Umbilical from SUTU to SSBV (PL1034)	Control Umbilical	3m	0m	3 m	Lennox Platform approach
					Concrete Mattress (6m x 3m each)	(incl. in PL1034)	(incl. in PL1034)	(inc. in PL1034)	
					Grout bags	Unknown	Unknown	Unknown	
07	PLU6436	Operating	Buried	Control Umbilical from SUTU for PL1036A SSBV	SSBV Control Umbilical	154m	0m	154 m	Lennox Platform approach
					Concrete Mattress (6m x 3m each)	(inc. in PL1036A)	(inc. in PL1036A)	(inc. in PL1036A)	
					Grout bags	Unknown	Unknown	Unknown	
08	PLU6437	Operating	Buried	Control Umbilical from SUTU for PL1035 SSBV	SSBV Control Umbilical	38m	0m	38 m	Lennox Platform approach
					Concrete Mattress (6m x 3m each)	(inc. in PL1035)	(inc. in PL1035)	(inc. in PL1035)	
					Grout bags	Unknown	Unknown	Unknown	
09	PLU6438	Operating	Buried	Control Umbilical from LD Platform to SUTU (LD Area)	SSBV Control Umbilical	129m	0m	129 m	Lennox Platform approach
					Concrete Mattress (6m x 3m each)	(inc. in PL1034 and 1036A)	(inc. in PL1034 and 1036A)	(inc. in PL1034 and 1036A)	
					Grout bags	Unknown	Unknown	Unknown	
					SUTU Subsea Umbilical Termination Unit	1	0	1	
10	PL1035	Operating	Buried	16" Gas Pipeline Lennox to Douglas	Pipeline section	31,772m	31,516m	176m	Douglas Complex approach
					Spools			80m	
					Concrete Mattress (6m x 3m each)	17	4	13	
					Grout bags	Unknown	Unknown	Unknown	
					SSBV DD-ESV-20022	1	0	1	
11	PL1036 Disused	Non- Operational	Buried	12" Gas Injection Douglas to Lennox	Pipeline section	31,270	30,704m	352m	Douglas Complex approach
					Spools			84m	
					Concrete Mattress (6m x 3m each)	109 across PL1036 and	15 across PL1036 and	90 across PL1036 and	



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						PL1038	PL1038	PL1038	Lennox Platform approach	
					Grout bags	Unknown	Unknown	Unknown		
					Pipeline section	As above	As above	40m		
					Spools			90m		
					Concrete Mattress (6m x 3m each)	As above	As above	4 across PL1036 and PL1038		
					Grout bags	Unknown	Unknown	Unknown		
12	PL1036A	Operating	Buried	12" Gas Pipeline Lennox to Douglas	Pipeline section	31,424m	31,185m	143m	Douglas Complex approach	
					Spools			96m		
					Concrete Mattress (6m x 3m each)	94	83	11		
					Grout bags	Unknown	Unknown	Unknown		
					SSBV LD-ESV-30001	1	0	1		
13	PL1037	Operating	Buried	2" Methanol Pipeline Douglas to Lennox (piggyback onto PL1034)	Pipeline section	31,772m	31,273m	228m	Douglas Complex approach	
					Spools			135m		
					Concrete Mattress (6m x 3m each)	40 across PL1034 and PL1037	0	14 across PL1034 and PL1037		
					Grout bags	Unknown	Unknown	Unknown		
					Pipeline section	As above	As above	23m		Lennox Platform approach
					Spools			113m		
					Concrete Mattress (6m x 3m each)	As above	As above	26 across PL1034 and PL1037		
					Grout bags	Unknown	Unknown	Unknown		
14	PL1038	Operating	Buried	2" Wax Inhibitor Pipeline Douglas to Lennox (piggyback onto PL1036 Disused)	Pipeline section	31,772m	31,206m	352m	Douglas Complex approach	
					Spools			84m		
					Concrete Mattress (6m x 3m each)	109 across PL1036 and PL1038	15 across PL1036 and PL1038	90 across PL1036 and PL1038		
					Grout bags	Unknown	Unknown	Unknown		
					Pipeline section	As above	As above	40m		Lennox Platform approach
					Spools			90m		
					Concrete Mattress (6m x 3m each)	As above	As above	4 across PL1036 and PL1038		
					Grout bags	Unknown	Unknown	Unknown		
15	PL1039	Operating	Buried	20" Gas Pipeline Hamilton to	Pipeline section	11,207m	10,978m	174m	Douglas Complex approach	
					Spools			55m		

				Douglas	Concrete Mattress (6m x 3m each)	29 across PL1039 and PL1040	17 across PL1039 and PL1040	12 across PL1039 and PL1040		
					Grout bags	Unknown	Unknown	Unknown		
16	PL1040	Operating	Buried	2" Methanol Pipeline Douglas to Hamilton (piggyback onto PL1039)	Pipeline section	11,207m	10,759m	174m	Douglas Complex approach	
					Spools			56m		
					Concrete Mattress (6m x 3m each)	29 across PL1039 and PL1040	17 across PL1039 and PL1040	12 across PL1039 and PL1040		
					Grout bags	Unknown	Unknown	Unknown		
					Pipeline section	As above	As above	52m		Hamilton Platform approach
					Spools			57m		
					Concrete Mattress (6m x 3m each)	As above	As above	As above		
Grout bags	Unknown	Unknown	Unknown							
17	PL1041	Operating	Buried	14" Gas Pipeline Hamilton North to Douglas	Pipeline section	14,300m	14,086m	166m	Douglas Complex approach	
					Spools			48m		
					Concrete Mattress (6m x 3m each)	25 across PL1041 and PL1042	18 across PL1041 and PL1042	7 across PL1041 and PL1042		
					Grout bags	Unknown	Unknown	Unknown		
18	PL1042	Operating	Buried	2" Methanol Pipeline Douglas to Hamilton North (piggyback onto PL1041)	Pipeline section	14,300m	14,087m	166m	Douglas Complex approach	
					Spools			47m		
					Concrete Mattress (6m x 3m each)	25 across PL1041 and PL1042	18 across PL1041 and PL1042	7 across PL1041 and PL1042		
					Grout bags	Unknown	Unknown	Unknown		
19	PL1860	Non-operational	Buried	8" Gas Flexible Line Hamilton East to Hamilton North	Flexible Line section	6,620m	6,542m	78m	Hamilton North Platform approach	
					Concrete Mattress (6m x 3m each)			0		0
					Grout bags	Unknown	Unknown	Unknown		
					Flexible Line section	As above	As above	0	Hamilton East approach	
					Concrete Mattress (6m x 3m each)			20		20
					Grout bags	Unknown	Unknown	Unknown		
20	PLU1861	Operating	Buried	Control Umbilical Hamilton North to	Control Umbilical	6,620m	6,547m	73m	Hamilton North Platform approach	
					Concrete Mattress (6m x 3m each)			0		0

Item #	TAG	Status	Type	Description	Hamilton East			Approach	
					Grout bags	Unknown	Unknown		
21	PL6424	Operating	Buried	Power Cable Douglas to Hamilton	Control Umbilical	As above	As above	0	Hamilton East approach
					Concrete Mattress (6m x 3m each)	10	10	0	
					Grout bags	Unknown	Unknown	Unknown	
					Cable section	11,490m	10,961m	285m	
22	PL6423	Operating	Buried	Power Cable Douglas to Hamilton North	Concrete Mattress (6m x 3m each)	58	42	8	Douglas Complex approach
					Cable section	As above	As above	244m	
					Concrete Mattress (6m x 3m each)	As above	As above	8	Hamilton North Platform approach
					Cable section	14,560m	14,238m	265m	
23	PL6426	Operating	Buried	Power Cable Hamilton to Lennox	Concrete Mattress (6m x 3m each)	20	1	11	Douglas Complex approach
					Cable section	As above	As above	57m	
					Concrete Mattress (6m x 3m each)	As above	As above	8	Hamilton Platform approach
					Cable section	22,180m	22,039m	93m	
23	PL6426	Operating	Buried	Power Cable Hamilton to Lennox	Concrete Mattress (6m x 3m each)	27	12	8	Hamilton Platform approach
					Cable section	As above	As above	48m	
					Concrete Mattress (6m x 3m each)	As above	As above	7	Lennox Platform approach
					Cable section	As above	As above	7	

**Table 2-2 – Pipelines and Stabilisation Features**

### 2.2.1 Subsea Barrier Valve (SSBV)

The Liverpool Bay Asset has four SSBVs installed on the following pipelines:

Item #	TAG	Size	Pipeline	Service	From-To	Location	Decommissioning Strategy
001	DD-ESV-20001	14"	PL1034	Oil	Douglas-Lennox	Lennox end termination	Full removal of the valve together with pipeline section (ref. <b>Table 2-2</b> )
002	DD-ESV-20002	14"	PL1034	Oil	Douglas-Lennox	Douglas end termination	Full removal of the valve together with pipeline section (ref. <b>Table 2-2</b> )
003	DD-ESV-20022	16"	PL1035	Gas	Douglas-Lennox	Lennox end termination	Full removal of the valve together with pipeline section (ref. <b>Table 2-2</b> )
004	LD-ESV-30001	12"	PL1036A	Gas	Douglas-Lennox	Lennox end termination	Full removal of the valve together with pipeline section (ref. <b>Table 2-2</b> )

**Table 2-3 SSBV Decommissioning Strategy**

The dimensions of the SSBVs are presented in **Figure 2-4**, extract from SSBVs General Arrangements:

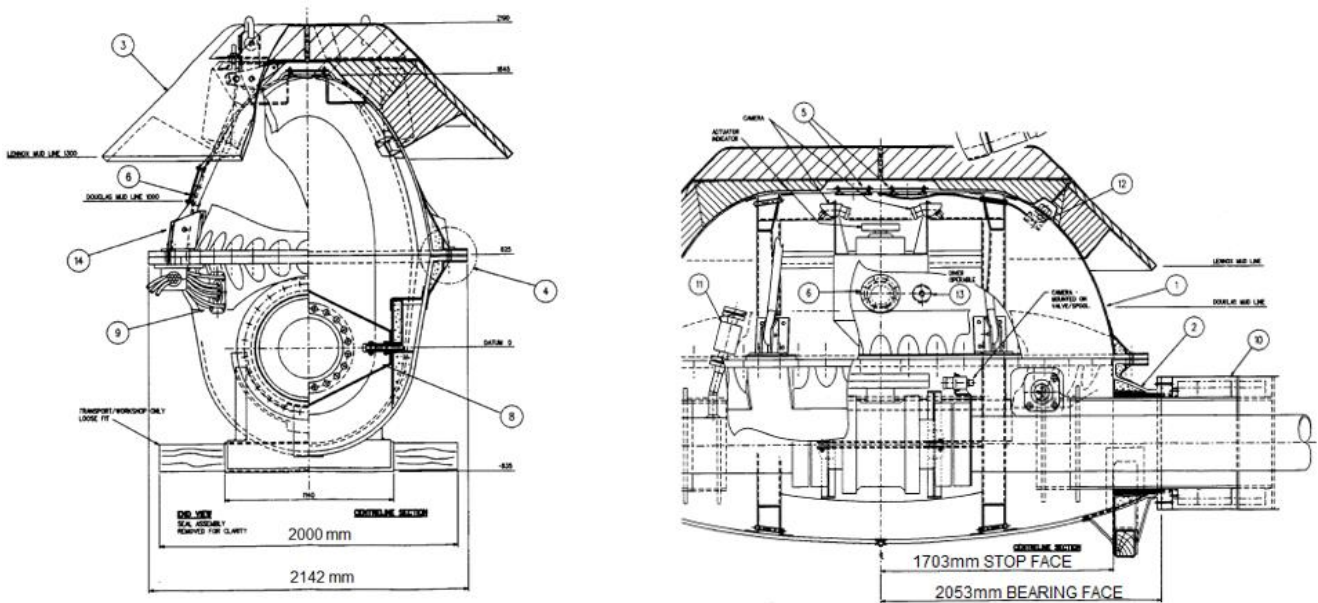


Figure 2-4 - Subsea Barrier Valves - Dimensions and GAs

### 2.3 Wells

The Liverpool Bay Asset has 42 platform wells spread over 4 platforms; DW – 22 wells, LD – 13 wells, HH – 4 wells, and HN – 3 wells. Conwy wells (5 of) and Hamilton East will be the subject of separate Decommissioning Programmes.

Eni's chosen abandonment scheme has been formulated after consideration of the elements presented in both Eni STAP (Eni standards and procedures) and OEUK. The NSTA Well Operations and Notifications System will be used to apply for consent for abandonment works to be carried out.

At the LBA fields, there is a single 'zone of flow potential'/'distinct permeable zone' only. Therefore, the P&A will involve a combination barrier in the caprock (Ansdell Mudstone and Rossall Halite) above this zone and a top hole barrier only. The combination barrier will be set in a milled window to ensure a laterally extensive barrier across the wellbore with CO<sub>2</sub> resistant cement.

**Table 2-5** details all operating and suspended platform wells. Nine of the wells will be repurposed for the LBA CO<sub>2</sub> T&S project, as indicated in the table.

The Category of Wells is as per OEUK Well Decommissioning Guidelines, Issue 7, November 2022.

