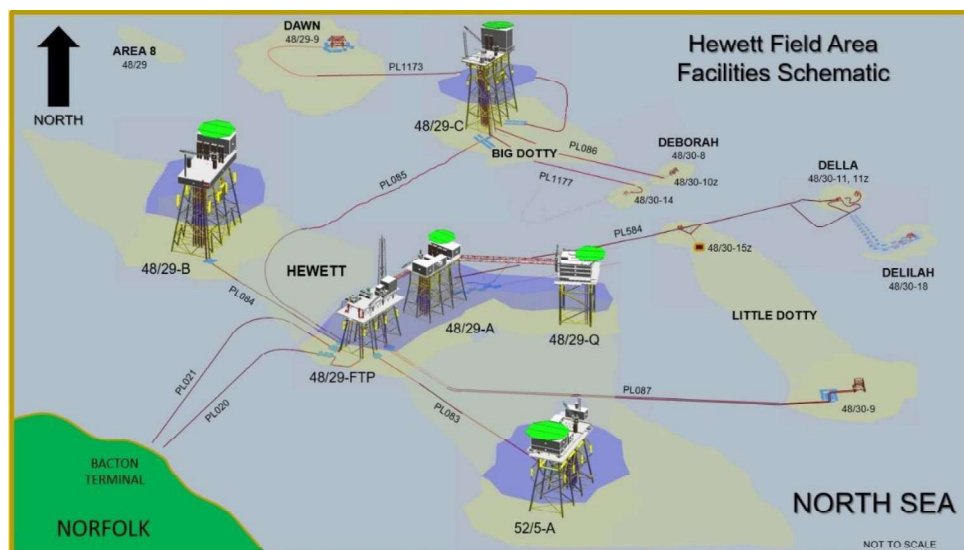


HEWETT AREA SUBSEA PIPELINES DECOMMISSIONING PROGRAMMES



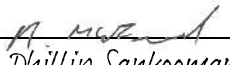
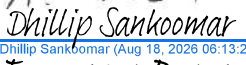
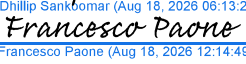
CONSULTATION VERSION

August 2026

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Document Control

Approvals

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Name	Company	No of Copies
Senior Decommissioning Manager	OPRED	1

Hold Record

HOLD	Sheet	Paragraph	Description
1	59	Section 8.0	Partner letters of support
2	60	Annex A	Consultation Public Notices

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Terms and Abbreviations

Abbreviation	Explanation
AOI	Areas of Interest
AW	Anode Wastage
BEIS	Department for Business, Energy & Industrial Strategy
CP	Cathodic Protection
CoP	Cessation of Production
DOB	Depth of Burial
DPN	Disused Pipeline Notification
EA	Environmental Appraisal
EC	European Commission
EMT	Environmental Management Team
Eng	Engineering
Eni	Eni UK Limited
EU	European Union
FEED	Front End Engineering Design
FTP	Field Terminal Platform
GVI	General Visual Inspection
H ₂ S	Hydrogen Sulphide
HC	Hydrocarbon
HSEx	(Offshore Safety Directive Regulator) Health and Safety Executive
ICES	International Council for the Exploration of the Sea
DSV	Dive Support Vessel
JNCC	Joint Nature Conservation Committee
km	Kilometre
LSA	Low Specific Activity scale
MAH	Major Accident Hazard
MHWS	Mean High Water Spring
MTM	Midline Termination Module
N/A	Not Applicable
NFFO	National Federation of Fishermen's Organisations
nM	Nautical Mile
NORM	Naturally Occurring Radioactive Materials
NSTA	North Sea Transition Authority
OGUK	Oil & Gas UK
ODU	Offshore Decommissioning Unit
OPEP	Oil Pollution Emergency Plan
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
P&A	Plug and Abandon / Plugging and Abandonment
PETS	Portal Environmental Tracking System
PLEM	Pipeline End Manifold
PON	Petroleum Operations Notice
PWA	Pipeline Works Authorisation
RLV	Rigid Lay Vessel
SAC	Special areas of Conservation
SCAP	Supply Chain Action Plan
SDU	Subsea Distribution Unit
SFF	Scottish Fishermen's Federation
SNS	Southern North Sea
SUT	Subsea Umbilical Termination
Te	Metric Tonnes
ToP	Top of Pipeline
TUTU	Topside Umbilical Termination Unit

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Abbreviation	Explanation
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UTA	Umbilical Termination Unit
WGS84	World Geodetic System of 1984

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1.0 EXECUTIVE SUMMARY

1.1 Decommissioning Programmes

This document contains 10 decommissioning programmes. (S29 references below for info)

Hewett

- 12.04.06.05/197c - S29/435/07
- 12.04.06.05/196c - S29/433/07
- 12.04.06.05/193c - S29/432/07
- 12.04.06.05-38u - S29/22/19
- 12.04.06.05/192c - S29/436/07

Deborah

- 12.04.06.05-32u - S29/16/19
- 12.04.06.05/189c - S29/147/07

Dawn

- 12.04.06.05/212c - S29/209/07

Delilah

- 12.04.06.05/191c - S29/149/07

Della

- 12.04.06.05/190c - S29/156/07

All pipelines will be flushed cleaned before any decommissioning activities commencing. Any umbilicals that suffered a loss of integrity or contained environmentally friendly fluids were reviewed and dispensation received for not flushing.

1.2 Pipeline System Decommissioning Battery Limits

Battery limits for the pipeline decommissioning work are as follows:

Pipeline / Spools

- Riser bottom flange to manifold / Xmas tree piping flange.
- Riser bottom flange to Mean High Water Spring at shore approach (export trunk lines). The onshore Bacton section of pipeline is outside the scope of this document.

Umbilical

- J-tube hang-off and TUTU to manifold UTA or Xmas tree SUT.

Jumpers

- Manifold SDU base connector to Xmas tree SUT base connector
- Xmas tree production piping flange to Manifold production piping flange.

Kilometre Point Boundaries

The following KP boundaries can be assumed: -

- Offshore = KP0.000 (FTP) to KP26.949
- Nearshore = KP 26.949 to KP 32.300
- Onshore = KP32.300

The above KPs form the boundary for PL20 and PL21 and the surveys overlap to ensure continuity of data. Further details are provided in Section 2.1, Table 8.

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1.3 Decommissioned Facilities List

The facilities to be decommissioned consist of the following pipelines:

Hewett Export Pipelines

- PL20 30" Export Pipeline¹;
- PL21 30" Export Pipeline¹;

¹Offshore sections of pipelines only. Offshore section battery limits defined as pipeline up to Mean High Water Spring at shore, see Annex B

Hewett Infield Pipelines

- PL83 24" Production Pipeline;
- PL84 24" Production Pipeline;
- PL85 24" Production Pipeline;

Deborah Pipelines

- PL86 10.75" Production Pipeline;
- PL135.1 2.375" Service Pipeline;
- PL135.2 2.375" Service Pipeline;
- PL446 6" NB Flexible Jumper;
- PL446.1 2" NB Flexible Jumper;
- PL1177 8" Production Pipeline;
- PLU4688 3.3" OD Control Umbilical;
- PLU4689 2.98" OD Hydraulic Umbilical;
- PLU4690 2.98" OD Hydraulic Umbilical;
- U30-8 Redundant Hydraulic Umbilical;

Dawn Pipelines

- PL1173 8" Production Pipeline
- PL1174.1 4.9" OD Elec Hydraulic CI Umbilical;
- PL1174.2 4.9" OD Elec Hydraulic CI Umbilical;

Little Dotty Pipelines

- PL87 8" Production Pipeline;
- PL136.1 2.375" Service Pipeline;
- PL136.2 2.375" Service Pipeline;
- PLU4743 2.95" OD Hydraulic Umbilical;
- PL1324 4.72" OD Electro Hydraulic CI Umbilical Jumper;
- PL1325 8" NB Flexible Jumper;

Della Pipelines

- PL584 10.75" Production Pipeline;
- PL1323 5.16" OD Electro Hydraulic CI Umbilical;
- PL585 Redundant Hydraulic CI Umbilical;
- PL586 Redundant Hydraulic CI Umbilical;

Delilah Pipelines

- PL1629.1 16.43" OD Electro Hydraulic CI Umbilical Jumper;

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- PL1629.2 16.43" OD Electro Hydraulic CI Umbilical Jumper;
- PL1629.3 16.43" OD Electro Hydraulic CI Umbilical Jumper;
- PL1629.4 16.43" OD Electro Hydraulic CI Umbilical Jumper;
- PL1630 8" NB Flexible Jumper;

This Decommissioning Programme also considers pipeline stabilisation and protection, including frond and concrete mattresses, grout bags and rock placement.

Note:

All installations in the Hewett area and associated satellite fields are covered by separate Decommissioning Programmes.

Surveys

The status of facilities is determined by conducting a survey of each facility and this includes not only the pipelines but also any installed stabilisation features (concrete mattresses etc.).

The pipeline Depth of Burial (DOB) / Free-Span status / Cathodic Protection status (CP) / Anode Wastage (AW) and General Visual Inspection (GVI) are performed.

The inspection frequency is as follows: -

- Pipelines / jumpers that contain hydro-carbons or that are still to be flushed / cleaned are surveyed every 2 years (with the exception of PL21 which is surveyed every 1 year until it is flushed / cleaned).