Eni has awarded a contract to Valaris for LBA well P&A. The rig mobilised in November 2023, to commence operations in January 2024. It is expected that the well P&A programme will extend until 2028. An indicative well sequence is provided in **Table 2-4** below:



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Platform	Well	Activity Type	days	Start Date	End Date
<b>Original Mob + rig up</b>			<b>23</b>	<b>06/01/2024</b>	<b>29/01/2024</b>
Lennox	110/15-6z	SUBSEA	118	29/01/2024	26/05/2024
Hamilton North	110/13-5	SUBSEA	30	26/05/2024	25/06/2024
Douglas	110/13-6	SUBSEA	30	25/06/2024	25/07/2024
<b>Moving between locations</b>			<b>15</b>	<b>25/07/2024</b>	<b>09/08/2024</b>
Lennox P&A	L02	PLATFORM	17	09/08/2024	26/08/2024
Lennox P&A	L07	PLATFORM	17	26/08/2024	12/09/2024
Lennox P&A	L04 (Suspension)	PLATFORM	13	12/09/2024	25/09/2024
Lennox P&A	L10	PLATFORM	17	25/09/2024	12/10/2024
Lennox P&A	L11	PLATFORM	17	12/10/2024	29/10/2024
Lennox P&A	L08	PLATFORM	17	29/10/2024	15/11/2024
Lennox P&A	L14	PLATFORM	17	15/11/2024	02/12/2024
<b>Moving between locations &amp;CT R/U</b>			<b>19</b>	<b>02/12/2024</b>	<b>21/12/2024</b>
Douglas P&A	D15	PLATFORM	19	21/12/2024	08/01/2025
Douglas P&A	D21	PLATFORM	19	08/01/2025	27/01/2025
Douglas P&A	D13	PLATFORM	14	27/01/2025	10/02/2025
Hamilton	110/13-4	SUBSEA	30	10/02/2025	12/03/2025
<b>DEMOB Valaris Norway</b>			<b>0</b>	<b>12/03/2025</b>	<b>12/03/2025</b>
<b>MOB Valaris 72 from Hewett</b>			<b>15</b>	<b>12/03/2025</b>	<b>27/03/2025</b>
Hamilton Main P&A	110/13-H01	PLATFORM	15	27/03/2025	11/04/2025
Hamilton Main P&A	110/13-H02	PLATFORM	15	11/04/2025	26/04/2025
Hamilton Main P&A	110/13-H03	PLATFORM	15	26/04/2025	11/05/2025
Hamilton Main P&A	110/13-H04	PLATFORM	15	11/05/2025	26/05/2025
Hamilton Main P&A	H01 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	26/05/2025	31/05/2025
Hamilton Main Drill	110/13-H01 - CCUS ST1	CCS	21	31/05/2025	21/06/2025
Hamilton Main P&A	H02 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	21/06/2025	26/06/2025
Hamilton Main Drill	110/13-H02 - CCUS ST1	CCS	21	26/06/2025	17/07/2025
Hamilton Main P&A	H03 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	17/07/2025	22/07/2025
Hamilton Main Drill	110/13-H03 - CCUS ST1	CCS	21	22/07/2025	12/08/2025
Hamilton Main P&A	H04 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	12/08/2025	17/08/2025
Hamilton Main Drill	110/13-H04 - CCUS ST1	CCS	21	17/08/2025	08/09/2025
Hamilton Main Drill	110/13-HM-M1	CCS	26	08/09/2025	03/10/2025
Hamilton Main Comp	110/13-H01 - CCUS COMP	CCS	13	03/10/2025	16/10/2025
Hamilton Main Comp	110/13-H02 - CCUS COMP	CCS	13	16/10/2025	28/10/2025
Hamilton Main Comp	110/13-H03 - CCUS COMP	CCS	13	28/10/2025	10/11/2025
Hamilton Main Comp	110/13-H04 - CCUS COMP	CCS	13	10/11/2025	23/11/2025
Hamilton Main Comp	110/13-HM-M1 COMP	CCS	13	23/11/2025	06/12/2025
<b>Moving between locations</b>			<b>15</b>	<b>06/12/2025</b>	<b>21/12/2025</b>
Hamilton North	110/13-N01	PLATFORM	15	21/12/2025	05/01/2026
Hamilton North	110/13-N02 (Suspension)	PLATFORM	13	05/01/2026	18/01/2026
Hamilton North	110/13-N03	PLATFORM	15	18/01/2026	02/02/2026
Hamilton Main P&A	N01 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	02/02/2026	07/02/2026
Hamilton North Drill	110/13-N01 - CCUS ST1	CCS	21	07/02/2026	28/02/2026
Hamilton Main P&A	N01 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	5	28/02/2026	05/03/2026
Hamilton North Drill	110/13-N03 - CCUS ST1	CCS	31	05/03/2026	05/04/2026
Hamilton North Drill	HN-M1	CCS	26	05/04/2026	01/05/2026
Hamilton North Comp	110/13-N01 - CCUS ST1	CCS	13	01/05/2026	13/05/2026
Hamilton North Comp	110/13-N03 - CCUS ST1	CCS	13	13/05/2026	26/05/2026
Hamilton North Comp	HN-M1	CCS	13	26/05/2026	08/06/2026
Hamilton North Comp	HN-S1	CCS	13	08/06/2026	20/06/2026



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<b>Moving between locations</b>		<b>MOVE</b>	<b>15</b>	<b>20/06/2026</b>	<b>05/07/2026</b>
Lennox P&A	L05	PLATFORM	15	05/07/2026	20/07/2026
Lennox P&A	L01	PLATFORM	15	20/07/2026	04/08/2026
Lennox P&A	L06	PLATFORM	17	04/08/2026	21/08/2026
Lennox P&A	L09	PLATFORM	17	21/08/2026	07/09/2026
Lennox P&A	L12	PLATFORM	17	07/09/2026	24/09/2026
Lennox P&A	L13	PLATFORM	15	24/09/2026	09/10/2026
Lennox P&A	Xmas Tree recovery - 13 wells	PLATFORM	10	09/10/2026	19/10/2026
Lennox P&A	CP recovery - 9 wells	PLATFORM	20	19/10/2026	08/11/2026
Lennox P&A	L13 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	4	08/11/2026	12/11/2026
Lennox Drill	L13 - CCUS ST1	CCS	21	12/11/2026	03/12/2026
Lennox P&A	L05 Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	4	03/12/2026	07/12/2026
Lennox Drill	L05 - CCUS ST1	CCS	21	07/12/2026	29/12/2026
Lennox P&A	L01z Casing cut and recovery (prior to sidetrack). Skid & BOP rig up on CCS.	PLATFORM	4	29/12/2026	02/01/2027
Lennox Drill	LX-M1(ex L01)	CCS	21	02/01/2027	23/01/2027
Lennox Comp	L13 - CCUS ST1	CCS	13	23/01/2027	04/02/2027
Lennox Comp	L05 - CCUS ST1	CCS	13	04/02/2027	17/02/2027
Lennox Comp	LX-M1 (ex L01)	CCS	13	17/02/2027	02/03/2027
Lennox Comp	LX-S1 (ex L08)	CCS	13	02/03/2027	14/03/2027
<b>Moving between locations</b>		<b>MOVE</b>	<b>15</b>	<b>14/03/2027</b>	<b>29/03/2027</b>
Conwy P&A	110/12a-C1	PLATFORM	17	29/03/2027	16/04/2027
Conwy P&A	110/12a-C2/C2z	PLATFORM	17	16/04/2027	03/05/2027
Conwy P&A	110/12a-C3	PLATFORM	17	03/05/2027	20/05/2027
Conwy P&A	112/12a-C4	PLATFORM	17	20/05/2027	06/06/2027
Conwy P&A	110/12a-C5y	PLATFORM	17	06/06/2027	23/06/2027
Conwy P&A	Batch Conductor Recovery	PLATFORM	15	23/06/2027	07/07/2027
<b>Moving between locations &amp; CT R/U</b>		<b>MOVE</b>	<b>19</b>	<b>07/07/2027</b>	<b>26/07/2027</b>
Douglas P&A	D01	PLATFORM	19	26/07/2027	14/08/2027
Douglas P&A	D02	PLATFORM	19	14/08/2027	02/09/2027
Douglas P&A	D03	PLATFORM	14	02/09/2027	16/09/2027
Douglas P&A	D04	PLATFORM	14	16/09/2027	29/09/2027
Douglas P&A	D05	PLATFORM	19	29/09/2027	18/10/2027
Douglas P&A	D06	PLATFORM	14	18/10/2027	01/11/2027
Douglas P&A	D07	PLATFORM	19	01/11/2027	19/11/2027
Douglas P&A	D08	PLATFORM	19	19/11/2027	08/12/2027
Douglas P&A	D09	PLATFORM	14	08/12/2027	22/12/2027
Douglas P&A	D10	PLATFORM	14	22/12/2027	04/01/2028
Douglas P&A	D11	PLATFORM	19	04/01/2028	23/01/2028
Douglas P&A	Batch Conductor Recovery	PLATFORM	31	23/01/2028	23/02/2028
<b>Moving between locations</b>		<b>MOVE</b>	<b>19</b>	<b>23/02/2028</b>	<b>13/03/2028</b>
Douglas P&A	D12	PLATFORM	19	13/03/2028	01/04/2028
Douglas P&A	D14	PLATFORM	14	01/04/2028	14/04/2028
Douglas P&A	D16	PLATFORM	19	14/04/2028	03/05/2028
Douglas P&A	D17	PLATFORM	19	03/05/2028	22/05/2028
Douglas P&A	D18	PLATFORM	19	22/05/2028	09/06/2028
Douglas P&A	D19	PLATFORM	19	09/06/2028	28/06/2028
Douglas P&A	D20	PLATFORM	19	28/06/2028	17/07/2028
Douglas P&A	D22	PLATFORM	19	17/07/2028	05/08/2028
Douglas P&A	Batch Conductor Recovery	PLATFORM	31	05/08/2028	04/09/2028
Douglas P&A	Douglas contingency (D18 Delta)	PLATFORM	9	04/09/2028	13/09/2028
Douglas	110/13-11	SUBSEA	30	13/09/2028	13/10/2028
Douglas	110/13-2	SUBSEA	30	13/10/2028	12/11/2028
Douglas	110/13-13	SUBSEA	30	12/11/2028	12/12/2028
HE01		SUBSEA	30	12/12/2028	11/01/2029
<b>Final Demob</b>		<b>MOVE</b>	<b>15</b>	<b>11/01/2029</b>	<b>26/01/2029</b>

**Table 2-5 – Indicative Well Sequence**





**Wells - Douglas Wellhead (DW) Platform**

Well	Designation	Status	Category of Well
110/13-D1	Oil Producer	Completed (Operating)	PL-3-3-3
110/13-D2	Oil Producer	Completed (Shut-in)	PL-3-3-3
110/13-D3	WAG Injector	Completed (Shut-in)	PL-3-3-3
110/13-D4	Water Injector	Completed (Operating)	PL-3-3-3
110/13-D5Z	Oil Producer	Completed (Operating)	PL-3-3-3
110/13-D6	Gas Injector	Completed (Operating)	PL-3-3-3
110/13-D7	Oil Producer	Completed (Shut-in)	PL-3-3-3
110/13-D8	Oil Producer	Completed (Shut-in)	PL-3-3-3
110/13-D9Y	Water Injector	Completed (Shut-in)	PL-3-3-3
110/13-D10	WAG Injector	Completed (Shut-in)	PL-3-3-3
110/13-D11Z	Oil Producer	Completed (Operating)	PL-3-3-3
110/13-D12	Producer	Completed (Operating)	PL-3-3-3
110/13-D13Z	Condensate Disposal	Completed (Shut-in)	PL-3-3-3
110/13-D14	Injector	Completed (Operating)	PL-3-3-3
110/13b-D15Z	Oil Producer	Completed (Shut-in)	PL-3-3-3
110/13b-D16Z	Oil Producer	Completed (Operating)	PL-3-3-3
110/13b-D17	Oil Producer	Completed (Operating)	PL-3-3-3
110/13b-D18	Oil Producer	Completed (Operating)	PL-3-3-3
110/13b-D19	Oil Producer	Completed (Operating)	PL-3-3-3
110/13b-D20Y	Oil Producer: a single well into Douglas West	Completed (Operating)	PL-3-3-3
110/13b-D21Z	Oil Producer	Completed (Shut-in)	PL-3-3-3
110/13b-D22	Oil Producer	Completed (Operating)	PL-3-3-3

**Wells - Hamilton (HH) Platform**

Well	Designation	Status	Category of Well
110/13-H1	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
110/13-H2	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack

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110/13-H3	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
110/13-H4	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
Hamilton MMV	N/A – Future Monitoring Well. Not yet drilled	N/A – Future Monitoring Well. Not yet drilled	N/A – Future Monitoring Well. Not yet drilled



**Wells - Hamilton North (HN) Platform**

Well	Designation	Status	Category of Well
110/13-N1	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
110/13-N2	Gas Producer	Completed (Operating)	PL-0-0-0 – Future Sentinel Well
110/13-N3	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
Hamilton North MMV	N/A – Future Monitoring Well. Not yet drilled	N/A – Future Monitoring Well. Not yet drilled	N/A – Future Monitoring Well. Not yet drilled

**Wells - Lennox (LD) Platform**

Well	Designation	Status	Category of Well
110/15-L1Z	Gas Producer	Completed (Operating)	PL-4-0-0 – Future Monitoring Well
110/15-L2	Gas Producer	Completed (Shut-in)	PL-4-3-3
110/15-L4	Gas Producer	Completed (Shut-in)	PL-0-0-0 – Future Sentinel Well
110/15-L5	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
110/15-L6Z	Gas Producer	Completed (Operating)	PL-4-3-3
110/15-L7Z	Gas Producer	Completed (Operating)	PL-4-3-3
110/15-L8Y	Gas Producer	Completed (Operating)	PL-4-3-3
110/15-L9	Gas Producer	Completed (Operating)	PL-4-3-3
110/15-L10X	Gas Producer	Completed (Operating)	PL-4-3-3
110/15-L11Z	Gas Producer	Completed (Operating)	PL-4-3-3
110/15a-L12Y	Gas Producer	Completed (Operating)	PL-4-3-3
110/15a-L13Z	Gas Producer	Completed (Operating)	PL-4-0-0 – Future CCS Injector Sidetrack
110/15a-L14Y	Gas Producer	Completed (Operating)	PL-4-3-3

**Table 2-5 - Wells**

 	<b>LIVERPOOL BAY ASSET PARTIAL DECOMMISSIONING PROGRAMMES</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Sheet of Sheets <a href="#">43 / 83</a></td> </tr> <tr> <td style="padding: 2px;">Revision Number</td> </tr> <tr> <td style="text-align: center; padding: 2px;">04</td> </tr> </table>	Sheet of Sheets <a href="#">43 / 83</a>	Revision Number	04
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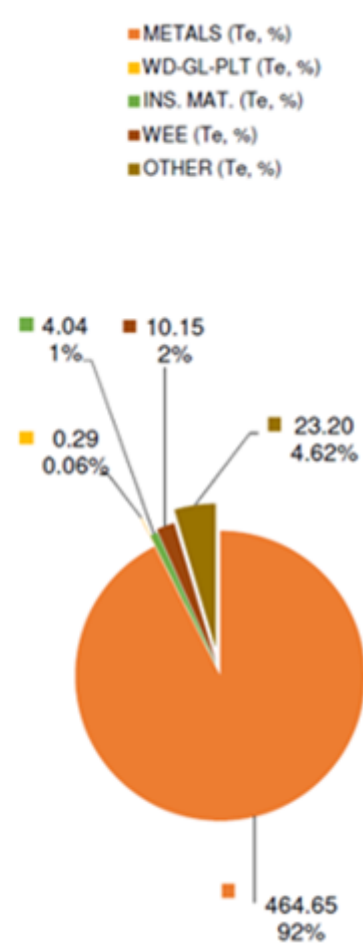
## 2.4 Drill Cuttings

The EBS reports fine sediments located in the proximity of platforms which could be associated with historical mostly dispersed drill cuttings. No piles have been found. The chemical analysis found no associated Polycyclic Aromatic Hydrocarbons (RPS, 2022).

It is believed that the relatively high tidal and wave generated currents in the area, together with the shallowness of the predicted cuttings deposition have caused the cuttings to dissipate in the period since the wells were drilled.

## 2.5 Inventory Estimates

TOPSIDE'S TOTAL		
W. CODE	SUMMARY	Weight (Te)
	<b>17 04 METALS (including their alloys)</b>	<b>464.65</b>
17 04 05	IRON AND STEEL	387.40
17 04 07	MIXED METALS	58.86
17 04 11	COPPER/STEEL	20.40
	<b>17 02 WOOD, GLASS, PLASTIC</b>	<b>0.29</b>
17 02 03	PLASTIC	0.29
	<b>17 06 INSULATION MATERIALS</b>	<b>4.04</b>
17 06 04	INSULATION MATERIALS	4.04
	<b>16 02 WEEE TOTAL</b>	<b>10.15</b>
16 02 16	METAL / PLASTIC	10.15
	<b>OTHER</b>	<b>23.20</b>
08 01 11	REMOVAL OF PAINT AND VARNISH	6.10
11 05 01	GALVANIZED STEEL	12.91
16 06 01	LEAD BATTERY	4.20
	<b>GRAND TOTAL (NO CONTINGENCY)</b>	<b>502.33</b>
	<b>GRAND TOTAL (+ 5% CONTINGENCY)</b>	<b>527.45</b>
	<b>GRAND TOTAL (-10% ACCURACY)</b>	<b>474.71</b>
	<b>GRAND TOTAL (+10% ACCURACY)</b>	<b>580.20</b>

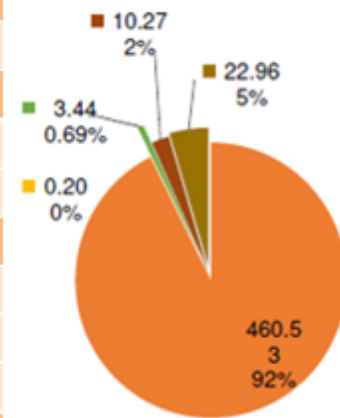
Material Category	Weight (Te)	Percentage (%)
METALS (Te, %)	464.65	92%
WD-GL-PLT (Te, %)	0.29	0.06%
INS. MAT. (Te, %)	4.04	1%
WEE (Te, %)	10.15	2%
OTHER (Te, %)	23.20	4.62%

Table 2-6 - Hamilton HH Platform – Overall Materials Summary

Description	Dry Weight (Te) No Contingency	Dry Weight (Te) 5% Contingency	Dry Weight (Te) - 10% Accuracy	Dry Weight (Te) + 10% Accuracy
EQUIPMENT	11.5	12	10.9	13.3
PIPING	79.7	83.7	75.4	92.1
INSTRUMENT	42.3	44.4	40	48.9
ELECTRICAL	45.6	47.9	43.1	52.7
STRUCTURAL	283.6	297.7	268	327.5
TELECOM	2.6	2.8	2.5	3
HVAC	9.3	9.8	8.8	10.8
ARCHITECTURAL	21.9	22.9	20.7	25.2
HSE	5.8	6.1	5.5	6.7
<b>GRAND TOTAL</b>	<b>502.33</b>	<b>527.45</b>	<b>474.71</b>	<b>580.20</b>

Table 2-7 - Hamilton HH Platform – Topside Inventory

TOP SIDE \$ TOTAL		
W. CODE	SUMMARY	Weight (Te)
	<b>17 04 METAL \$ (Including their alloys)</b>	<b>460.53</b>
17 04 05	IRON AND STEEL	387.67
17 04 07	MIXED METALS	53.72
17 04 11	COPPER/STEEL	19.14
	<b>17 02 WOOD, GLASS, PLASTIC</b>	<b>0.20</b>
17 02 03	PLASTIC	0.20
	<b>17 06 INSULATION MATERIAL \$</b>	<b>3.44</b>
17 06 04	INSULATION MATERIALS	3.44
	<b>16 02 WEEE TOTAL</b>	<b>10.27</b>
16 02 13	METAL / PLASTIC	3.40
16 02 16	METAL / PLASTIC	6.87
	<b>OTHER</b>	<b>22.96</b>
08 01 11	PAINT AND VARNISH	6.06
11 05 01	GALVANIZED STEEL	12.70
16 06 01	LEAD BATTERY	4.20
	<b>GRAND TOTAL (NO CONTINGENCY)</b>	<b>497.41</b>
	<b>GRAND TOTAL (+ 5% CONTINGENCY)</b>	<b>522.28</b>
	<b>GRAND TOTAL (-10% ACCURACY)</b>	<b>470.05</b>
	<b>GRAND TOTAL (+10% ACCURACY)</b>	<b>574.51</b>

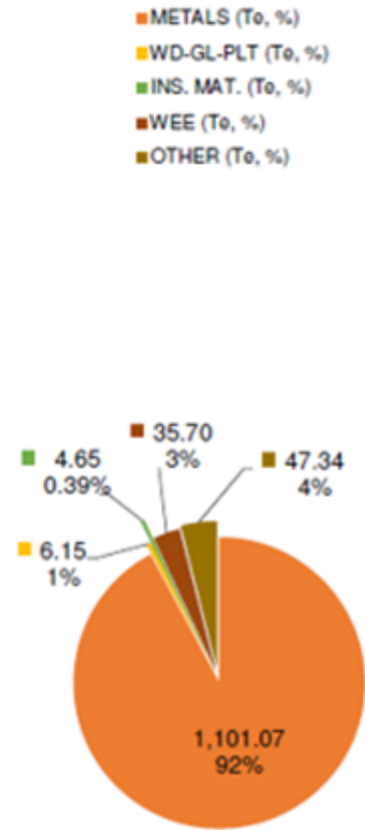


**Table 2-8 - Hamilton North HN Platform - Overall Materials Summary**

Description	Dry Weight (Te) No Contingency	Dry Weight (Te) 5% Contingency	Dry Weight (Te) - 10% Accuracy	Dry Weight (Te) + 10% Accuracy
EQUIPMENT	10.1	11	9.6	11.7
PIPING	73	76.6	69	84.3
INSTRUMENT	49	51.4	46.3	56.6
ELECTRICAL	38.6	40.5	36.5	44.6
STRUCTURAL	287.3	301.7	271.5	331.8
TELECOM	2.7	2.9	2.6	3
HVAC	9.3	9.8	8.8	10.8
ARCHITECTURAL	21.7	22.7	20.5	25
HSE	5.7	6	5.4	6.6
<b>GRAND TOTAL</b>	<b>497.41</b>	<b>522.28</b>	<b>470.05</b>	<b>574.51</b>

**Table 2-9 - Hamilton North HN Platform – Topside Inventory**

TOP SIDE \$ TOTAL		
W. CODE	SUMMARY	Weight (Te)
	<b>17 04 METAL \$ (Including their alloys)</b>	<b>1,101.07</b>
17 04 05	IRON AND STEEL	864.80
17 04 07	MIXED METALS	200.43
17 04 11	COPPER/STEEL/ PVC	35.84
	<b>17 02 WOOD, GLASS, PLASTIC</b>	<b>6.15</b>
17 02 03	PLASTIC	6.15
	<b>17 06 INSULATION MATERIAL \$</b>	<b>4.65</b>
17 06 04	INSULATION MATERIALS	4.65
	<b>16 02 WEEE TOTAL</b>	<b>35.70</b>
16 02 13	GRP / BRASS	0.05
16 02 16	METAL / PLASTIC	35.65
	<b>OTHER</b>	<b>47.34</b>
08 01 11	PAINT AND VARNISH	12.01
11 05 01	GALVANIZED STEEL	28.03
16 06 01	LEAD BATTERY	7.30
	<b>GRAND TOTAL (NO CONTINGENCY)</b>	<b>1,194.91</b>
	<b>GRAND TOTAL (+ 5% CONTINGENCY)</b>	<b>1,254.66</b>
	<b>GRAND TOTAL (-10% ACCURACY)</b>	<b>1,129.19</b>
	<b>GRAND TOTAL (+10% ACCURACY)</b>	<b>1,380.12</b>

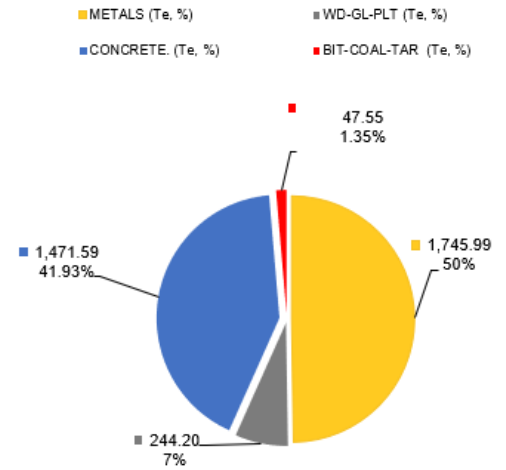


**Table 2-10 - Lennox LD Platform - Overall Materials Summary**

Description	Dry Weight (Te) No Contingency	Dry Weight (Te) 5% Contingency	Dry Weight (Te) - 10% Accuracy	Dry Weight (Te) + 10% Accuracy
EQUIPMENT	113.9	120	107.7	131.6
PIPING	259.2	272.1	244.9	299.4
INSTRUMENT	112.8	118.4	106.6	130.3
ELECTRICAL	81.3	85.4	76.8	93.9
STRUCTURAL	584	613.2	551.9	674.6
TELECOM	2.8	2.9	2.6	3
HVAC	8.9	9.4	8.4	10.3
ARCHITECTURAL	19.4	20.3	18.3	22.4
HSE	12.6	13.2	11.9	14.6
<b>GRAND TOTAL</b>	<b>1,194.91</b>	<b>1,254.66</b>	<b>1,129.19</b>	<b>1,380.12</b>

**Table 2-11 - Lennox LD Platform - Topside Inventory**



PIPELINES AND STABILISATION FEATURES TOTAL		
W. CODE	SUMMARY	Weight (Te)
	<b>17 04 METALS (including their alloys)</b>	<b>1,745.99</b>
17 04 01	NON-FERROUS METAL	7.43
17 04 05	IRON AND STEEL	1,595.56
17 04 11	COPPER / STEEL / PVC	143.00
	<b>17 02 WOOD, GLASS, PLASTIC</b>	<b>244.20</b>
17 02 03	PLASTIC	244.20
	<b>17 01 CONCRETE, BRICKS, TILES AND CERAMICS</b>	<b>1,471.59</b>
17 06 04	CONCRETE	1,471.59
	<b>17 03 01 BITUMINOUS, COAL TAR AND TARRED PRODUCTS</b>	<b>47.55</b>
17 03 01	BITUMINOUS MIXTURES CONTAINING COAL TAR	47.55
	<b>WD-GL-PLT</b>	<b>244.20</b>
	<b>BIT-COAL-TAR</b>	<b>47.55</b>
	<b>GRAND TOTAL (NO CONTINGENCY)</b>	<b>3,509</b>
	<b>GRAND TOTAL (+ 5% CONTINGENCY)</b>	<b>3,685</b>
	<b>GRAND TOTAL (-10% ACCURACY)</b>	<b>3,316</b>
	<b>GRAND TOTAL (+10% ACCURACY)</b>	<b>4,053</b>



**Table 2-12 – Pipelines and Stabilisation Features - Overall Materials Summary**

Description	Dry Weight (Te) No Contingency	Dry Weight (Te) 5% Contingency	Dry Weight (Te) - 10% Accuracy	Dry Weight (Te) + 10% Accuracy
PIPELINES	2,580.7	2,709.7	2,438.8	2,980.7
MATTRESSES	928.3	974.7	877.2	1,072.2
<b>GRAND TOTAL</b>	<b>3,509</b>	<b>3,684</b>	<b>3,316</b>	<b>4,053</b>

**Table 2-13 – Pipelines Stabilisation Features – Inventory**

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### 3.0 REMOVAL AND DISPOSAL METHODS

The decommissioning strategy is at an early stage of definition. A number of contractual and technical approaches are under consideration. A final decision on decommissioning methods, including removal and disposal, will be made following a commercial tendering process.

#### 3.1 Waste Hierarchy and Principles

Eni waste hierarchy aligns with the principles of the EU Waste Framework Directive (Directive 2008/98/EC). Contractor and onshore site selection process will be implemented to ensure compliance with waste hierarchy and all applicable waste regulations and Duty of Care.

Recyclable metals, predominantly steel and iron, are estimated to account for the greatest proportion of the materials inventory. The current plan is to transport the structures to an onshore decommissioning facility for re-use and recycling using an appropriately licensed contractor. Contractor and site selection process is in early stages and thus the potential trans-frontier shipment of waste cannot be dismissed for certainty.

Wastes generated during decommissioning will be segregated and recorded by type and transported to onshore waste facilities through licensed waste contractors for recovery or disposal.