The last survey was performed in 2023 for the following pipelines / jumpers / umbilicals containing hydrocarbons or other fluids requiring flushing, or have Areas of Interest (AOI): -

- PL20 (AOIs only)
- PL21 (Full route survey + AOIs)
- PL83 (AOIs only)
- PL84 (AOIs only)
- PL85 (Full route survey + AOIs)
- PL1173 (AOIs only)
- PL1174.1 & PL1174.2 (AOIs only)
- PL1177 (AOIs only)
- PL87 (AOIs only)
- PL1323 (Full route survey, no AOIs)
- PL584 (Full route survey + AOIs)
- PL1629.1-4 (Full route survey, no AOIs)
- PL1630 (Full route survey, no AOIs)
- Pipelines / umbilicals/ jumpers listed in Table 8 that did not contain hydrocarbon and had been previously flushed / cleaned are surveyed at a frequency agreed with OPRED once the PLs had been accepted into the IPR. This was every 5 years.

Currently, all other pipelines / jumpers and umbilicals were last surveyed in 2021.

Refer to Section 2.1 for full survey details and status of pipelines / jumper / umbilicals and Annex C for the DOB charts.

With regard to pipeline surveys, any underlying pattern of behaviour cannot be derived as spans and pipeline exposures are complex phenomena. The heterogeneous nature of the seabed and the local non-linear behaviour of sea currents and weather patterns mean spans and exposures cannot be predicted with any accuracy; therefore, frequent surveys identify critical spans, and remedial action is undertaken as appropriate / required.

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A monitoring program will be employed post decommissioning to ensure pipeline spanning remains acceptable. Flooding of the pipelines during decommission will significantly increase submerged weight and so promote self-burial and it is envisaged that when the seabed surrounding the pipeline becomes mobile the pipeline will tend to sink. This will promote and maintain safe seabed conditions combined with a pipeline lowering analysis considering the increased self-weight of the flooded lines and the mobilisation of seabed surrounding the pipelines.

A survey will also be conducted at the start of each stage of the decommission campaign. Post decommissioning this exercise will continue to maintain safe seabed conditions, combined with a pipeline lowering analysis considering the increased self-weight of the flooded lines and the mobilisation of seabed surrounding the pipelines.

1.4 Requirement for Decommissioning Programme(s)

In accordance with the Petroleum Act 1998, Eni UK Limited as Operator of the Hewett Fields and on behalf of the Section 29 notice holders (see Table 4 - Pipeline(s) Section 29 Notice Holders Details) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for the decommissioning of the subsea pipelines and controls detailed in Section 2.1 of this programme(s). (See also Section 8 – Section 29 Notice Holders Letter(s) of Support).

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programme(s) is submitted without derogation and in compliance with national and international regulations and OPRED guidelines.

The schedule outlined in this document is for the **Hewett Field Subsea Pipelines decommissioning projects**, anticipated to begin in 2026. The **Hewett Field Platforms decommissioning programme** has been approved in March 2021. The **Hewett Field Subsea Structures decommissioning programme** has been approved in November 2022. Currently, the foreseen major project milestones for subsea pipelines decommissioning are as follows:

Table 1 – Decommissioning Programme(s) Milestones

Milestones	Approx. Date
Pre-Draft submission of Hewett Subsea pipelines decommissioning programme(s)	2022
CoP	2023
Approval of Subsea Pipelines DP	2026
Subsea Pipelines Removal & Disposal window Start	2026
Subsea Pipelines Removal & Disposal Window End	2030
Submission of Close-Out report for Subsea Installation decommissioning programme(s)	2031

1.5 Hewett Field Overview

The Hewett Field is located in Blocks 48/28a, 48/30a, 48/29a, 52/4a and 52/5a of the UKCS. The field lies in the Southern North Sea within the UK Sector, approximately 22km north-east of the Norfolk coast. The Hewett area contains the main Hewett field and six adjacent satellite fields: Big Dotty, Little Dotty, Deborah, Dawn, Della, and Delilah. The main Hewett Field, Big Dotty, Little Dotty and Deborah are in a single unitised licensed area.

Refer to Section 1.8, Figure 1-2 for relative layout of the facilities.

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The following Marine protected areas are within 40km of the Hewett Field infrastructure (Figure 1-4), the potential impacts and associated controls regarding Marine Protection are outlined in the environmental appraisal associated with and referenced in this decommissioning programme(s).

Table 2 – Marine Protected Areas

Marine Protected Areas (within 40km of the Project)	
Special Area of Conservation (SAC)	- All pipelines partially within the Southern North Sea SAC - PL20, PL21, PL083, PL084, PL085 and PL087 partially within the Haisborough, Hammond and Winterton SAC
Special Protection Area (SPA)	PL20 and PL21 partially within the Greater Wash SPA
Marine Conservation Zone (MCZ)	PL20 and PL21 partially within the Cromer Shoal Chalk Beds MCZ

1.5.1 Fields

Hewett Development gas production has now ceased gas export to sales due to reservoir pressure dropping below the level where economic production is no longer feasible. Cessation of Production was achieved in Q2 2023. Decommissioning of the field is therefore required to ensure the surrounding environment is suitable for safe future use. As the Hewett field topside and subsea infrastructure is outside its working design life, it is deemed to be unacceptable for re-use.

The Hewett Field straddles all five of the blocks above and accesses the gas from three production platforms, 48/29-A, 48/29-B and 52/5-A. The two additional platforms 48/29-FTP and 48/29-Q are bridge-linked to the 48/29-A platform (this group also known as the 48/29-A Complex or Central Complex).

Big Dotty field straddles 48/29a and 48/30a blocks and the wells are accessed from the 48/29-C platform. Deborah and Little Dotty fields are situated entirely in block 48/30a. The Deborah Field is accessed via three subsea wells tied back to 48/29-C. Little Dotty is accessed by two subsea wells, one tied back to 48/29-FTP and the other tied back to 48/29-A via a tee into the Della flowline. Dawn is tied back to 48/29-C platform, and Della and Delilah are tied back to the 48/29-A Complex.

1.6 Overview of Pipeline(s) Being Decommissioned

This document describes the decommissioning programmes, for the Hewett Field Pipelines, Umbilicals and their associated Stabilisation materials.

Hewett Subsea Protection structures are addressed in a separate decommissioning programme which has been approved by OPRED. The Hewett Field Platforms decommissioning program has now been approved.

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Table 3 – Field Information

Field Information			
Field(s)	Hewett, Dawn, Deborah, Della, Delilah, Little Dotty, Big Dotty Fields	Production Type (Oil/Gas/Condensate)	Gas/ Condensate
Water Depth (m)	33.0m – 38.0m	UKCS block	Quad 48 Blocks 29a and 30a
Distance to median (km)	82km approx.	Distance from nearest UK coastline (km)	22km approx.
Overall Number of Pipelines / Umbilicals / Jumpers			
Subsea			
33			

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

Section 29 Notice Holder(s)	Registration Number	Equity Interest (%) <i>If zero show 0%</i>
S29 Reference – S29/147/07, S29/149/07, S29/156/07, S29/209/07, S29/432/07, S29/433/07, S29/435/07, S29/436/07 Pipelines – PL1177, PL1323, PL1324, PL1325, PL1629.1, PL1629.2, PL1629.3, PL1629.4, PL1630, PL446, PL446.1, PL584, PL585, PL586, PL20, PL21, PL83, PL84, PL85, PL86, PL87, PL135.1, PL135.2, PL136.1, PL136.2, PL1173, PL1174.1, PL1174.2		
Chrysaor Petroleum Company U.K. Limited	00792712	0%
Eni Hewett Limited	SC090159	0%
Eni UK Limited	00862823	89.31333%
Perenco Gas (UK) Limited	00715529	10.68667%
S29 Reference – S29/16/19, S29/22/19 Pipeline – PLU4688, PLU4689, PLU4690, PLU4743		
Eni Hewett Limited	SC090159	0%
Eni UK Limited	00862823	89.31333%
Perenco Gas (UK) Limited	00715529	10.68667%

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Table 5 – Existing 3RD Party and Cable Crossings

Pipeline	Status	Burial Status					
		1997	2004	2013	2017	2021 ⁽²⁾	2023 ⁽²⁾
PL20 ¹	Under- PL25 30" Shell Leman	0.914	>70%	93.7%	-	100%	-
PL21 ¹	Over – PL25 30" Shell Leman	0.724	>64%	74.2%	-	100%	100%
PL84	Over – PL25 30" Shell Leman	0.907	>81%	84.9%	-	100%	-
PL85	1. Over – PL25 30" Shell Leman 2. Over -Telephone Cable (Bacton Borkum No. 2 AJ)	0.846	>90%	90%	-	100%	100%
PL1323	Over – PL25 30" Shell Leman	-	-	-	-	100%	100%
PL584 / 585	Over – PL25 30" Shell Leman	-	-	-	-	100%	100%
PL1173	Over - PL370 24" IOG	-	-	-	-	100%	-

Note: 1. Pipelines with Concrete coating (60mm)
2. 2021/2023 survey showed the pipeline KP identified but pipe buried

ENI have discussed the decommissioning proposals with the operators of the third-party pipelines / cables.

All pipeline crossings will be left in-situ during decommissioning, with any trenching or cut & lift intervention of Hewett pipelines ceasing at a minimum of 10 m from either side of the crossing to ensure the crossing is left undisturbed and to prevent risk adversely affecting live pipelines. Any free-span or instability found will be subject to remediation by mattressing of at the location.