The adoption of the Waste Hierarchy is clearly defined as a principle in the BEIS Guidance Notes (2018) as a requirement of the Decommissioning Programmes to:

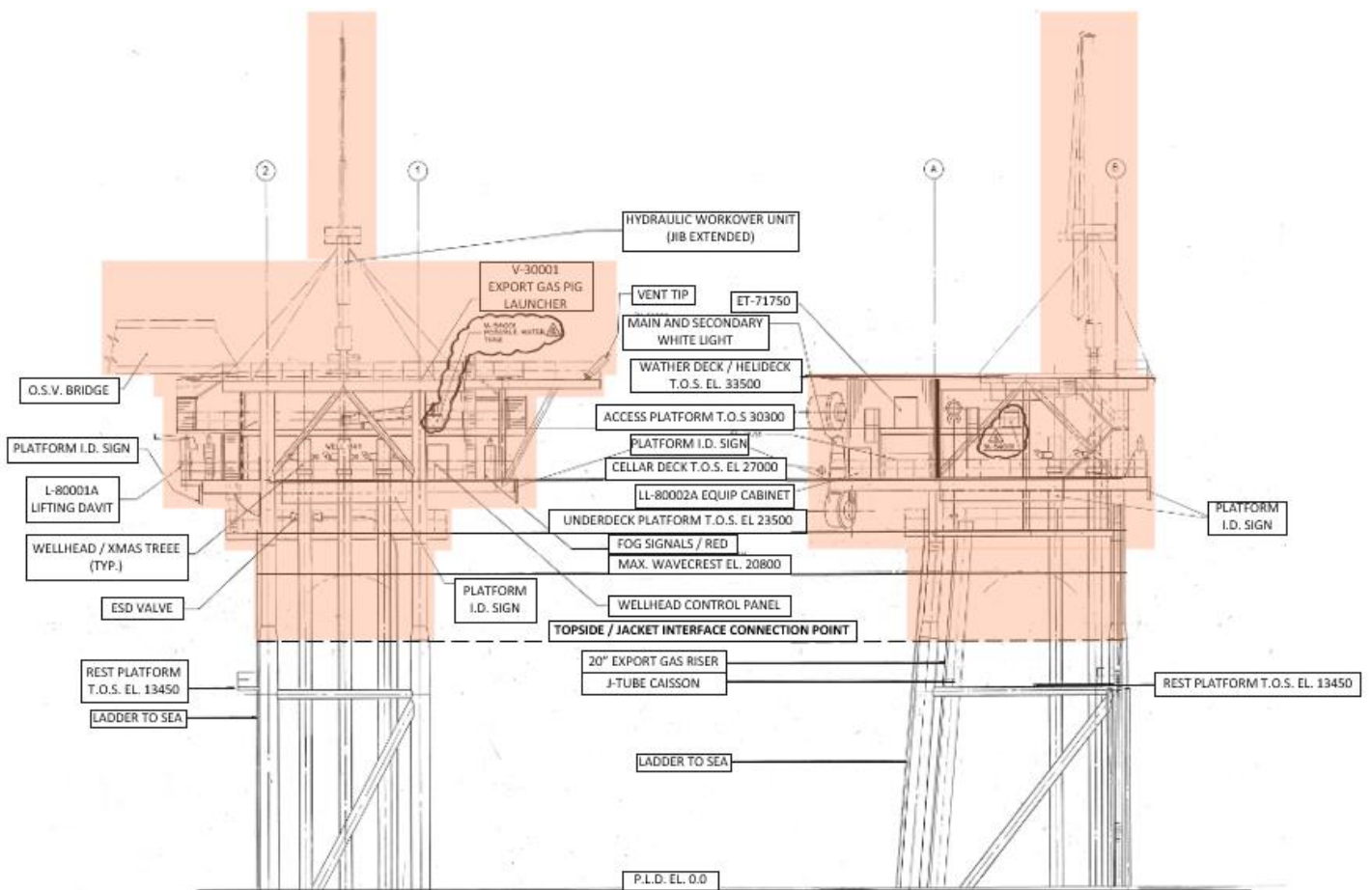
*“Describe the decommissioning solution for each item explaining why the solution has been selected, providing appropriate supporting evidence. In doing this the programmes must consider how the principles of the waste hierarchy will be met and show the extent to which the installation, including the topsides and the materials contained within the installation, will be re-used, recycled or disposed of on land”.*



## 3.2 Topsides

### 3.2.1 Hamilton (HH) Platform – Topsides Removal

Hamilton (HH) Platform's Topsides will be disconnected and totally removed in order to allow the installation of a new Topsides module with CCS equipment for CO<sub>2</sub> injection downhole. The existing jacket will remain in place. Figure 3-1 represents the parts of Hamilton (HH) Platform that will be removed as part of the Partial Decommissioning:




**Figure 3-1 - Hamilton (HH) Platform - Deck Removal**

*In red the parts subject to removal*

Hamilton (HH) topside will be disconnected from the jacket and removed according to the following sequence:

- Preparatory works at the platform
- Cutlines checking for platform's deck lifting and removal
- Preparatory work on wellhead and conductors in regard to P&A of platform wells
- Lifting Pad Eyes installation
- HLV Positioning and Mooring
- Transportation and Sea-fastening Manual preparation
- Towing Manual preparation
- Load-out / Load-in Manual

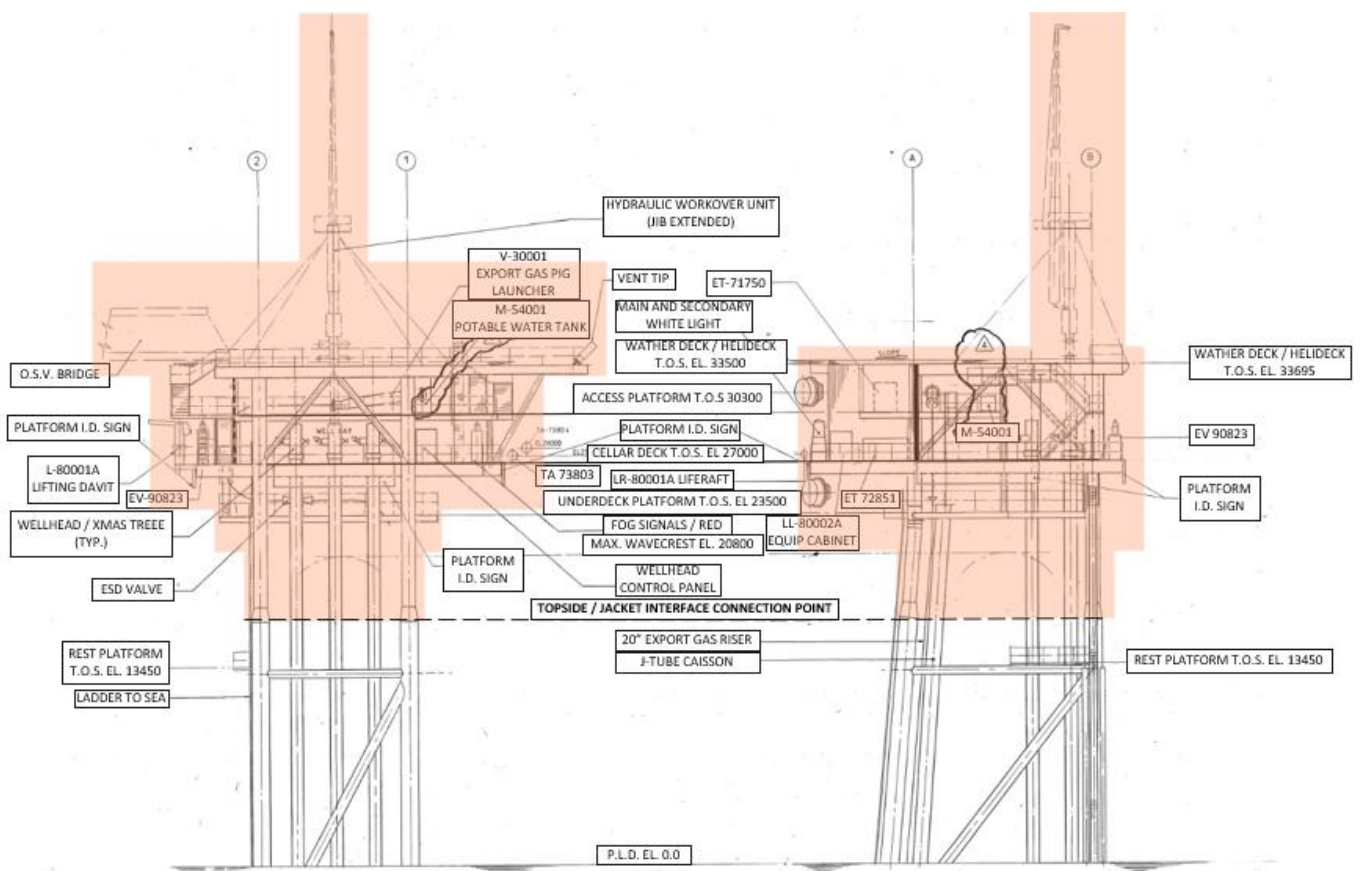
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- Disposal of Topside at a dedicated yard

The substitution of the Satellite Platforms topsides (removal of the existing one and installation of the new one) shall not take more than 1 or 2 days each. NavAids shall be installed on the jacket in case the HLV will need to leave the field due to an emergency (e.g. mechanical breakdown as crane failure, repair needed on thrusters, etc).

### 3.2.2 Hamilton North (HN) Platform – Topsides Removal

Hamilton (HN) Platform's Topsides will be disconnected and totally removed in order to allow the installation of a new Topsides module with CCS equipment for CO2 injection downhole. The existing jacket will remain in place. Figure 3-2 represents the parts of Hamilton (HN) Platform that will be removed as part of the Partial Decommissioning:




**Figure 3-2 - Hamilton North (HN) Platform - Deck Removal**

*In red the parts subject to removal*

Hamilton (HN) topside will be disconnected from the jacket and removed according to the following sequence:

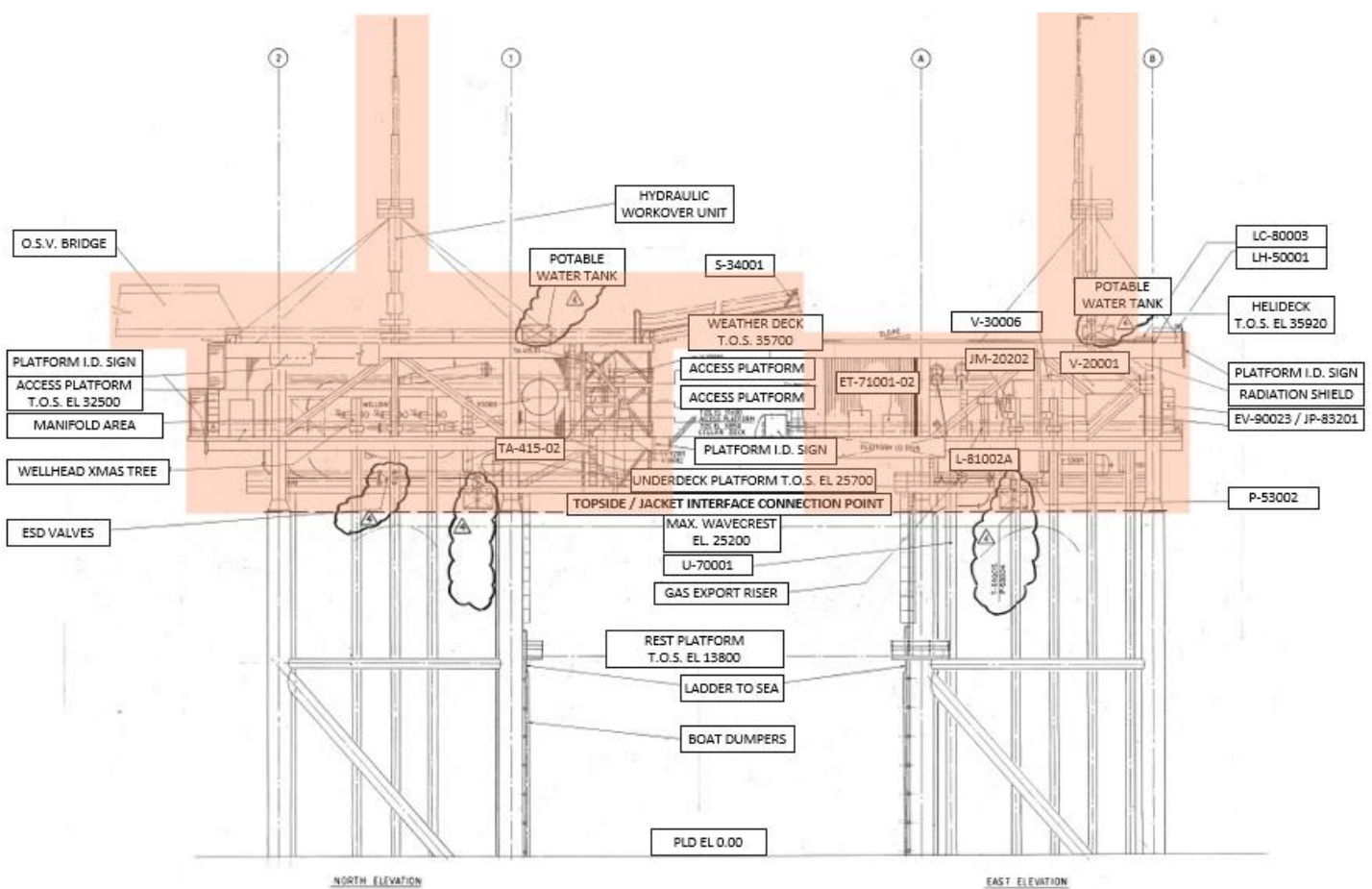
- Preparatory works at the platform
- Cutlines checking for platform's deck lifting and removal
- Preparatory work on wellhead and conductors in regard to P&A of platform wells
- Lifting Pad Eyes installation
- HLV Positioning and Mooring
- Transportation and Sea-fastening Manual preparation

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- Towing Manual preparation
- Load-out / Load-in Manual
- Disposal of Topside at a dedicated yard

### 3.2.3 Lennox (LD) Platform – Topsides Removal

Lennox (LD) Platform's Topsides will be disconnected and totally removed in order to allow the installation of a new Topsides module with CCS equipment for CO2 injection downhole. The existing jacket will remain in place. Figure 3-3 represents the parts of Lennox (LD) Platform that will be removed as part of the Partial Decommissioning:





**Figure 3-3 – Lennox (LD) Platform – Deck Removal**

*In red the parts subject to removal*

Lennox (LD) topside will be disconnected from the jacket and removed according to the following sequence:

- Preparatory works at the platform
- Cutlines checking for platform's deck lifting and removal
- Preparatory work on wellhead and conductors in regard to P&A of platform wells
- Lifting Pad Eyes installation
- HLV Positioning and Mooring
- Transportation and Sea-fastening Manual preparation

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- Towing Manual preparation
- Load-out / Load-in Manual
- Disposal of Topside at a dedicated yard

### 3.2.4 Preparation and Cleaning



Prior to any system disconnection and removal, the topsides of Hamilton (HH), Hamilton North (HN) and Lennox (LD), will be subject to a sequence of cleaning activities post-CoP, aimed to reduce the levels of hydrocarbon inventory and contaminants within the topsides process systems & pipeline systems and to achieve the “Made Safe” status.