1.7 Summary of Proposed Decommissioning Solutions

The proposed decommissioning solution chosen is based on the recommendation by the CA study and based on the areas of: -

- **Safety** (i.e. risk exposure both offshore and onshore when considering leave in-situ vs full removal and given that there is a commitment to survey / monitor pipelines to ensure any snagging risk in managed).
- **Environmental impact** (i.e. Leave in-situ vs full removal from an operational marine impact perspective when considering seabed disturbance, Multiple cut pipe sections resulting in greater noise impact and Vessel emissions / fuel use. Also, the proximity of pipelines to protect areas).
- **Technical feasibility** (i.e. Technical risk and challenges associated to the scale of removal).
- **Societal impact** (i.e. Socio-economic impact on amenities, communities and fishing).
- **Economics** (i.e. Decommissioning cost when considering leave in-situ vs full removal).

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Table 6 - Summary of Decommissioning Solutions

Proposed Decommissioning Solution	Reason for Selection
Group 1 – Concrete Coated Export Pipelines PL20 & PL21 <u>Leave In-Situ</u> Disconnection and removal of the pipeline ends and spools at 48/29A-FTP Platform end (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed. Exposed/spanning pipeline sections, trenched to a minimum depth of burial of 0.6m ToP. (For trenching / lowering pipelines either a plough, MFE or jet trencher will be used with a contingency of cut & removal to vessel be utilised should trenching be unsuccessful). Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ.	Comparatively assessed as preferred option. Most of the pipelines are trenched and buried to 0.6m DOC (Refer to Table 22) and stable posing no risk to marine users. Minimal seabed disturbance. Lower energy use Reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas. Crossings progressively buried over time. No interaction with third-party facilities
Group 2 – Concrete Coated Infield Pipeline (incl piggyback pipeline) PL83, PL84, PL85, PL86 (incl PL135.1 & PL135.2) PL87 (incl PL136.1 & PL136.2) <u>Leave In-Situ</u> Disconnection and removal of the pipeline end and spools (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed. Exposed/spanning pipeline sections, trenched to a minimum depth of burial of 0.6m ToP. (For trenching / lowering pipelines either a plough, MFE or jet trencher will be used with a contingency of cut & removal to vessel be utilised should trenching be unsuccessful). Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ.	Comparatively assessed as preferred option. Most of the pipelines are trenched and buried to 0.6m DOC (Refer to Table 22) and stable posing no risk to marine users. Minimal seabed disturbance. Lower energy use Reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas. Crossings progressively buried over time. No interaction with third-party facilities
Group 3 Non-Concrete Coated Infield Pipeline (in piggyback umbilical)	Comparatively assessed as preferred option.

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Proposed Decommissioning Solution	Reason for Selection
PL584 (incl PL585 & PL586) PL1173 (incl PL1174.1, PL1174.2) PL1177 (incl PLU4688) <u>Leave In-Situ</u> Disconnection and removal of the pipeline end and spools (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed. Exposed / spanning pipeline sections trenched to a minimum depth of burial of 0.6m ToP. (For trenching / lowering pipelines either a plough, MFE or jet trencher will be used with a contingency of cut & removal to vessel be utilised should trenching be unsuccessful). Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ.	Most of the pipelines are trenched and buried to 0.6m DOC (Refer to Table 22) and stable posing no risk to marine users. Minimal seabed disturbance. Lower energy use Reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas. Crossings progressively buried over time. No interaction with third-party facilities
Group 4 – Umbilicals (standalone) PLU4689, PLU4690, PLU4743, PL1323, U30-8 <u>Full Removal</u> Recovery of the entire line by reverse installation utilising Reel Lay vessel. Umbilical will be exposed in trench if buried as required. Stabilisation mats over umbilical will be removed and recovered. Umbilical and mats returned to shore for recycling or appropriate treatment and disposal.	Comparatively assessed as preferred option. Meets regulatory convention requirements.
Group 5 – Flexible Flowlines and Jumpers PL1324, PL1325, PL1629.1, PL1629.2, PL1629.3, PL1629.4, PL1630, PL446, PL446.1 <u>Full Removal</u> Disconnection of the jumper ends and recovery of the entire line by reverse installation utilising Reel Lay vessel or Cut & Lift. Stabilisation mats over Jumpers will be removed and recovered.	Comparatively assessed as preferred option. Meets regulatory convention requirements.

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Proposed Decommissioning Solution	Reason for Selection
Returned to shore for recycling or appropriate treatment and disposal.	
Group 6a - Exposed Mattresses / Partially Buried Mattresses <u>Full Removal</u> Returned to shore for recycling or appropriate treatment and disposal. In the event of unsafe conditions and practical difficulties in recovery, mattresses shall be left in-situ	Comparatively assessed as preferred option. Meets regulatory convention requirements. Surveys will be performed immediately prior to Mattress removal and if found to be fully buried then left in Situ as per Group 6b.
Group 6b - Buried Mattresses <u>Left In-Situ</u> Buried Mattresses left in Situ.	Mattresses shown to be fully buried with minimum of 0.6m burial cover. Mattresses form part of pipeline stabilisation feature and were included as part pipeline decommissioning option within the Comparative Assessment Mattresses have been shown to be stably buried over last 20 years of regular offshore surveys. No seabed disturbance in a SAC & MCZ protected areas
Group 7a – Exposed Grout Bags Returned to shore for recycling or appropriate treatment and disposal. In the event of unsafe conditions and practical difficulties in recovery grout bags shall be left in-situ.	Full Removal Meets regulatory convention requirements. Surveys will be performed immediately prior to Grout bag removal and if found to be fully buried then left in Situ as per Group 7b.
Group 7b - Buried Grout Bags <u>Left In-Situ</u> Buried grout bags left in Situ.	Grout bags shown to be fully buried with minimum of 0.6m burial cover. Grout bags forming part of pipeline stabilisation feature and were included as part pipeline decommissioning option within the Comparative Assessment Grout bags have been shown to be stably buried over last 20 years of regular offshore surveys. No seabed disturbance in a SAC & MCZ protected areas
Notes: 1. The burial extent of each pipeline is presented in Annex C – Pipeline Burial Status	

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Proposed Decommissioning Solution	Reason for Selection
2. All recovered quantities shall be returned to shore for appropriate reuse, recycling, or disposal. 3. All pipelines will be flushed and cleaned prior to removal commencing. Any umbilicals that suffered a loss of integrity or contained environmentally friendly fluids were reviewed and dispensation received for not flushing. 4. PL20 is currently subsea in 2 sections following previous removal of the damaged section from KP15.635 to KP15.156. The PL20 pipeline cut end sections left at these KPs of PL20 shall be capped and buried to at least 0.6m. 5. All pipeline crossings will be left in-situ during decommissioning. Trenching or cut & lift as the case maybe will be stop at a minimum of 10 m either side of the crossing ensuring that we do not disturb the crossing or risk adversely affecting live pipelines. Any free-span or instability found will be subject to remediation by mattressing of at the location. 6. For protection and stabilisation features (such as concrete mattresses), where they protect a pipeline left in-situ and these protection / stabilisation features become exposed or partially buried, they shall remain in-situ to maintain the pipeline protection / stability. An assessment will be performed to determine if the feature can be recovered on a case-by-case basis, without impacting the pipeline protection / stabilisation (the assessment will also consider if the feature poses a snagging risk), If not OPRED will be consulted where the recovery of exposed / partially buried features is not deemed feasible. 7. Concrete Mattresses that have disintegrated, have broken into pieces or broken into individual blocks will not be recovered as it is deemed, they will self-bury. These will be monitored as part of the future survey campaigns to assess their location and determine if they are deemed to be a risk to other user of the sea.	