Prior to removal, the topsides will be cleaned of hydrocarbons and, where practical, of other hazardous materials. The cleaning activities are summarized as followings:

- Wells shall be shutdown (either temporarily or permanently)
- All piping systems shall be depressurised and purged.
- All pressure vessels shall be depressurised and purged
- Topsides process systems shall be cleaned and flushed
- Pipelines shall be cleaned and flushed
- Relevant electrical equipment de-energised
- All transformers shall be oil free
- All mechanical equipment (skid, package) shall be free from chemicals

The primary route for disposal of flushed fluids is injection into Douglas Wellhead (DW) wells. Other options may be considered as per **Table 3-1**:

Waste Type	Composition of waste	Disposal Route
On-board Hydrocarbons and liquids arising from flushing during Making Safe	Process fuels, Diesel, lubricants	Where possible, on-board HCs will be re-injected into the reservoir at Douglas Wellhead (DW). Should this approach be unsuccessful or if a suitable well is unavailable, flushed fluids containing HCs will be disposed in to a dedicated offshore tanker, subject to appropriate consents.
Hydraulic Fluid	Liquids drained from skids and equipment.	Hydraulic fluids will be drained into suitable containers and transported onshore for re-use/disposal
NORM	Potentially contained within liquids, scales, residues, and internal contamination to process pipework presence to be identified on breaking of containment	If the presence of NORM is identified, where possible it will be injected into the reservoir via a donor well. Where this approach is not available (bulk NORM solids) it will be transported onshore and disposed of in accordance with the regulations.

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Waste Type	Composition of waste	Disposal Route
Asbestos and Ceramic Fibre	CAF Gaskets, panelling, as defined in asset asbestos register and asbestos surveys.	The presence of quantities of asbestos is anticipated in the topsides process systems, in form of compressed asbestos fibre (CAF) gaskets, and within panels of topsides accommodation. Asbestos-containing materials will be managed in line with the control of asbestos regulations 2012 and transported onshore for disposal via an appropriately licenced waste management contractor.
Other Hazardous Materials	Liquids, sludges, cleaning chemicals	Where possible, cleaning chemicals will be injected into the reservoir via a donor well together with remaining hydrocarbon inventory and flushing fluids. Should this approach be unsuccessful or if a suitable donor well is unavailable, they will be returned to shore for appropriate disposal. If any H2S is found the primary disposal route will be into a donor well.

**Table 3-1 – Topsides Preparation and Cleaning**

The primary route for disposal of flushed fluids from subsea pipelines preparation and cleaning activities is also injection into Douglas Wellhead (DW) wells. However, in cases where injection downhole is deemed not feasible or unsafe, disposal fluids will be directed to the OSB for settling before being discharged overboard in compliance with the required regulatory permits and consents. Upon verification that systems have been adequately cleaned in compliance with the cleanliness targets according to the Project Cleaning Strategy, the topside and pipelines systems will be positively isolated and made ready for disconnection and removal.

### 3.2.5 Satellite Platforms HH, HN and LD – Removal Methods

Hamilton (HH), Hamilton North (HN), and Lennox (LD) Platforms will be subject to a customized repurposing, focused on the removal of existing platform's deck, to allow the installation of a new deck with pre-installed CCS equipment and systems required to achieve initial (free flow) CO2 injection. The removal methods are summarized at **Table 3-2**:

Methods	Description
Single lift removal of Topsides, by HLV.	Removal of topsides as complete units and transportation to shore for re-use of selected equipment, recycling, break up, and/or disposal
Offshore removal 'piece small' for onshore reuse/disposal.	Removal of topsides by breaking up offshore and transporting to shore using work barge. Items will then be sorted for re-use, recycling or disposal
Proposed removal method and disposal route:  Single lift removal of Topsides, by HLV.	The Topsides will be separated from the jacket structure by cutting below the main deck level. The complete unit will then be lifted and transported to the onshore disposal yard for re-use of selected equipment, recycling, break up and /or disposal.  <u>A final decision on the decommissioning method will be made following a commercial tendering process.</u> Once a final decision has been made, OPRED will be informed.

**Table 3-2 – Satellite Platforms HH, HN and LD – Removal Methods**

### 3.3 Pipelines and Stabilisation Features

The seabed areas around the Douglas Production (DP), Hamilton (HH), Hamilton North (HN) and Lennox (LD), will be cleared of pipelines and stabilisation features exposed on the seabed.

Figures 3-4, 3-5, 3-6 and 3-7, show the proposed removals. This work is the subject of a dedicated desktop Comparative Assessment (see Section 7).

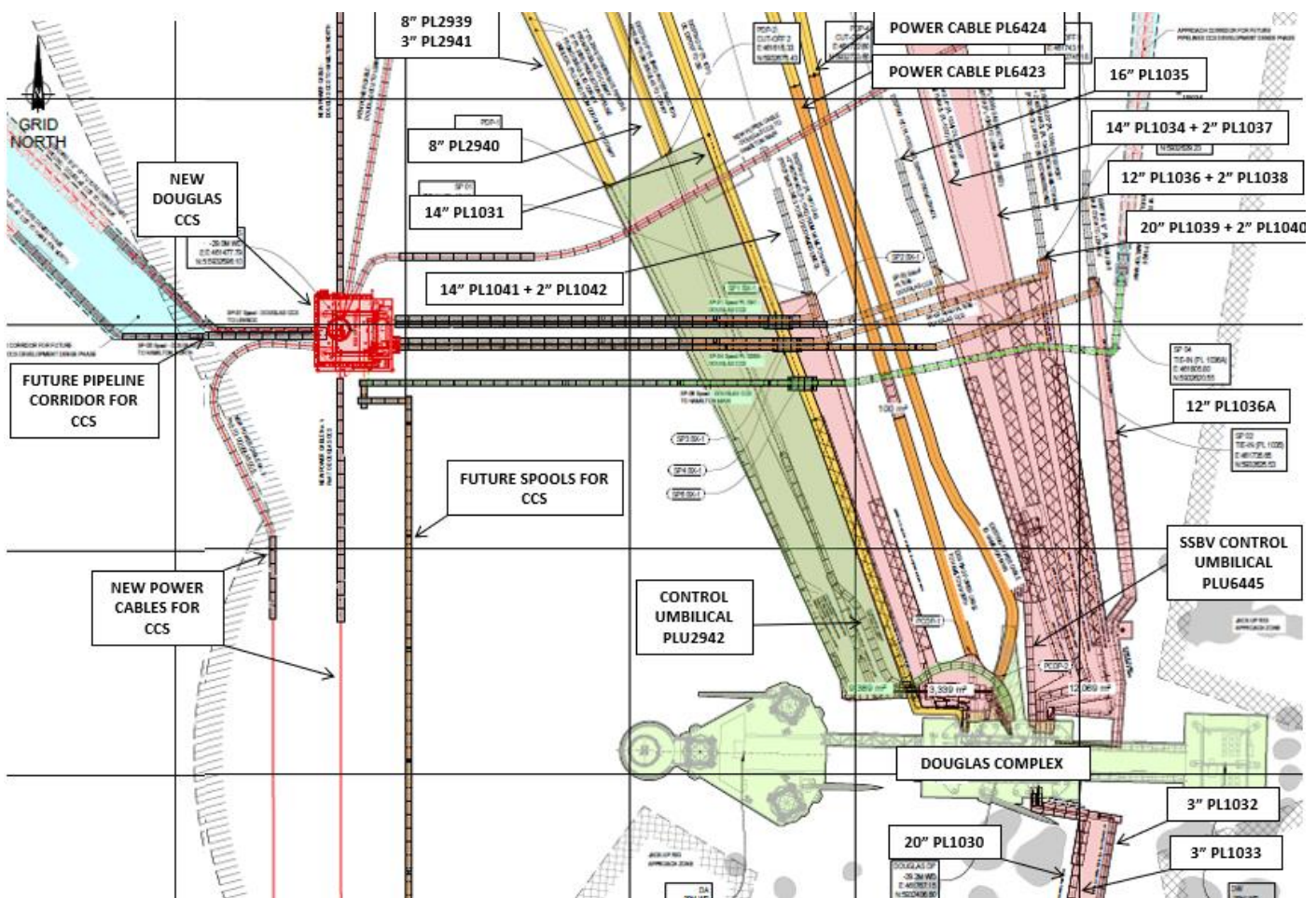


Figure 3-4 Seabed Removals around Douglas Production (DP) Platform



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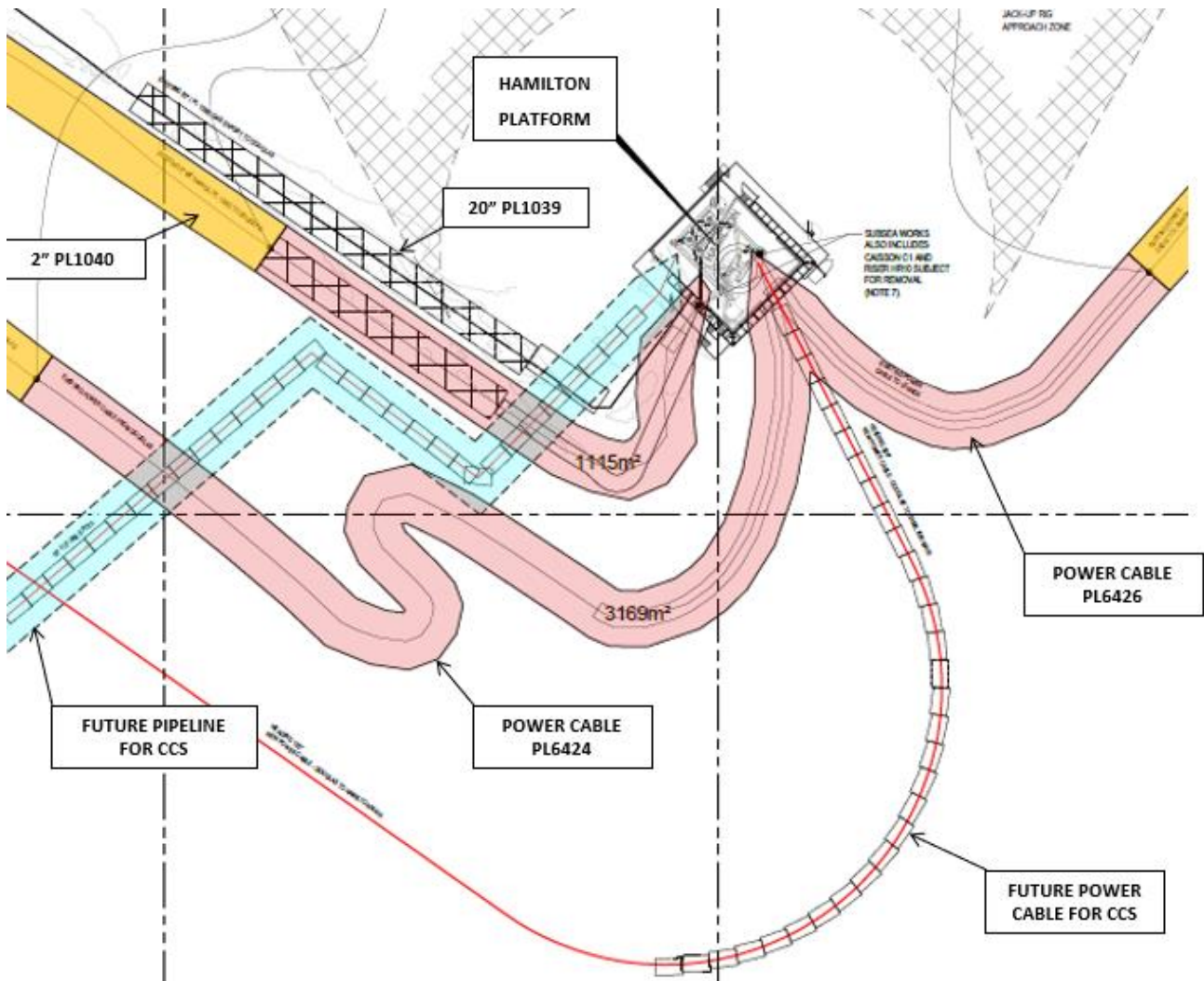