1.8 Field Location, Field Layout & Adjacent Facilities

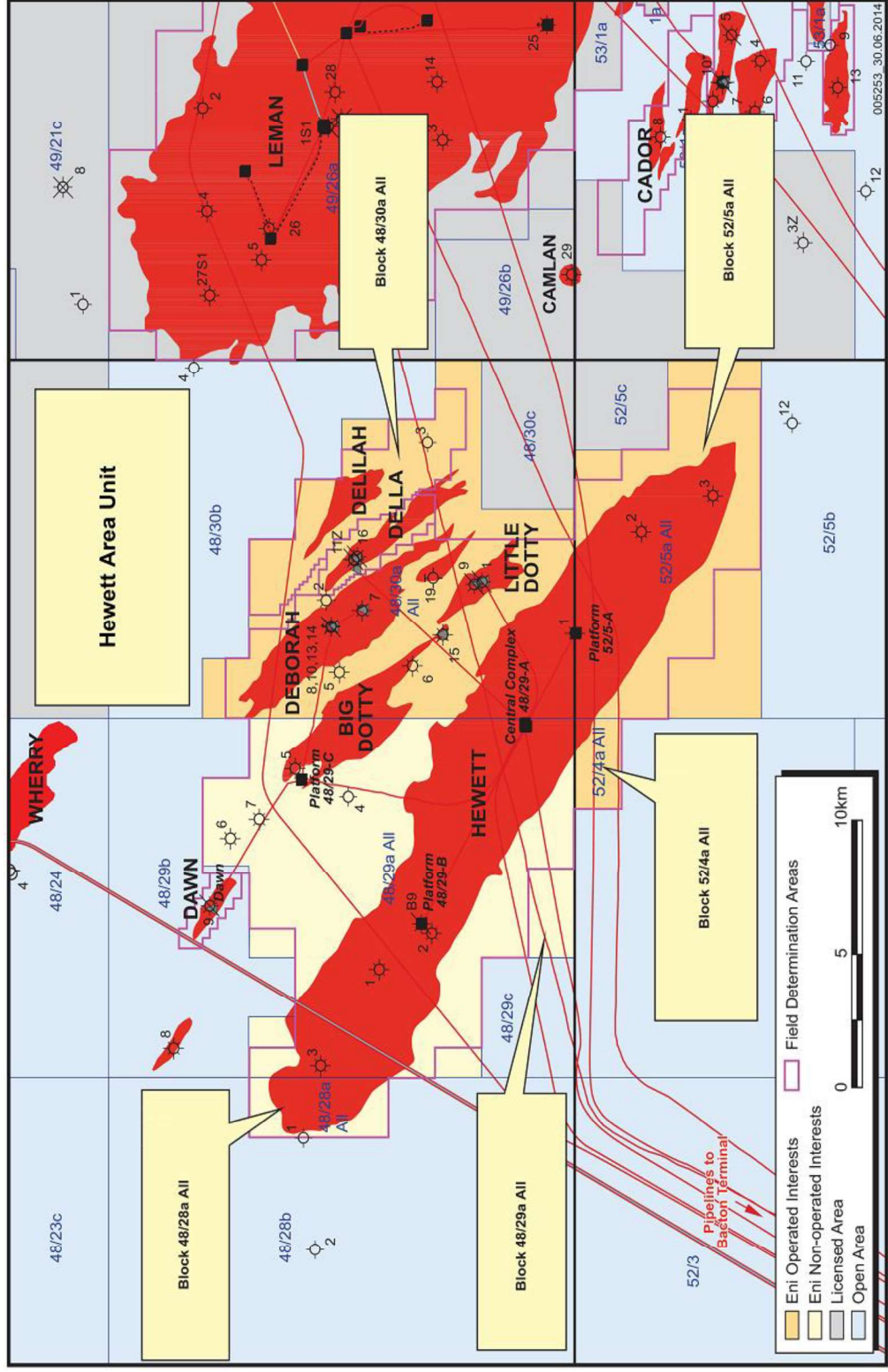


Figure 1-1: Field Location

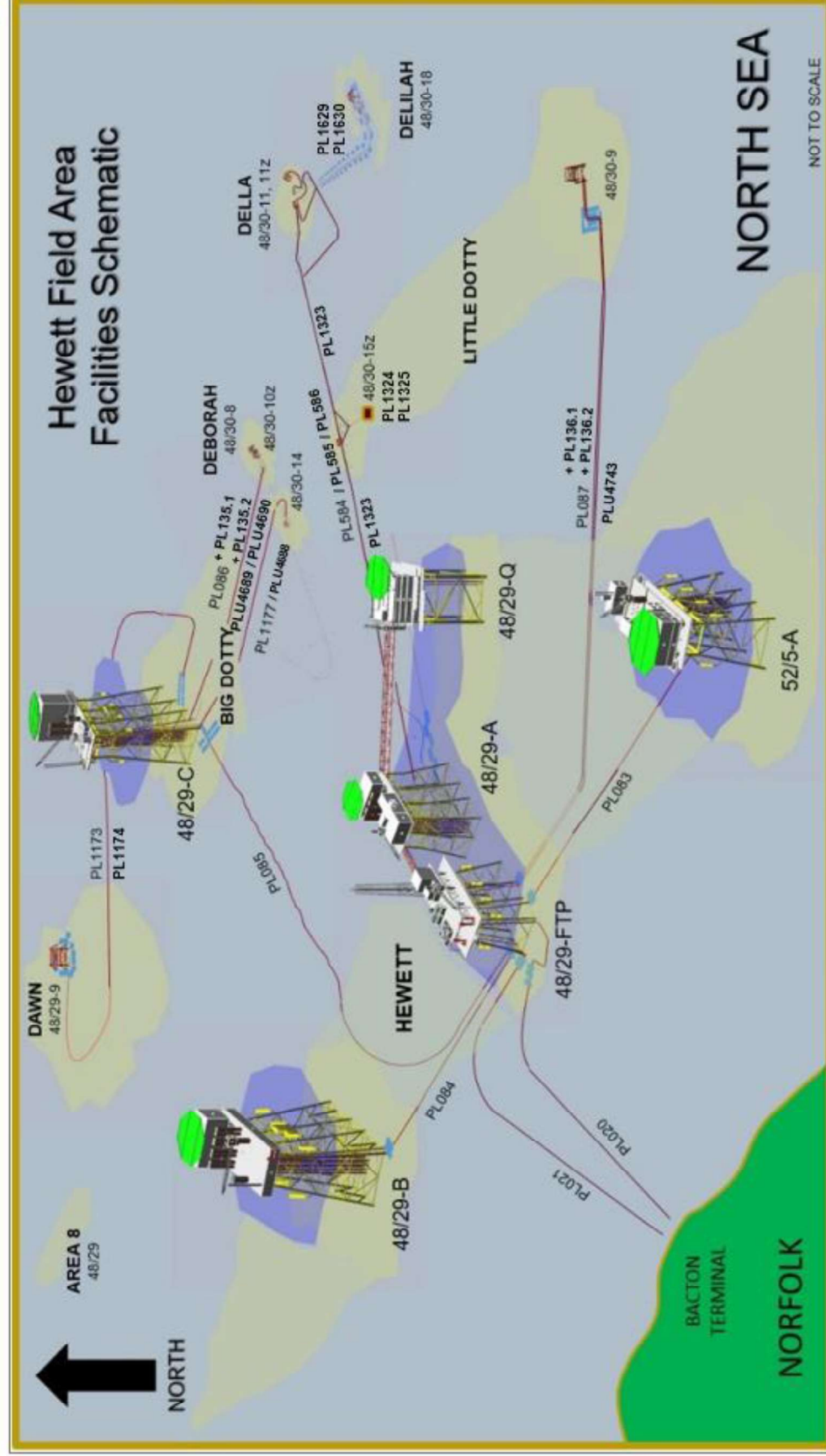


Figure 1-2: Field Layout

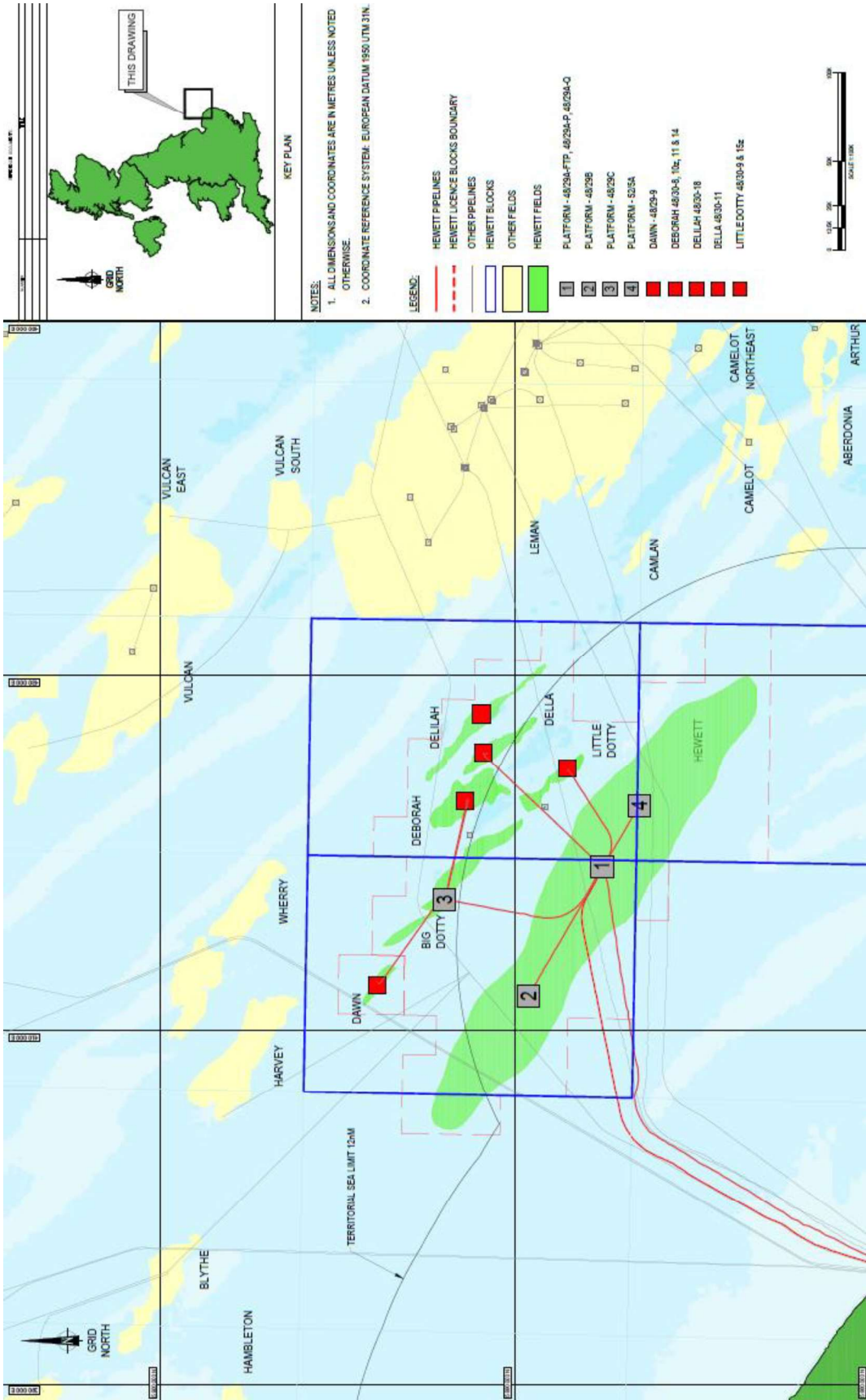
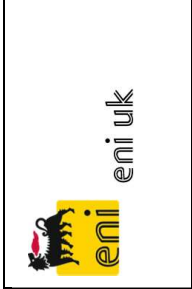


Figure 1-3: Adjacent Facilities



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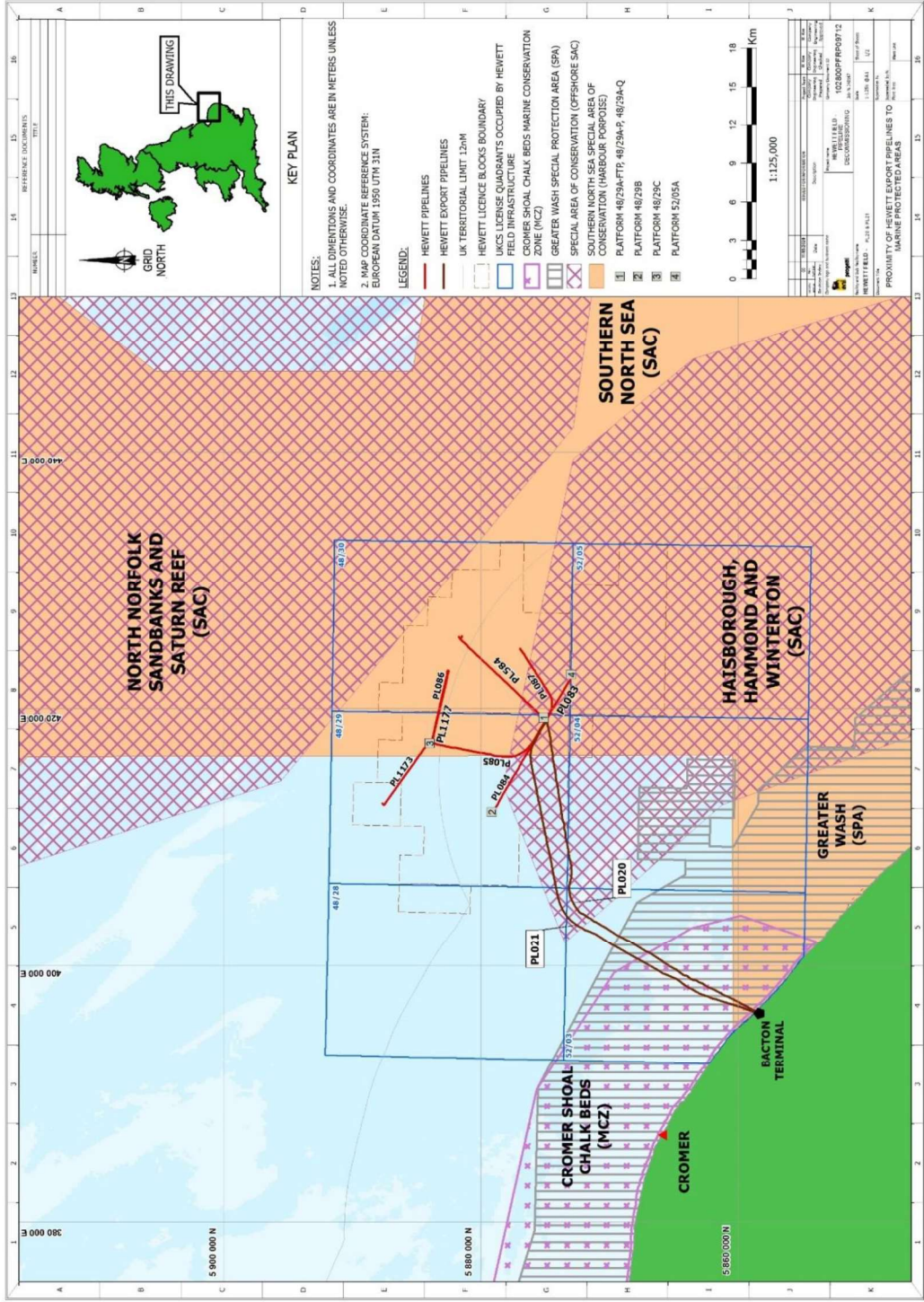


Figure 1-4: Proximity of Hewett Pipelines to Marine Protected Areas

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1.8.1 Adjacent facilities

Facilities adjacent to the Hewett Pipelines which are potentially impacted by these decommissioning programme(s) are listed below in Table 7 and in Figure 1-3 above.

Table 7 - Adjacent Facilities

Operator	Name	Type	Information	Status
Eni	Platform 48/29-FTP	Offshore Gas Platform	Gas production from Little Dotty 48/30-9 and 48/29-C (Deborah & Dawn) are routed towards 48/29-FTP, where it is commingled with gas from other Hewett Fields and exported onward to Bacton Onshore Terminal via PL21	Removed
Eni	Platform 48/29-A	Offshore Gas Platform	Gas production from Della, Little Dotty & Delilah are routed towards 48/29-A	Removed
Eni	Dawn Subsea Well 48/29-9	Subsea Well & WHPS	Gas production from Dawn routed to 48/29-C Platform	Well P&A to AB2 & Disconnected
Eni	Deborah 48/30-8 Subsea Well	Subsea Well & WHPS	Gas production from Deborah routed to 48/29-C Platform	Well P&A to AB2 & Disconnected
Eni	Deborah 48/30-10 Subsea Well	Subsea Well & WHPS	Gas production from Deborah routed to 48/29-C Platform	Well P&A to AB2 & Disconnected
Eni	Deborah 48/30-14 Subsea Well	Subsea Well & WHPS	Gas production from Deborah routed to 48/29-C Platform	Well P&A to AB2 & Disconnected
Eni	Little Dotty Subsea Well 48/30-9	Subsea Well & WHPS	Gas production from Little Dotty routed to 48/29-FTP Platform	Well P&A to AB2 & Disconnected
Eni	Little Dotty Subsea Well 48/30-15	Subsea Well & WHPS	Gas production from Little Dotty routed to 48/29-A Platform	Well P&A to AB2 & Disconnected
Eni	Della Subsea Well 48/30-11z	Subsea Well & WHPS	Gas production from Della routed to 48/29-A Platform	Well P&A to AB2 & Disconnected
Eni	Delilah Subsea Well 48/30-18	Subsea Well & WHPS	Gas production from Delilah routed to 48/29-A Platform	Well P&A to AB2 & Disconnected
Eni	Pipeline End Module (PLEM)	Subsea Structure	Protective structure to pipeline end terminations and SUTU	Disconnected
Eni	Midline Termination Module (MTM)	Subsea Structure	Protective structure to midline tee and SUTU	Disconnected

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Operator	Name	Type	Information	Status
Eni	Bacton Onshore Terminal Mean High Water Spring at shore	Pipeline Landfall	Gas production from Hewett 48/29-FTP Platform routed via PL21. Scope to battery limit Mean High Water Spring at shore	Non-Operational

Impacts of Decommissioning Proposals
There are no direct impacts on adjacent facilities from the decommissioning / removal of the Hewett pipelines, Umbilicals, jumpers or stabilisation features. Short term environmental impacts associated with this activity are detailed in Section 4.

1.9 Industrial Implications

Eni is actively engaging with the market and other operators decommissioning in the SNS (e.g., Perenco) to maximise the value of past lessons learned and will be taking advantage of industry conferences to present the project to prospective contractors.

Eni is liaising with the North Sea Transition Authority (NSTA), to provide more details through a Supply Chain Action Plan (SCAP).

2.0 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Pipelines Including Stabilisation Features

Table 8- Pipeline / Umbilical Features

No.	Description	Pipeline No (As per PWA)	Diameter NB (mm)	Approx. Length (km)	Description of Components parts	Product Conveyed	From – To End points	Survey Date	Burial Status	Pipeline Status	Current Status
1	Gas Export Pipeline	PL20	762.0	27.320	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Disconnected End Adjacent to FTP to Bacton Onshore Terminal Sphere Receiver ¹	Last full route inspection = 2021 In addition: - 7 x AOIs inspected 2023: - (5 x Free-spans Identified) (2 x Cut pipe ends identified)	6% of pipeline exposed ¹ 1 x FishSAFE span: - (Length = 40m) ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29A FTP Platform now removed. (Open to sea) (Capped and buried to 0.8m DOC at KP15.635 and KP15.156 respectively. Section between the open ends has been removed in 2017 due to previous pipeline buckle occurring).
2	Gas Export Pipeline	PL21	762.0	32.690	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Disconnected End Adjacent to FTP to Bacton Onshore Terminal Sphere Receiver ¹	Last full route inspection = 2023 In addition: - 9 x AOIs inspected 2023: - (9 x Free-spans Identified)	35% of pipeline exposed ¹ 2 x FishSAFE spans: - (Length = 14.1m / 11.2m) ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29A FTP Platform now removed (Open to sea)
3	Gas Pipeline	PL83	609.6	3.930	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Cut Point A to Cut Point B	Last Full route inspection = 2021 In addition: - 8 x AOIs inspected 2023: - (6 x Free-spans not identified / not found)	13% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29A FTP Platform now removed and 52/5A Platform now removed (Open to sea) Section of pipeline within 52-5A Platform 500m zone identified as debris ³
4	Gas Pipeline	PL84	609.6	8.382	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Disconnection point A to Disconnection point B	Last full route inspection = 2021 In addition: - 2 x AOIs inspected 2023: - (2 x Free-spans Identified)	26% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at Central Complex (FTP) Platform now removed. Disconnected at 48/29B Platform now removed (Open to sea)
5	Gas Pipeline	PL85	609.6	9.303	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Disconnection point A to Disconnection point B	Last full route inspection = 2023 In addition: - 7 x AOIs inspected 2023: - (7 x Free-spans Identified)	31% of pipeline exposed ¹ 1x FishSAFE span: - (Length = 11.9m) ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at Central Complex (FTP) Platform now removed. Disconnected at 48/29C Platform now removed (Open to sea)