Figure 3-5 Seabed Removals around Hamilton (HH) Platform



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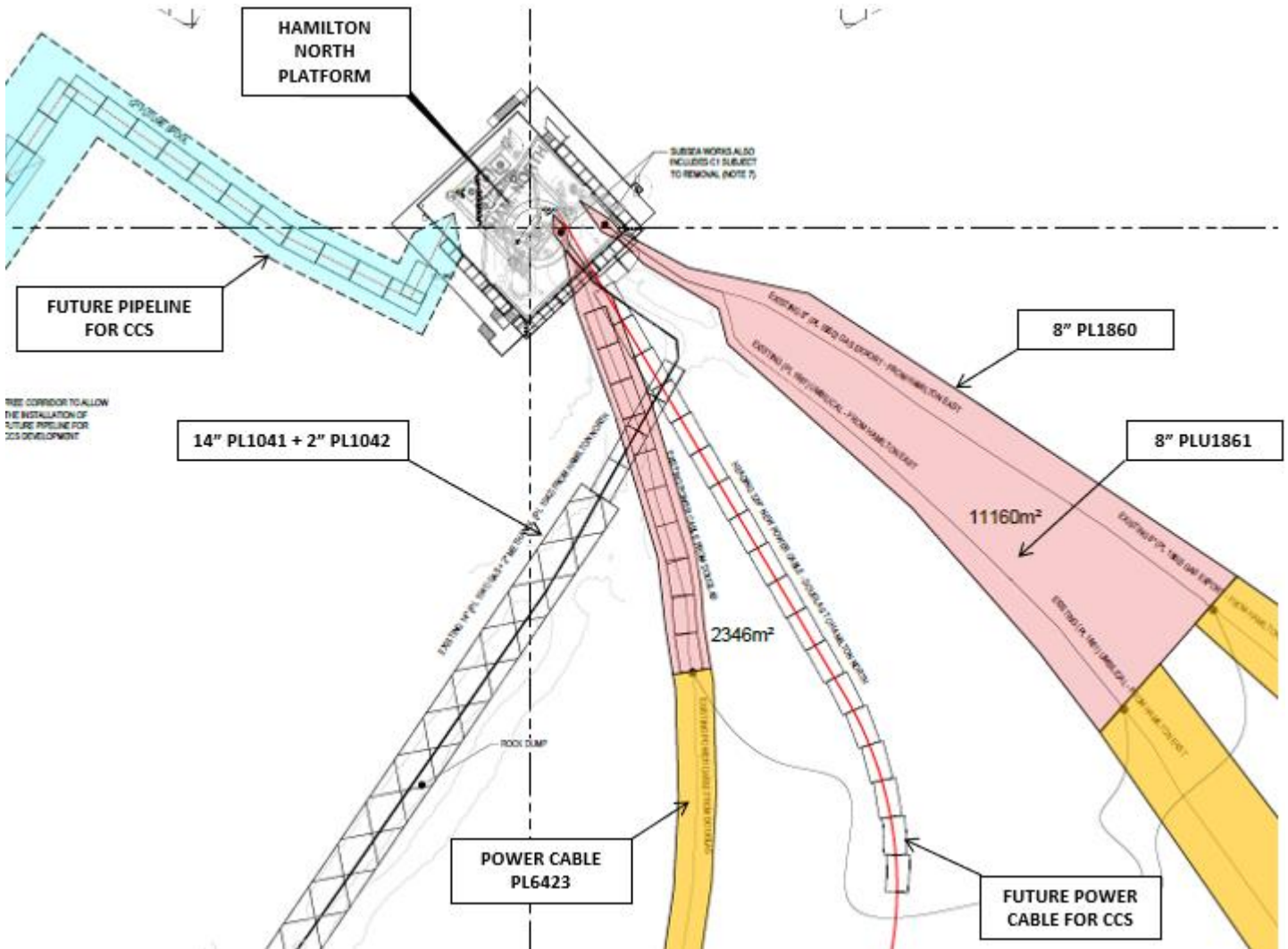


Figure 3-6 Seabed Removals around Hamilton North (HN) Platform



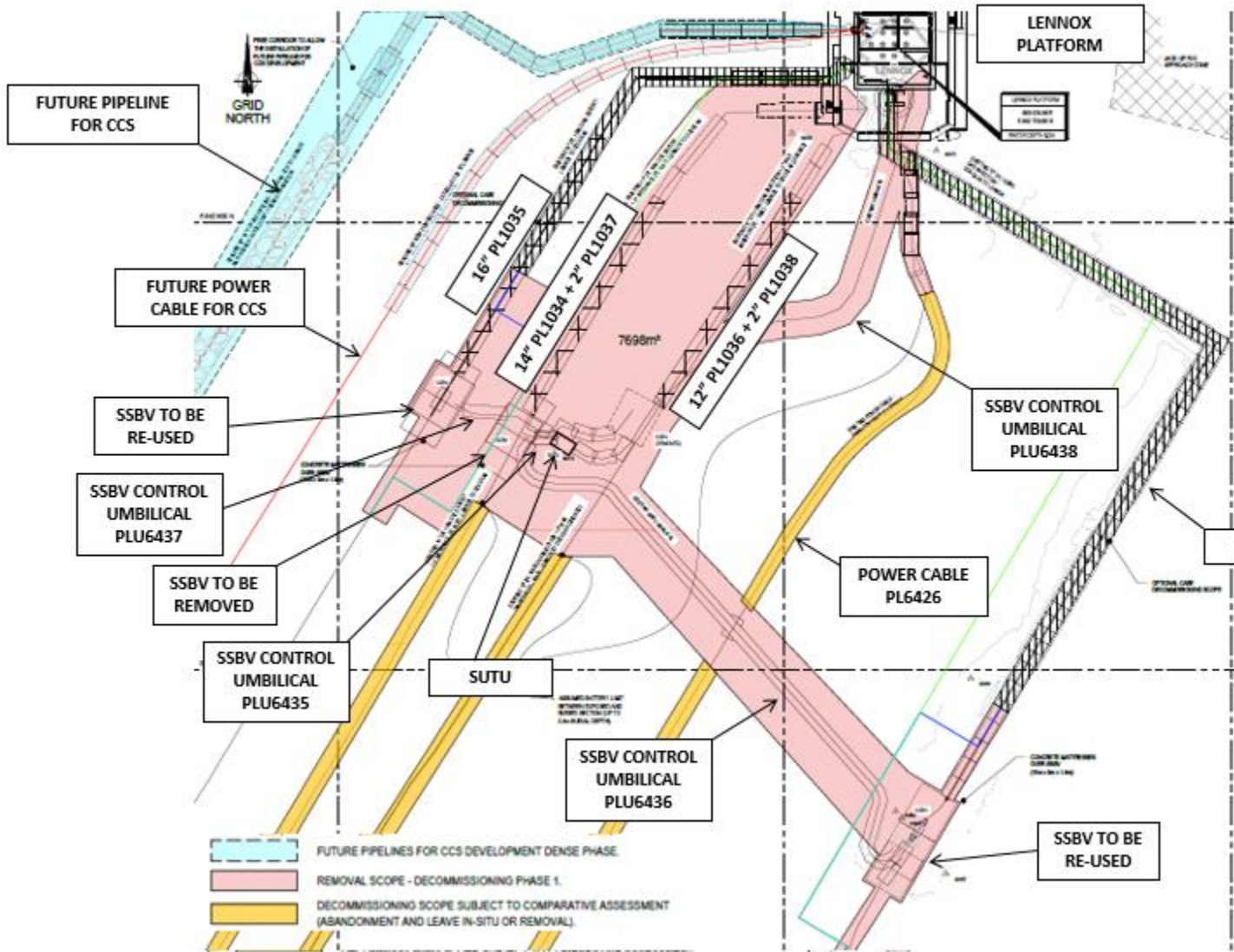




Figure 3-7 Seabed Removals around Lennox (LD) Platform

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### 3.3.1 Pipelines and Stabilisation Features – Removal Methods

Pipelines and stabilisation features present in the platforms' area (see Section 2.2) will be subject to removal and transportation to shore for recycling and/or disposal.

Pipelines and stabilisation features removal methods are summarized in [Table 3-3](#):

Pipelines and Umbilicals Removal Methods			
Pipeline	Condition of line	Whole or part of pipeline	Decommissioning options considered
PL1030	Buried	It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	6
PL1032	Buried	It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	6
PL1033	Buried	It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	6

<b>PL1034</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>Control Umbilical for PL1034 SSBV (Douglas), PLU6445</b>	Buried	<p>It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4
<b>PL1034 SSBV (Douglas)</b>	Buried	<p>It is intended that the SSBV exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4
<b>Control Umbilical for PL1034 SSBV (Lennox), PLU6435</b>	Buried	<p>It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4
<b>PL1034 SSBV (Lennox)</b>	Buried	<p>It is intended that the SSBV exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4



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<b>PL1035</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>PL1035 SSBV (Lennox)</b>	Buried	<p>It is intended that the SSBV exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4
<b>Control Umbilical for PL1035 SSBV (Lennox), PLU6437</b>	Buried	<p>It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	4
<b>PL1036 Disused</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>PL1036A</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6

<b>PL1036A SSBV (Lennox)</b>	Buried	It is intended that the SSBV exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	4
<b>Control Umbilical from Lennox Platform to SUTU, PLU6438</b>	Buried	It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	4
<b>Control Umbilical for PL1036A SSBV (Lennox), PLU6436</b>	Buried	It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	4
<b>PL1037</b>	Buried	It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform ( <b>Note 1</b> ). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.	6

<b>PL1038</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>PL1039</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>PL1040</b>	Buried	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6



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<p>PL1041</p>	<p>Buried</p>	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	<p>6</p>
<p>PL1042</p>	<p>Buried</p>	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	<p>6</p>
<p>PL1860</p>	<p>Buried</p>	<p>It is intended that the flexible line section exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Flexible Line cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization. However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	<p>6</p>

<b>PLU1861</b>	Buried	<p>It is intended that the flexible line section exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Umbilical cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>Power Cable Douglas to Hamilton, PL6424</b>	Buried	<p>It is intended that the cables sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Cable cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>Power Cable Douglas to Hamilton North, PL6423</b>	Buried	<p>It is intended that the cables sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Cable cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6
<b>Power Cable Hamilton to Lennox, PL6426</b>	Buried	<p>It is intended that the cables sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>). Cable cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	6

**Table 3-3 - Pipelines and Umbilicals Removal Methods**





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\*Key to Options:

- 1) Remove – reverse reeling
- 2) Remove – reverse S lay
- 3) Trench and bury
- 4) Remedial removal
- 5) Remedial trenching
- 6) Partial removal

Pipelines and Stabilisation Features Removal Methods and Disposal Routes			
Pipelines and stabilization features	Number	Option	Disposal Route (if applicable)
Cables	3	<p>It is intended that the cables sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Cable cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal
Concrete Mats	264	<p>Full recovery.</p> <p>It is intended that the mattresses will be recovered to shore, however in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal
Control Umbilicals	6	<p>It is intended that the control umbilicals sections exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal
Flexible Line	1	<p>It is intended that the flexible line section exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Flexible Line cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal



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Spools / Section of pipelines	13	<p>It is intended that the spools exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>Pipelines cut ends will be lowered in the seabed by means of a jet trencher machine to guarantee a full stabilization.</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal
SSBV	4	<p>It is intended that the SSBV exposed on the seabed will be removed and recovered to shore, from 0.6m BD up to interface with platform (<b>Note 1</b>).</p> <p>However, in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment process.</p>	Transportation to shore for recycling and / or disposal

**Table 3-4 - Pipelines and Stabilisation Features Removal Methods and Disposal Routes**

Notes on Table 3-4:

- [1] *The removals scope will include spools, cables and umbilicals sections from 0.6m BD up to the interface with the platform (e.g. riser bottom flange or j-tube bellmouth), in accordance with BEIS Guidance Notes "Decommissioning of Offshore Oil and Gas Installations and Pipeline".*[2] *Pipeline sections to be removed under this DP are as detailed in table 2.2, removal of the remainder of the pipeline not removed during phase 1 will be subject to a full Comparative Assessment and covered under the LBA Pipelines DP*

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### 3.4 Wells – P&A



<b>Well Plug and Abandonment Method</b>
<p>The wells (listed in Table 2.5) will be plugged and abandoned in compliance with the requirements of the Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996 (DCR) and abandoned in accordance with the latest version of the OEUK Well Decommissioning Guidelines (Issue 7, November 2022).</p> <p>The NSTA Well Operations and Notifications System will be used to apply for consent for abandonment works to be carried out.</p>

**Table 3-5 - Well Plug and Abandonment Method**

### 3.5 Drill Cuttings Decommissioning Options

The EBS reports fine sediments located in the proximity of platforms which could be associated with historical mostly dispersed drill cuttings. No piles have been found. The chemical analysis found no associated Polycyclic Aromatic Hydrocarbons (RPS, 2022).

It is believed that the relatively high tidal and wave generated currents in the area, together with the shallowness of the predicted cuttings deposition have caused the cuttings to dissipate in the period since the wells were drilled.

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### 3.6 Waste Streams



<b>Waste Stream Management Methods</b>	
<b>Waste Stream</b>	<b>Removal and Disposal method</b>
<b>Bulk liquids</b>	<p>Residual hydrocarbons will be removed and transported to shore. Vessels, pipework and sumps will be drained prior to removal to shore and shipped in accordance with maritime transportation guidelines. Further cleaning and decontamination will take place onshore prior to recycling / re-use.</p> <p>All pipelines will be flushed, cleaned and filled with seawater prior to decommissioning activities taking place.</p>
<b>Marine growth</b>	<p>Where practicable to allow access, marine growth will be removed in-situ offshore. The remainder will be brought ashore and disposed of in accordance with health, safety and environmental protocols.</p> <p>With reference to the scope of this Decommissioning Programme, marine growth is expected to be found on pipelines spools, control umbilicals, SSBVs, power cables, and concrete mattresses.</p>
<b>NORM</b>	<p>Tests for NORM will be carried out offshore and work will be carried out in full compliance with all relevant regulations. NORM may be partially removed offshore under appropriate permit. Where possible NORM will be injected into the reservoir via a donor well.</p>
<b>Asbestos</b>	<p>Asbestos-containing materials (CAF Gaskets, paneling etc as indicted in the Asbestos Survey) will be transported onshore and disposed of via an appropriately licensed waste management contractor. All asbestos will be managed in line with the Control of Asbestos Regulations 2012.</p>
<b>Other hazardous wastes</b>	<p>Will be recovered to shore and disposed of under appropriate permit. Where possible, cleaning chemicals will be injected into the reservoir via a donor well together with remaining hydrocarbon inventory and flushing fluids.</p>
<b>Onshore Dismantling sites</b>	<p>Appropriate licensed sites will be selected. Dismantling sites must demonstrate a proven disposal track record and waste stream management throughout the deconstruction process and the ability to deliver innovative reuse and recycling options. OPRED will be advised when a decision is made.</p>

**Table 3-6 - Waste Stream Management Methods**

As part of the Contracting Strategy, Eni will ensure the selection of waste contractor(s), experienced in the handling of all wastes associated with the decommissioning of Oil and Gas infrastructure.

The waste management providers and disposal yards shall follow the waste management hierarchy in the handling of materials from the LBA Area decommissioning Project to maximize the amount of material from the projects which is reused or recovered / recycled.

Eni 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. Eni reserves the right to audit the service provider, to fulfil its Duty of Care responsibilities. 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.



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Inventory Disposition			
	Total Inventory Tonnage	Planned tonnage to shore	Planned left in situ
<b>Topsides</b>	2,193 tons	2,193 tons	0 tons
<b>Pipelines</b>	3,509 tons	3,509 tons	0 tons

**Table 3-7 - Inventory Disposition**

All recovered material will be transported onshore for re-use recycling or disposal. Reuse is unlikely, but not impossible. Some of the serviceable equipment installed may be reused, and this will be assessed on an item by item basis.

It is not currently possible to predict the market for re-usable materials with confidence however there is a target material recycling rate of better than 95%.

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## 4.0 ENVIRONMENTAL APPRAISAL

Eni UK Limited has prepared a stand-alone Partial Decommissioning Environmental Appraisal Report (see Section 7) describing Environmental Impact Assessment process and assessing environmental impact of the partial decommissioning activities contained within this document.

Section 4.1 below provides an overview of the environmental sensitivities in the area of the LBA Field and Section 4.2 summarises potential impacts associated with the partial decommissioning operations as well as proposed mitigation measures.

### 4.1 Environmental Sensitivities

Environmental Receptor	Main Features
<b>Conservation interests</b>	<p>There are a number of offshore protected areas present in the East Irish Sea (<b>Figure 4-1</b>). The nearest site is the Liverpool Bay Special Protection Area (SPA) which is c. 260 m from the Douglas complex. The Hamilton East subsea well and the Lennox Platform lie within LBA SPA.</p> <p>Other sites that are within 40 km are:</p> <ul style="list-style-type: none"> <li>• <b>Special Protection Areas (SPAs):</b> Liverpool Bay/ Bae Lerpwl; Anglesey Terns / Morwenoliaid Ynys Môn; The Dee Estuary; Ribble and Alt Estuaries; Mersey Narrows and North Wirral Foreshore; Traeth Lafan/ Lavans Sands, Conwy Bay.</li> <li>• <b>Special Areas of Conservation (SACs):</b> Shell Flat and Lune Deep; Y Fenai a Bae Conwy / Menai Strait and Conwy Bay; Dee Estuary / Aber Dyfrdwy.</li> <li>• <b>Marine Conservation Zones (MCZs):</b> Fylde; West of Walney.</li> </ul>
<b>Seabed</b>	<p>Sediment types within LBA area vary from coarse to sandy gravels, and gravelly sand to sand. The main habitat type identified is classified as 'Offshore circalittoral coarse sediment' (EUNIS A5.1). Water depths across Liverpool Bay are generally less than 50 m and the seabed is essentially flat and featureless with no discernible bedforms. Seabed formations within Liverpool Bay are predominantly characterised by sand ribbons of heights less than 30 cm and sand wave fields with a height of less than 2 m with lengths between 10 m and 20 m.</p> <p>Sediment types within LBA area vary from coarse to sandy gravels, and gravelly sand to sand. The main habitat type identified is classified as 'Offshore circalittoral coarse sediment' (EUNIS A5.1). Water depths across Liverpool Bay are generally less than 50 m and the seabed is essentially flat and featureless with no discernible bedforms. Seabed formations within Liverpool Bay are predominantly characterised by sand ribbons of heights less than 30 cm and sand wave fields with a height of less than 2 m with lengths between 10 m and 20 m.</p> <p>During the subtidal baseline survey undertaken by RPS in October 2022, four notable taxa were recorded across all decommissioning stations in low abundance:</p> <ul style="list-style-type: none"> <li>• The ocean quahog, <i>Arctica islandica</i>, is protected under the OSPAR list of threatened and/or declining species and habitats and one juvenile specimen was counted at GS38.</li> <li>• The polychaete <i>Goniadella gracilis</i> is an invasive non-native species (INNS)</li> </ul>



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	<p>that was first introduced in the UK, Liverpool Bay, in 1970 most likely by shipping from the east coast of North America. Only one specimen was recorded at station GS28.</p> <ul style="list-style-type: none"> <li>No evidence of <i>S. spinulosa</i> reef features were noted across all decommissioning stations, as only three individuals were recorded. Two individuals were counted at partial decommissioning station GS31 and one at partial decommissioning station GS37.</li> <li>The thumbnail crab hia. <i>scutellata</i> is a nationally scarce marine species and three individuals were found across all decommissioning stations: one individual each at stations GS26 and GS38 and one specimen at full decommissioning station GS57.</li> </ul>
<p style="text-align: center;"><b>Fish</b></p>	<p>The Irish Sea provides spawning and nursery grounds for a number of ecologically and commercially important demersal, pelagic, and shellfish species.</p> <p>Rare or protected species present in the Liverpool Bay area include basking shark (<i>C. maximus</i>), common goby (<i>Pomatoschistus microps</i>), sand goby (<i>P. minutus</i>), allis shad (<i>A. alosa</i>) and Twaites shad (<i>A. fallax</i>). Also present in the area are salmon (<i>S. salar</i>), river lamprey (<i>L. fluviatilis</i>), sea lamprey (<i>P. marinus</i>) and smelt or spurling (<i>Osmerus eperlanus</i>).</p>
<p style="text-align: center;"><b>Fisheries</b></p>	<p>The LBA project area lies within ICES rectangles 35E6 and 36E6 characterised by spawning and nursery grounds for the following fish species: whiting, plaice, mackerel, sand eel, cod, sole, spurdog, ling, anglefish, tope shark, herring, thornback, sprout, spotted ray c.523 days in ICES rectangle 36E6 in 2021, considered to be moderate, constituting c. 0.52% of the overall fishing effort in the UK (Scottish Government, 2022). Shellfish species tend to dominate in terms of weight and value followed by demersal species, whilst landings of pelagic species were very low. The primary gear type used in the area are dredges and traps with some trawling.</p>
<p style="text-align: center;"><b>Marine Mammals</b></p>	<p><b>EU Habitats Directive Annex II / IV Species:</b></p> <ul style="list-style-type: none"> <li>Annex II species common in the LBA field are harbour porpoise (<i>P. phocoena</i>) bottlenose dolphin (<i>Tursiops truncatus</i>)</li> <li>Annex IV species common in the LBA field is the common dolphin (<i>Delphinus delphis</i>)</li> <li>Other Annex II / IV species that could be present in the vicinity of the field include white-beaked dolphin (<i>Lagenorhynchus albirostris</i>), Risso's dolphin (<i>Grampus griseus</i>), minke whale (<i>Balaenoptera acutorostrata</i>), grey seal (<i>Halichoerus grypus</i>) and harbour (common) seal (<i>Phoca vitulina</i>).</li> </ul>

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<b>Birds</b>	<p>The East Irish Sea and its adjacent coastlines are of particular importance for wintering seabirds. Liverpool bay hosts internationally important populations of red-throated divers (<i>Gavia stellata</i>) and common scoter (<i>Melanitta nigra</i>). Seabird sensitivity in Block 110/13 (Douglas, Hamilton and Hamilton North) is recorded as medium and low in the months of May to August. September, October and December have very high sensitivity with January to April and in November having extremely high seabird sensitivity.</p> <p>Seabird sensitivity in Block 110/15 (Lennox) is recorded as low in the months of June and July. August, September and April have high sensitivity with October to March having extremely high sensitivity.</p> <p>Kittiwakes are also known to nest on the LBA facilities.</p>
<b>Onshore Communities</b>	<ul style="list-style-type: none"> <li>The Liverpool Bay area hosts a combination of large industrial centres and relatively remote coastal areas. Infrastructure to support the decommissioning activities could be available either locally or from other UK or European ports.</li> </ul>
<b>Other Users of the Sea</b>	<p>The following resource users are located adjacent to the LBA project area (<b>Figure 4-2</b>):</p> <ul style="list-style-type: none"> <li>Oil and Gas activity</li> <li>Mineral &amp; Aggregate sites</li> <li>Offshore Wind Farms</li> <li>Commercial fishing (ICES rectangles 35E6 and 36E6)</li> <li>Shipping</li> <li>Military activity</li> <li>Archaeology</li> <li>Tourism &amp; Leisure activities</li> </ul> <p>The HVDC interconnector crosses through the Douglas complex to reach landfall at Flintshire Bridge in North Wales. The Gwynt Y Môr, Rhyl Flats and North Hoyle offshore windfarms are to the south of the Douglas Complex (c. 5 km at the nearest point) and include inter-array and export cables. The Awel y Môr windfarm extension (in planning) is to the southeast of the Douglas Complex. Two active telecommunications cables pass through the north-eastern corner of the LBA project area: the active 'ESAT 2' telecom cable and the active 'Hibernia Atlantic' telecom cable (Figure below). There are no windfarm cable crossings as part of this DP.</p> <p>Aggregate production areas lie to the southeast of the Douglas Complex (Hilbre Swash). An aggregates exploration and option area (Liverpool Bay) is to the east of Douglas. MoD firing ranges lie c. 50 km north (Eskmeals) and c. 33 km east on the coast at Altcar.</p>

**Table 4-1 - Environmental Sensitivities**



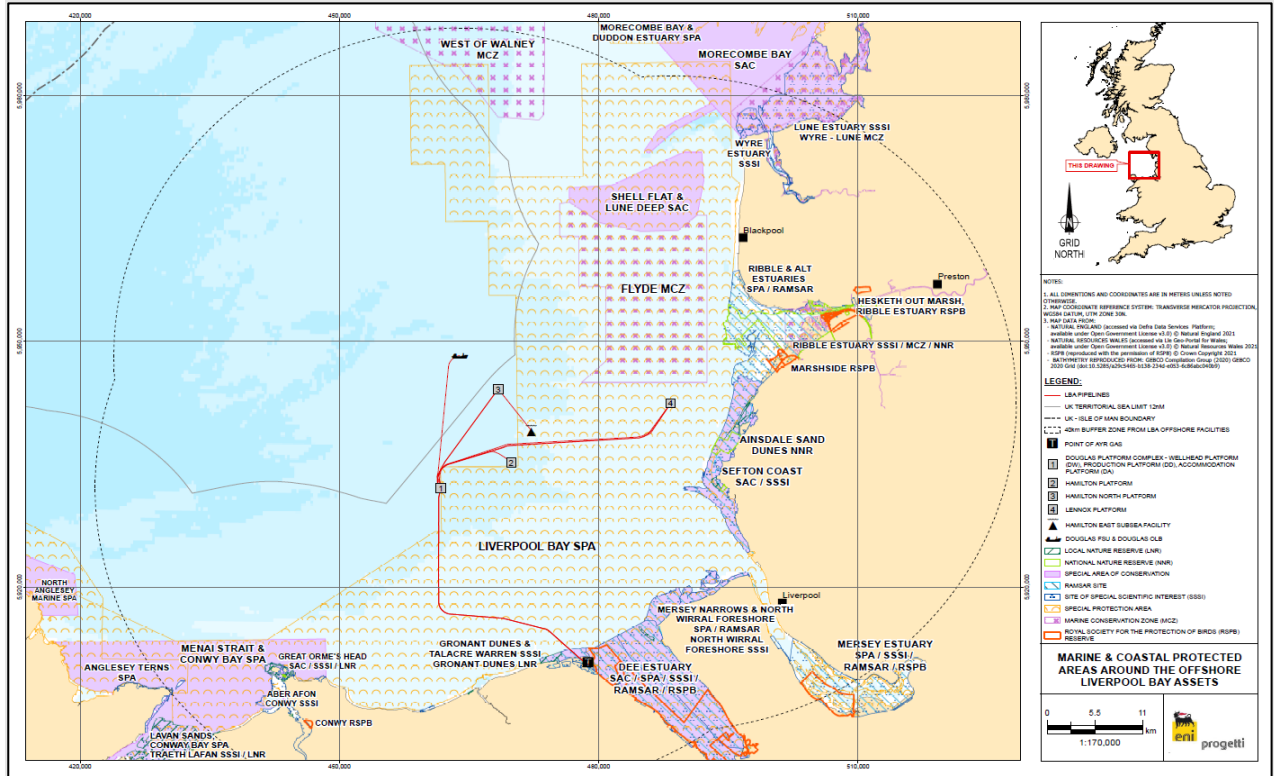


Figure 4-1 - Marine and Coastal Protected Areas in the Vicinity of the LBA Assets

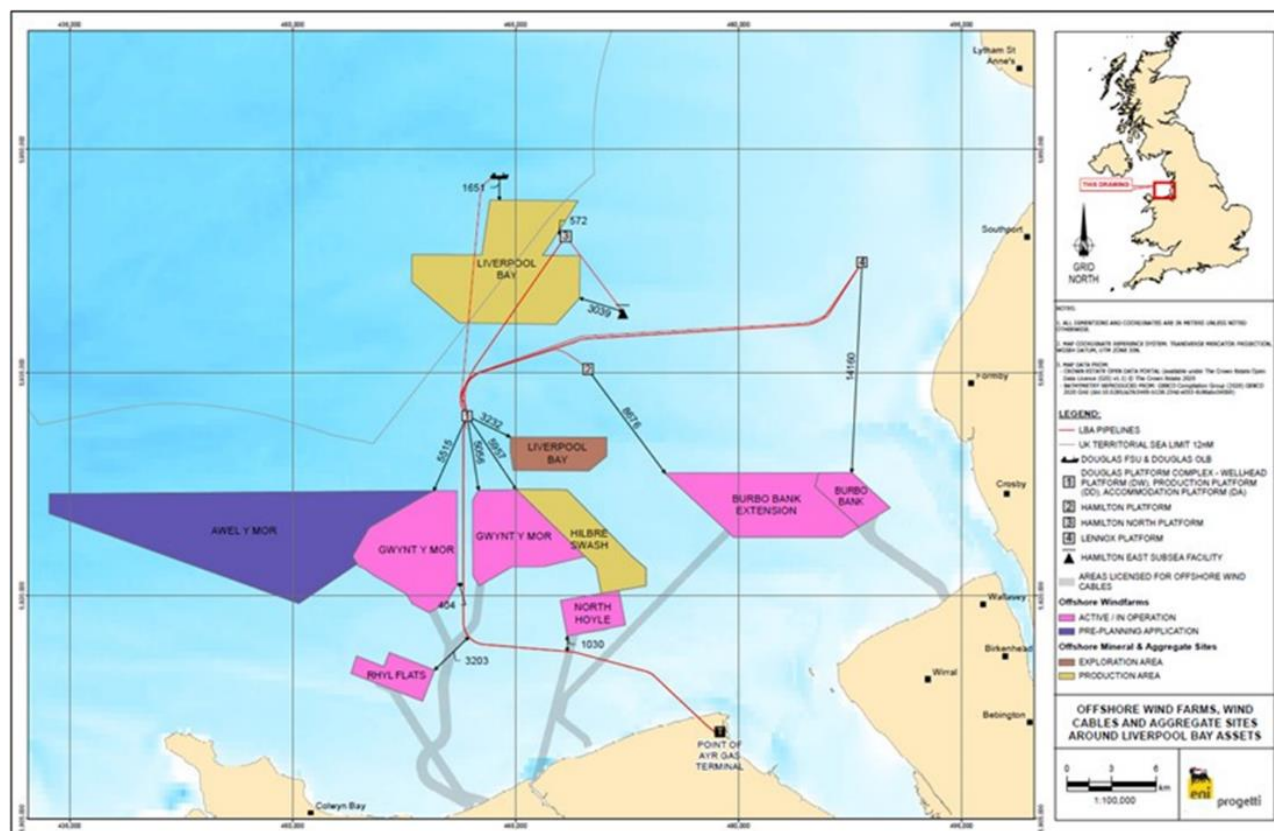


Figure 4-2 Offshore Windfarms, Cables and Aggregates in the LBA Project Area

#### 4.2 Potential Environmental Impacts and their Management

There will be environmental impacts associated with the removal of the Hamilton, Hamilton North and Lennox topsides, however the impacts will be managed such that they are localised, short-term and of low significance. Long-term environmental impacts are expected to be negligible. Cumulative and trans-boundary environmental impacts are also expected to be negligible.