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6	Gas Pipeline	PL86	254.0	5.750	Carbon Steel (Coal Tar Enamel & Concrete Coating)	Gas, Condensate, Water	Disconnected End Adjacent 48/30-8 to Cut Point A	Last full route inspection = 2021 No AOIs	4% of pipeline exposed' No FishSAFE spans?	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29C Platform now removed and disconnected at 48/30-8 (Open to sea)
7	Service Pipeline	PL135.1	60.3	6.000	Carbon Steel (Fusion Bonded Epoxy Coating)	Methanol, MEG	Disconnected End Adjacent 48/30-8 to Cut Point A	Refer to PL86 (PL135.1 piggybacked on PL86)	Trenched & Buried (as per PL86)	Out of use	PL135.1 Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29 – C and XT (Open to sea)
8	Service Pipeline	PL135.2	60.3	6.000	Carbon Steel (Fusion Bonded Epoxy Coating)	Methanol, MEG	Cut Point A to Disconnected End adjacent to Well 48/30-14	(PL135.2 piggybacked on PL86)	Trenched & Buried (as per PL86)	Out of use	PL135.2 Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29C Platform now removed and XT (Open to sea)
9	Gas Pipeline	PL446	168.3	0.015	Composite Flexible pipe	Gas, Condensate, Water	Adjacent Well 48/30-10 to Adjacent Well- 48/30-8	Last full route inspection = 2021 No AOIs	Surface laid	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at Subsea wells 8 & 10 (Open to sea)
10	Service Pipeline	PL446.1*	60.3	0.070	Composite Flexible pipe	Methanol, MEG	PL135.1 to 48/30- 10 Subsea Well Tie in Flange	Last full route inspection = 2021 No AOIs	Surface laid	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at PL135 and XT (Open to sea)
11	Gas Pipeline	PL1177	219.1	5.900	Carbon Steel (Fusion Bonded Epoxy Coating)	Gas, Condensate, Water	Disconnected End Adjacent to Well 48/30-14 to Disconnected End A	Last full route inspection = 2021 No AOIs	0% of pipeline exposed' No FishSAFE spans?	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29C Platform now Removed and disconnected at 48/30-14 (Open to sea)
12	Umbilical	PLU4688	83.8	5.930	Hydraulic Control umbilical	Water Based Hydraulic Fluid	Disconnected End A to Disconnected End Adjacent to SS well 48/30-14	Refer to PL1177	Trenched & Buried (as per PL1177)	Out of use	Flushing Not Required 100% Filled With Environmentally Friendly Fluid Disconnected at 48/29-C Platform now Removed and Disconnected at 48/30-14
13	Umbilical	PLU4689	75.7	5.805	Hydraulic Control umbilical	Water Based Hydraulic Fluid	Disconnection Point A to Disconnected End Adjacent to 48/30-8 Subsea well	Last full route inspection = 2019 No AOIs	29% of pipeline exposed' No FishSAFE spans?	Out of use	Flushing Not Required 100% Filled With Environmentally Friendly Fluid Disconnected at 48/29C Platform now removed and disconnected at 48/30-8
14	Umbilical	PLU4690*	75.5	5.905	Hydraulic Control umbilical	Water Based Hydraulic Fluid	Topside Hydraulic Control Panel (48/29C Platform) to Subsea Hydraulic Control System (48/30-10 Well)	Last full route inspection = 2019 No AOIs	28% of pipeline exposed' No FishSAFE spans?	Out of use	Flushing Not Required 100% Filled With Environmentally Friendly Fluid Disconnected at 48/29-C and XT NOT USED - Will be removed from the register once PWA submitted

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15	Umbilical (Redundant)	U30-8 (Redundant – No S29 number issued as yet. New PWA submitted)	219.1	5,900	Hydraulic Control umbilical	Water Based Hydraulic Fluid	Umbilical not connected at either end	Not surveyed	-	Out of use	Flushing Not Required 100% Filled With Environmentally Friendly Fluid Not Connected
16	Gas Pipeline	PL1173	219.1	6,070	Carbon Steel (Fusion Bonded Epoxy Coating)	Gas, Condensate, Water	Disconnected End Adjacent to Well- 48/29- 9 to Cut Point A	Last full route inspection = 2021 In addition: - 5 x AOLs inspected 2023: - (2 x Free-spans Identified) (3 x pipeline exposure areas not identified)	5% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29-C Platform now Removed and disconnected at 48/29-9 (Open to sea)
17	Umbilical	PL1174.1	124.5	6,100	Electro, Hydraulic & Chemical Control umbilical	Water Based Hydraulic Fluid, MEG, Methanol	Cut Point A to Disconnected End Adjacent to Well- 48/29- 9	Last full route inspection = 2021 In addition: - 5 x AOLs inspected 2023: - (2 x Free-spans Identified) (3 x pipeline exposure areas not identified)	Trenched & Buried (as per PL1173 and piggybacked)	Out of use	All MEG Lines / Hydraulic Lines Flushed 100% Seawater Filled Disconnected at 48/29-C Platform now Removed and disconnected at 48/29-9
18	Umbilical	PL1174.2	124.5	6,100	Electro, Hydraulic & Chemical Control umbilical	Water Based Hydraulic Fluid, MEG, Methanol	Cut Point A to Disconnected End Adjacent to Well- 48/29- 9	Last full route inspection = 2021 In addition: - 5 x AOLs inspected 2023: - (2 x Free-spans Identified) (3 x pipeline exposure areas not identified)	Trenched & Buried (as per PL1173 and piggybacked)	Out of use	All MEG Lines / Hydraulic Lines Flushed 100% Seawater Filled Disconnected at 48/29-C Platform now Removed and disconnected at 48/29-9
19	Gas Pipeline	PL87	219.1	6,090	Carbon Steel (Coal Tar Etnamel & Concrete Coating)	Gas, Condensate, Water	Disconnected End Adjacent Well- 48/30- 9 to Cut Point A	Last full route inspection = 2021 In addition: - 3 x AOLs inspected 2023: - (1 x Free-span Identified) (2 x Free-spans not identified)	2% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at 48/29A FTP Platform now removed and disconnected at 48/30-9 (Open to sea)
20	Service Pipeline	PL136.1	60.3	6,040	Carbon Steel (Fusion Bonded Epoxy Coating)	Methanol, MEG, Corrosion Inhibitor	Disconnected End Adjacent 48/30-9 to Cut Point A	Refer to PL87 (PL136.1 is piggybacked on PL87)	Trenched & Buried (as per PL87)	Out of use	Flushed and Cleaned Disconnected at Central Complex (FTP) Platform now removed. 100% Seawater Filled Disconnected at 48/30-9 (Open to sea)
21	Service Pipeline	PL136.2	60.3	6,040	Carbon Steel (Fusion Bonded Epoxy Coating)	Methanol, MEG, Corrosion Inhibitor	Disconnected End Adjacent 48/30-9 to Cut Point A	Refer to PL87 (PL136.2 is piggybacked on PL87)	Trenched & Buried (as per PL87)	Out of use	Flushed and Cleaned Disconnected at Central Complex (FTP) Platform now removed. 100% Seawater Filled Disconnected at 48/30-9 (Open to sea)