Based on the findings of the EA, including the identification and subsequent application of appropriate mitigation measured and Project Management according to ENI'S HSEQ Policy and EMS, it is considered that the proposed PDP can be executed with no significant impact to the environmental or societal receptors within the UKCS or internationally.

The potential environmental impacts identified for each phase of the project and the associated proposed management can be found in **Table 4-2**:

Activity	Main Impacts	Management
<b>Flushing and Cleaning Activities</b>	Flushing and cleaning of the topsides shall result in emissions to air due to venting and depressurisation, potential discharges and spills, generation of waste and potential seabed disturbance due to support vessel.	<p>Flushing and cleaning shall be undertaken following normal operating procedures and with all necessary permits in place.</p> <p>The base case for the flushing and cleaning activities is to flush the topsides downhole to the Douglas disposal wells, this will reduce waste and minimize the risk of spillages to sea.</p> <p>An injectivity study has been performed, and a number of candidate wells have been identified.</p>
<b>Topsides Removal</b>	The presence and activities of vessels executing the cutting and lifting works will result in emissions to air, generation of underwater noise, potential discharges and spills, and potential seabed disturbance due to removals vessel. There is also a potential to disturb nesting seabird on the topsides. For the short duration of the works, there will be a small increase in the baseline level of these emissions from high shipping activity in the area.	<p>Eni has been engaging EMT and SNCBs on the topic of nesting birds on LBA since 2021. Eni has been undertaking nesting birds surveys since 2022, ahead of any decommissioning works. Eni has formulated a nesting birds strategy that proposes solutions to limit the potential implications of nesting birds on decommissioning plans. Eni engages EMT regularly on the nesting birds and on updates to its strategy.</p> <p>The proposed topside removal method is a single lift, by HLV, activities will be planned to be executed as efficiently as possible. Vessels will be managed to minimise the durations required while on board practices will address fuel efficiency, noise and waste management. Where possible works will be undertaken outside of breeding seasons of sensitive species. In addition to appropriate planning the following management shall be put in place:</p> <ul style="list-style-type: none"> <li>• Seabed disturbance <ul style="list-style-type: none"> <li>o Vessel selection</li> </ul> </li> </ul>



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		<ul style="list-style-type: none"> <li>o Anchoring / locating procedures will be developed.</li> <li>o Post-decommissioning survey to recover any debris.</li> <li>o All necessary permits will be in place.</li> <li>o Minimise potential for dropped objects.</li> <li>• Noise <ul style="list-style-type: none"> <li>o Plan and execute activities as efficiently as possible and select equipment and removal method to minimise cutting and vessel operations.</li> </ul> </li> <li>• Discharges and Spills <ul style="list-style-type: none"> <li>o Hydrocarbon inventories to be removed from the topsides prior to commencing removal operations.</li> <li>o Contain any unpredicted releases.</li> <li>o OPEP in place to deal with emergency spills.</li> </ul> </li> </ul>
<p><b>Seabed removals</b></p>	<p>To enable the safe removal of the LBA topsides there is a requirement to undertake some limited seabed removals works as detailed in Section 3.0. These removals works are anticipated to create limited areas of seabed disturbance.</p> <p>Total area of seabed disturbance is estimated to be:</p> <ul style="list-style-type: none"> <li>• Douglas Complex (in 3 locations) – 27,714</li> <li>• Lennox - 6,542m<sup>2</sup></li> <li>• Hamilton (2 locations) – 4,284m<sup>2</sup></li> <li>• Hamilton North ( 2 locations) – 13,506m<sup>2</sup></li> <li>• Total – 42,906m<sup>2</sup></li> </ul>	<p>All seabed removals work shall be undertaken subject to approved permits including PWAs and associated Marine licenses. The area of seabed disturbance shall be minimized as much as possible and shall be within the 500m zone of the associated asset. Impacts are anticipated to be of a short duration with no long-term effects.</p> <p>Decommissioning activities will be planned to be executed as efficiently as possible, minimising disturbance of the seabed in order to reduce the impact on the affected areas.</p> <p>Vessels will be managed to minimise the durations required while on board practices will address fuel efficiency, noise and waste management.</p>
<p><b>Decommissioning Drill Cuttings</b></p>	<p>The EBS found no evidence of cutting piles remaining under the platforms due to the nature of the highly mobile seabed in which the infrastructure lies and the length of time since the drilling was undertaken.</p>	<p>In the event that cuttings are identified OPRED will be notified and appropriate management processes will be put in place.</p>

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<b>Platform well P&amp;A</b>	<p>All subsea wells need to be abandoned prior to subsea structure removal to meet NSTA and HSEx regulatory requirements.</p>	<p>Well abandonment will be undertaken in accordance with approved well designs, applicable legislation, Permits Licences, Consents, Notifications and Approvals will be applied for commensurate with the work, and any associated conditions will be complied with and verified.</p>
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**Table 4-2 - Environmental Impact Management**



## 5.0 INTERESTED PARTY CONSULTATIONS

### Consultations Summary:

The summary of the key stakeholder engagements is presented in the Table 5-1.

**Table 5-1 - Summary of Stakeholder Comments**

Who	Comment	Response
<b>Informal Stakeholder Consultations</b>		
	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<b>Joint Nature Conservation Committee (JNCC)</b>	<ul style="list-style-type: none"> <li>• JNCC have been engaged to assess the impact of marine biodiversity and ornithology (e.g. nesting birds, especially kittiwakes)</li> </ul>	<ul style="list-style-type: none"> <li>• Eni provided all the available information including methods of deterring birds from nesting on the platforms in the LBA field. There will be an ongoing engagement with JNCC to ensure minimal disturbance to any nesting birds offshore.</li> </ul>
<b>Health and Safety Executive (HSEx)</b>	<ul style="list-style-type: none"> <li>• Ongoing engagement with the HSEx to discuss safety case and CDM requirements throughout the decommissioning phases.</li> </ul>	<ul style="list-style-type: none"> <li>• HSEx have advised that the dismantling can be included in a phased safety case. Safety case strategy in planning.</li> <li>• HSEx have advised that CDM regs can be applied offshore, Eni are considering this.</li> </ul>
<b>Natural Resource Wales and Flintshire County Council Local Planning Authority (Onshore)</b>	<ul style="list-style-type: none"> <li>• NRW have been engaged to discuss the surrender of the Point of Ayr Environmental permit.</li> <li>• Onshore decommissioning and dismantling were also discussed in the Town and Country Planning Act (TCPA) application.</li> </ul>	<ul style="list-style-type: none"> <li>• NRW have confirmed onshore sampling will be required.</li> <li>• Permit surrender strategy in preparation.</li> <li>• TCPA application submitted, approval pending.</li> </ul>
<b>Shipping and Navigation Organisations</b>	<ul style="list-style-type: none"> <li>• Proposed Project overview including baseline shipping and navigational features and navigational risk assessment were presented.</li> <li>• Consultees were asked if there were any other parties to be included in the engagement or information dissemination process.</li> <li>• Port of Liverpool Authority requested the works to be broken down into phases to allow all the necessary permits to be obtained in a timely manner.</li> </ul>	<ul style="list-style-type: none"> <li>• Royal Yachting Association confirmed being content with the information presented.</li> <li>• Stakeholders confirmed availability of their networks and willingness to disseminate the information as required.</li> <li>• The Port of Liverpool Authority's request is in line with the Eni activity planning.</li> </ul>

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Who	Comment	Response
<b>Statutory Consultations</b> <i>To be completed after Public Consultation</i>		
National Federation of Fishermen's Organisations		
Scottish Fishermen's Federation		
Northern Ireland Fish Producers Organisation		
Global Marine System's Limited		
North Sea Transition Authority		

Who	Comment	Response
<b>Public Consultation</b>		
	•	•
	•	•
	•	
	•	•

## 6.0 PROGRAMME MANAGEMENT

### 6.1 Project Management and Verification

An Eni Decommissioning Project Management team will be set up to manage suitable sub-contractors for the removal of the installation. Standard procedures for operational control and hazard identification and management will be used.

Eni has had regular meetings with OPRED and will continue to do so in order to provide verification concerning progress and compliance.

The Management team will monitor and track the process of consents and the consultations required as part of this process. Any variances to the Decommissioning Programmes will be discussed and agreed with OPRED.

### 6.2 Post-Decommissioning Debris Clearance and Verification

Sea bed surveys will establish the extent of any debris or other oilfield related materials on the sea bed.

The environmental baseline seabed survey will provide detailed information on the existence of debris.

If debris is found during the surveys, the removal of this will be assessed and dealt with appropriately during the near platform seabed removal or later pipelines decommissioning scope. One of the objectives of the project is to leave the seabed in a state such that it is safe to other users of the sea.

Following the partial decommissioning of the installations, further post decommission surveys will be undertaken in tandem with LBA CCS T&S project surveys to determine if any debris remains within a 500m radius of installations. Seabed clearance verification will be undertaken, using methods and techniques agreed in prior consultation with OPRED following decommissioning activities.

### 6.3 Schedule

The main milestones of these Partial Decommissioning Programmes are:



Activity	2023				2024				2025				2026				2027				2028			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
All Topsides Modules Fabrication/Delivery																								
Douglas Jacket Fabrication/Delivery/Installation																								
Wells P&A/Sidetrack/Completion with Drilling Rig					Ex	Ex	LD	LD/DW	DW/Ex	HH	HH	HH	HN	HN	LD	LD	LD	CY	DW	DW	DW	DW	Ex	Ex
Topsides Removal/Installation with HLV																								
Commission																								
Flush and Clean of Satellite facilities and pipelines using ISP									HN	HH	LD													
Flush and Clean of Douglas and pipelines																								
Flush and Clean of Offshore Storage Installation																								
Window for removal of Offshore Storage Installation																								
Full decommissioning removals with HLV																								
Onshore Asset Decommissioning/Installation																								
Oil Production																								
Gas Sales																								

	CCS Project Activity				ND - New Douglas	DW - Douglas wellhead	CY - Conwy		
	Partial Decom for CCS				Ex - E&A well	HH - Hamilton	DA - Douglas Accomodation		
	Later phase of decom for assets not repurposed				LD - Lennox	HN - Hamilton North	DP - Douglas Process		

**Figure 6-1 - Liverpool Bay Asset Execution Schedule**

The decommissioning schedule may change subject to agreement of the CCS project schedule with DESNZ.

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Milestones	Approx. Date
Issue ITT Package for Platform Decommissioning	2023
Award Platform Decommissioning Contract	2024
Start of Platform Decommissioning Preparation Works window	2025
Satellite Platforms (LD, HH, HN) Deck Removal Window Start (First Platform Available)	2026
Platforms Removal & Disposal Window End	2027
Platforms Decommissioning Programmes Close-Out Report Submission	2028

**Table 6-1 - Partial Decommissioning Programmes Milestones**

#### 6.4 Costs

Provisional Decommissioning Programmes costs	
Item	Estimated Cost (£m)
Platform(s)/Jacket(s) - Preparation/Removal and Disposal	*
Pipeline(s) and Stabilisation Feature(s)	*
Well Abandonment	*
TOTAL	*

**Table 6-2 - Provisional Decommissioning Programmes Costs**

\* Estimated Costs are confidential and will be provided separately to OPRED

#### 6.5 Close Out



A close out report will be submitted to OPRED within 12 months of the completion of decommissioning activities, including debris clearance and post-decommissioning surveys. The close out report will notify OPRED of any variances to outcomes that have been detailed in these Decommissioning Programmes.

#### 6.6 Post-Decommissioning Monitoring and Evaluation

This decommissioning programme relates only to the partial decommissioning activities to support the CCS project. The pipeline sections and infrastructure included within this DP will be completely removed and returned to shore for reuse, recycling, or disposal.

The removal of the infrastructure not being re-used for CCS will be undertaken at a later date under a separate DP. After the phase 2 removal works a post-decommissioning environmental seabed survey will be undertaken which will include a further suite of Side Scan Sonar and MBES work. The post-decommissioning survey will also repeat the Sediment Physio-Chemistry and Faunal Analysis to determine whether there has been any change to the marine environment. A clear seabed validation would be sought at this time.





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For the infrastructure being reused for the CCS project will be monitored under the inspection repair and maintenance surveys.

The proposed approach will be the subject of further consultations with the Regulatory Authorities and the statutory consultees.



## **7.0 SUPPORTING DOCUMENTS**

1. Eni UK Liverpool Bay Partial Decommissioning Comparative Assessment, Consultation Version, ERM, July 2024
2. Partial Decommissioning Programme Environmental Appraisal, Consultation Version, Eniprogetti UK, July 2024

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## 8.0 SECTION 29 NOTICE HOLDERS LETTERS OF SUPPORT

[HOLD 2] S.29 Notice Holders Letters will be issued with final version of DP (post public consultation).

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## APPENDIX A - PUBLIC NOTICE

[HOLD 3] Public Notice yet to be posted.