22	Umbilical	PLU4743	74.9	7.650	Hydraulic Control umbilical	Water Based Hydraulic Fluid	Disconnection Point A to Disconnected End Adjacent to 48/30-9 Subsea Well	Refer to PL87 (PLU4743 is piggybacked on PL87)	14% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	100% Filled with Environmentally Friendly Fluid Disconnected at Central Complex (FTP) Platform now removed. Disconnected at 48/30-9
23	Umbilical Jumper	PL1324	119.9	0.254	Electro, Hydraulic & Chemical Control umbilical	Water Based Hydraulic Fluid, MEG Methanol	Midline Termination Module to Adjacent to Subsea Well 48/30-15	Last full route inspection = 2019 No AOIs	Surface Laid	Out of use	All MEG Lines / Hydraulic Lines Flushed 100% Filled with Environmentally Friendly Fluid Disconnected at MTM and 48/30 -15
24	Gas Jumper	PL1325	219.1	0.254	Composite Flexible pipe	Gas, Condensate, Water	Adjacent to Subsea Well 48/30-15 to Adjacent to Midline Termination Module	Last full route inspection = 2019 No AOIs	Surface Laid	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected 48/30-15 and MTM (Open to sea)
25	Gas Pipeline	PL584	273.1	9.198	Carbon Steel (Fusion Bonded Epoxy Coating)	Gas, Condensate, Water	Disconnected end Adjacent to Well- 48/30-11 to Cut- Point C Adjacent to Hewett Platform	Last full route inspection = 2023 In addition: - 3 x AOIs inspected 2023: - (1 x Free-span identified)	8% of pipeline exposed ¹ No reportable FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at Central Complex (29A-P) Platform now removed. Disconnected at 48/30-11 (Open to sea)
26	Umbilical	PL1323	131.1	9.550	Electro, Hydraulic & Chemical Control umbilical	Water Based Hydraulic Fluid, MEG Methanol	Cut Point A Adjacent to Platform 48/29 A-P to Cut Point F Adjacent to Subsea Well 48/30-11	Last full route inspection = 2023 No AOIs	3% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Flushed and Cleaned 100% Seawater Filled Not Disconnected at Central Complex (29A) Platform now removed. Disconnected at Subsea Well
27	Umbilical (Redundant)	PL585	96.5	9.362	Electro, Hydraulic & Chemical Control umbilical (UMB installed in 2 sections, 1 st section = PL585, 2 nd section = PL586)	Water Based Hydraulic Fluid, MEG Methanol	Disconnected end Adjacent to Well- 48/30-11 to Cut- Point C Adjacent to Hewett Platform	Refer to PL584	Trenched & Buried (as per PL584)	Out of use	Flushing Not Required, 100% Filled with Environmentally Friendly Fluid Line cannot be flushed due to integrity issues. Disconnected at 48/29A Platform now removed. Disconnected at 48/30-11
28	Umbilical (Redundant)	PL586	96.5	9.362	Electro, Hydraulic & Chemical Control umbilical (UMB installed in 2 sections, 1 st section = PL585, 2 nd section = PL586)	Water Based Hydraulic Fluid, MEG Methanol	Disconnected end Adjacent to Well- 48/30-11 to Cut- Point C Adjacent to Hewett Platform	Refer to PL584	Trenched & Buried (as per PL584)	Out of use	Flushing Not Required, 100% Filled with Environmentally Friendly Fluid Line cannot be flushed due to integrity issues. Disconnected at 48/29A Platform now removed. Disconnected at 48/30-11
29	Umbilical Jumper	PL1629.1	19.0	0.260	Chemical Core	MEG, Methanol	Adjacent to Della PLEM to Adjacent to Della Umbilical JUT	Last full route inspection of umbilical = 2023 No AOIs	Surface Laid	Out of use	Flushed and Cleaned 100% Seawater Filled Disconnected at PLEM and XT
30	Umbilical Jumper	PL1629.2	19.0	0.255	Chemical Core	MEG, Methanol	Adjacent to Della PLEM to Adjacent to Della Tree Connector	Last full route inspection of umbilical = 2023 No AOIs	Surface Laid	Out of use	Could not be found and not connected to XT during 2025 umbilical flushing campaign. Disconnected at PLEM and XT

31	Umbilical Jumper	PL1629.3* *This will be removed after consultation with the NSTA	19.0	0.250	Hydraulic Core	Water based Hydraulic Fluid	Dellah Umbilical JUT to Dellah Umbilical JUT	N/A	Surface Laid	Out of use	Flushing Not Required 100% Filled with Environmentally Friendly Fluid Disconnected at PLEM and XT
32	Umbilical Jumper	PL1629.4* *This will be removed after consultation with the NSTA	19.0	0.250	Chemical Core (Spare)	MEG, Methanol	Dellah Umbilical JUT to Dellah Umbilical JUT	N/A	Surface Laid	Spare, Not Used / Not Connected	Unknown
33	Gas Jumper	PL1630	219.1	0.268	Composite Flexible pipe	Gas, Condensate, Water	Adjacent to Dellah Xmas Tree to Adjacent to Della PLEM	Last full route inspection = 2023 No AOIs	4% of pipeline exposed ¹ No FishSAFE spans ²	Out of use	Clean, Free of Hydrocarbon 100% Seawater Filled Disconnected at PLEM and XT (Open to sea)

¹ As per pipeline survey length

² As per FishSAFE reporting criteria "Significant" pipeline span (greater than 10m length AND 0.8m Height)

³ A pipeline section within 52-SA Platform 500m zone and within proximity to PL83 has been identified, which will be monitored and is considered as debris.

⁴ Offshore sections of pipelines only. Offshore section battery limits defined as pipeline up to Mean High Water Spring at shore, see Annex B

Table 9 - Stabilisation Features

Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
Concrete Mats on PL20	167	1394	KP 0.000 to KP 0.253 – 118 mats	Partially Buried - Condition unknown - 1994
			KP 0.478 to KP 0.540 – 3 mats	Buried (DOC 0.7m to 2.75m) - Condition unknown - 1994
			KP 2.178 to KP 2.235 – 18 mats	Buried (DOC 1.28m to 2.97m) - Condition unknown – 1994 & 1997
			KP 2.580 to KP 2.690 – 6 mats	Exposed – Condition Good - 2019
			KP 2.893 to KP 2.936 – 6 mats	Partially Buried - Condition unknown - 1997
			KP 2.931 to KP 2.999 – 6 mats	Exposed – Condition Good - 2019
			KP 3.142 to KP 3.177 – 2 mats	Partially Buried - Condition unknown - 1998
			KP 3.353 to KP 3.377 – 8 mats	DOC - Condition unknown - 2002
Concrete Mats on PL21	112	935	KP 0.000 to KP 0.032 – 11 mats	Partially Buried - Condition unknown - 1994
			KP 0.084 to KP 0.128 – 6 mats	Partially Buried - Condition unknown - 1996
			KP 0.150 to KP 0.190 – 12 mats	Partially Buried - Condition unknown - 1994
			KP 0.232 to KP 0.259 – 1 mat	Partially Buried - Condition unknown - 1999
			KP 0.252 to KP 0.311 – 10 mats	Exposed – Condition Good - 2019
			KP 0.340 to KP 0.393 – 11 mats	Partially Buried - Condition unknown - 1997
			KP 0.390 to KP 0.420 – 1 mat	Partially Buried - Condition unknown - 2001
			KP 0.440 to KP 0.457 – 1 mat	Partially Buried - Condition unknown - 2001
			KP 0.473 to KP 0.491 – 1 mat	Partially Buried - Condition unknown - 1999
			KP 4.571 to KP 4.611 – 6 mats	Partially Buried - Condition unknown - 1997
Concrete Mats on PL83	86	718	KP 4.667 to KP 4.778 – 11 mats	Exposed – Condition Good - 2018
			KP 4.810 to KP 4.872 – 19 mats	Buried (DOC 0.6m to 2.64m) - Condition unknown - 1994
			KP 4.850 to KP 4.890 – 3 mats	Buried (DOC 1.82m to 2.76m) - Condition unknown - 1998
			KP 4.898 to KP 4.936 – 11 mats	Buried (DOC 2.2m to 2.8m) - Condition unknown - 1997
			KP 4.948 to KP 4.975 – 8 mats	Buried (DOC 2.6m to 2.86m) - Condition unknown - 1998
			KP 0.005 to KP 0.020 – 5 mats	Buried (DOC – >3m) - Condition unknown - 1994
			KP 0.051 to KP 0.145 – 31 mats	Partially Buried - Condition unknown - 1994
			KP 0.153 – 1 mat	Exposed – Condition Good - 2020
			KP 0.177 to KP 0.225 – 9 mats	Exposed – Condition Good - 2019

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Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
			KP 0.278 to KP 0.303 – 11 mats	Exposed – Condition Good - 2020
			KP 0.384 - 1 mat	Exposed – Condition Good - 2020
			KP 0.482 to KP 0.507 – 3 mats	Exposed – Condition Good - 2019
			KP 0.521 to KP 0.557 – 3 mats	Exposed – Condition Good - 2020
			KP 0.565 to KP 0.578 – 2 mats	Partially Buried - Condition unknown - 1997
			KP 0.697 to KP 0.727 – 11 mats	Exposed – Condition Good - 2019
			KP 1.623 to KP 1.657 – 1 mat	Partially Buried - Condition unknown - 1995
			KP 1.980 to KP 2.015 – 3 mats	Exposed – Condition Good - 2019
			KP 4.005 to KP 4.024 – 5 mats	Partially Buried - Condition unknown 1994
			KP 0.005 to KP 0.020 – 5 mats	Buried - Condition unknown - 1994
Concrete Mats on PL 84	62	518	KP 1.723 to KP 1.788 – 22 mats	Partially Buried - Condition unknown - 1994
			KP 8.082. to KP 8.150 – 22 mats	Partially Buried - Condition unknown – 1994
			KP 8.161 to KP 8.189 – 2 mats	Partially Buried - Condition unknown – 1999
			KP 8.346 to KP 8.400 – 5 mats	Partially Buried - Condition unknown – 1994
			KP 8.427 to KP 8.445 – 6 mats	Partially Buried - Condition unknown - 1994
Concrete Mats on PL 85	67	559	KP 0.005 to KP 0.020 – 5 mats	Buried (DOC – >3m) - Condition unknown - 1994
			KP 4.628 to KP 4.740 – 14 mats	Exposed – Condition Good - 2019
			KP 10.146 to KP 10.183 – 5 mats	Exposed – Condition Good - 2019
			KP 10.159 to KP 10.204 – 16 mats	Exposed – Condition Unknown - 1994
			KP 10.297 to KP 10.351 – 21 mats	Partially Buried - Condition unknown - 1994
Concrete Mats on PL 87	20	167	KP 10.425 to KP 10.441 – 6 mats	Buried (DOC – >3m) - Condition unknown - 1994
			KP 0.000 to KP 0.030 – 8 mats	Exposed – Condition Unknown – 1994
Concrete Mats on PL 135.1	9	75	KP 4.468 to KP 4.489 – 12 mats	Exposed - Condition Good - 2019
			KP 0.000 to KP 0.070 – 6 mats	Exposed – Condition Unknown - 1995
			KP 0.035 to KP 0.043 – 3 mats	Exposed – Condition Unknown - 1999
Concrete Mats on PL 584	18	150	KP 0.329 to KP 0.344 – 4 mats	Exposed – Condition Good - 2018
			KP 1.245 to KP 1.286 – 13 mats	Exposed – Condition Good - 2019
			KP 9.137 to KP 9.156 – 1 mat	Partially Buried - Condition unknown - 2000

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Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
Concrete Mats on PL1173 / PL1174	45	376	KP 0.000 to KP 0.080 – 7 mats	Buried– Condition Unknown - 1995
			KP 3.546 to KP 3.572 – 10 mats	Exposed – Condition Good - 2018
			KP 4.347 to KP 4.464 – 18 mats	Buried – Condition Unknown - 1995
			KP 5.927 to KP 6.038 – 10 mats	Buried – Condition Unknown - 1995
Concrete Mats on PL1177 / PLU4688	29	242	KP 0.000 to KP 0.050 – 17 mats	Buried – Condition Unknown - 1995
			KP 5.628 to KP 5.798 – 12 mats	Buried – Condition Unknown - 1995
Concrete Mats on PL1323	45	376	KP 0.071 to KP 0.164 – 15 mats	Buried – Condition Unknown - 1997
			KP 2.269 to KP 2.325 – 12 mats	Buried – Condition Unknown - 1997
			KP 9.371 to KP 9.439 – 18 mats	Buried – Condition Unknown - 1997
Concrete Mats on PL1324 / PL1325	43	359	KP 0.000 to KP 0.259 – 43 mats	Buried – Condition Unknown - 1997
Concrete Mats on PL1629 / PL1630	45	376	KP 0.000 to KP 0.263 – 45 mats	Buried – Condition Unknown - 1998
Concrete Mats on U30-8 Umbilical	1	8.3	KP 0.231 to KP 0.233 – 1 mat	Buried – Condition Unknown - 1999
Total Concrete Mats on all Pipelines	749	6254	All Pipelines (Locations as above)	Various conditions as above
Fronnd Mats on PL20	176	8.2	KP 0.000 to KP 0.253 – 100 mats	Buried - Condition unknown - 1994
			KP 0.478 to KP 0.540 – 12 mats	Buried - Condition unknown - 1994
			KP 2.178 to KP 2.235 – 26 mats	Buried - Condition unknown - 1994 & 1997
			KP 2.725 to KP 2.755 – 10 mats	Buried - Condition unknown - 1993
			KP 2.893 to KP 2.936 – 12 mats	Buried - Condition unknown - 1997
Fronnd Mats on PL21	161	9.1	KP 3.142 to KP 3.177 – 6 mats	Buried - Condition unknown - 1998
			KP 3.353 to KP 3.377 – 10 mats	Buried - Condition unknown - 2002
			KP 0.060 to KP 0.065 – 2 mats	Buried - Condition unknown - 1995
			KP 0.084 to KP 0.128 – 14 mats	Buried - Condition unknown - 1996
			KP 0.145 to KP 0.190 – 18 mats	Buried - Condition unknown – 1994 & 1995
			KP 0.195 to KP 0.205 – 3 mats	Buried - Condition unknown - 1995

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Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
Fronnd Mats on PL83	122	7.1	KP 0.232 to KP 0.259 – 5 mats	Buried - Condition unknown - 1999
			KP 0.271 to KP 0.304 – 7 mats	Buried - Condition unknown - 1995
			KP 0.340 to KP 0.393 – 18 mats	Buried - Condition unknown - 1997
			KP 0.390 to KP 0.420 – 4 mats	Buried - Condition unknown - 2001
			KP 0.416 to KP 0.438 – 6 mats	Buried - Condition unknown – 1995
			KP 0.440 to KP 0.457 – 2 mats	Buried - Condition unknown – 2001
			KP 0.473 to KP 0.491 – 4 mats	Buried - Condition unknown – 1999
			KP 0.493 to KP 0.508 – 12 mats	Buried - Condition unknown – 1995 & 1999
			KP 4.571 to KP 4.611 – 12 mats	Buried - Condition unknown – 1997
			KP 4.810 to KP 4.872 – 28 mats	Buried - Condition unknown – 1994
			KP 4.873 to KP 4.888 – 2 mats	Buried - Condition unknown – 1995
			KP 4.898 to KP 4.936 – 12 mats	Buried - Condition unknown – 1997
Fronnd Mats on PL84	134	7.2	KP 4.948 to KP 4.975 – 12 mats	Buried - Condition unknown - 1998
			KP 0.051 to KP 0.145 – 40 mats	Buried - Condition unknown – 1994
			KP 0.193 to KP 0.235 – 16 mats	Buried - Condition unknown – 1998
			KP 0.271 to KP 0.304 – 11 mats	Buried - Condition unknown – 1995
			KP 0.402 to KP 0.429 – 5 mats	Buried - Condition unknown – 1995
			KP 0.427 to KP 0.468 - 6 mats	Buried - Condition unknown – 1997
			KP 0.565 to KP 0.578 – 4 mats	Buried - Condition unknown – 1997
			KP 1.235 to KP 1.245 – 4 mats	Buried - Condition unknown – 1995
			KP 1.620 to KP 1.670 – 24 mats	Buried - Condition unknown – 1996
			KP 2.496 to KP 2.541 – 12 mats	Buried - Condition unknown - 1996
			KP 0.886 to KP 0.914 – 14 mats	Buried - Condition unknown – 1995 & 1997
			KP 0.919 to KP 0.942 – 7 mats	Buried - Condition unknown – 1997
			KP 1.715 to KP 1.783 – 20 mats	Buried - Condition unknown – 1993
			KP 1.723 to KP 1.788 – 39 mats	Buried - Condition unknown – 1994 & 2000
			KP 2.155 to KP 2.215 – 18 mats	Buried - Condition unknown – 1993
			KP 8.082 to KP 8.150 – 7 mats	Buried - Condition unknown – 1994
			KP 8.154 to KP 8.195. – 17 mats	Buried - Condition unknown – 1995, 1997 & 1999

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Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
FronD Mats on PL 85	86	4.4	KP 8.228 to KP 8.245. – 3 mats	Buried - Condition unknown – 1995
			KP 8.274 to KP 8.279 – 2 mats	Buried - Condition unknown – 1995
			KP 8.346 to KP 8.400 – 7 mats	Buried - Condition unknown - 1994
			KP 4.618 to KP 4.633 – 7 mats	Buried - Condition unknown – 1997
			KP 10.051 to KP 10.056 – 2 mats	Buried - Condition unknown – 1995
			KP 10.103 to KP 10.140 – 6 mats	Buried - Condition unknown – 1997
			KP 10.146 to KP 10.204 – 41 mats	Buried - Condition unknown – 1994, 1996 & 2000
			KP 10.274 to KP 10.286 – 4 mats	Buried - Condition unknown - 1994
FronD Mats on PL 87	20	0.9	KP 10.297 to KP 10.351 – 26 mats	Buried - Condition unknown – 1994
			KP 0.000 to KP 0.030 – 9 mats	Buried - Condition unknown - 1994
			KP 5.997 to KP 6.017 – 5 mats	Buried - Condition unknown – 1994
FronD Mats on PL135.1	3	0.2	KP 6.103 to KP 6.140 – 6 mats	Buried - Condition unknown - 1997
FronD Mats on PL584	16	0.8	KP 0.000 to KP 0.070 – 3 mats	Buried - Condition unknown - 1995
FronD Mats on PL1173 / PL1174	30	1.4	KP 9.137 to KP 9.171 – 16 mats	Buried - Condition unknown – 1995 & 2000
			KP 0.000 to KP 0.080 – 15 mats	Buried– Condition Unknown - 1995
			KP 4.347 to KP 4.464 – 4 mats	Buried– Condition Unknown – 1995
FronD Mats on PL1177 / PLU4688	39	1.8	KP 5.927 to KP 6.038 – 11 mats	Buried– Condition Unknown – 1995
			KP 0.000 to KP 0.050 – 8 mats	Buried– Condition Unknown – 1995
			KP 5.628 to KP 5.798 – 31 mats	Buried– Condition Unknown - 1995
FronD Mats on PL1323	75	3.4	KP 0.071 to KP 0.164 – 15 mats	Buried– Condition Unknown - 1997
			KP 2.269 to KP 2.325 – 9 mats	Buried– Condition Unknown – 1997
			KP 4.699 to KP 4.829 – 34 mats	Buried– Condition Unknown – 1997
FronD Mats on PL1324 / PL1325	34	1.5	KP 9.371 to KP 9.439 – 17 mats	Buried– Condition Unknown - 1997
			KP 0.000 to KP 0.259 – 34 mats	Buried– Condition Unknown - 1998

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Stabilisation Feature	Total Number	Total Weight (Te)	Locations	Exposed / Buried / Condition / Date Installed
Total Frond Mats on all Pipelines	896	46.0	All Pipelines (Locations as above)	Conditions as above
Grout Bags	3062	77 ¹	PL1323	Condition Unknown - 1997
Deposited Rock	n/a	Unknown	All Pipelines	Buried – various installation dates

¹ Exact quantity is unknown

² Partially buried - some of the mattress is covered in seabed soils and some part of the mattress is exposed.

³ Where burial conditions are unknown diving conditions precluded the burial depth measurement, due to access and / or, visibility limitations at the dive site

⁴ It is not possible for the ROV to survey the DOC of frond mattresses due to the risk of ROV entrapment resulting in damage / loss of ROV. Also refer to Table 13 for frond mattress DOB.

2.2 Inventory Estimates

Quantities have been estimated based on documentation review and non-intrusive surveying work. Intrusive surveying and sampling will be undertaken as the decommissioning project progresses, to provide a more accurate quantification of the installation's inventories, particularly those of a hazardous nature.

The inventory and mapping of materials studies were undertaken to provide the best available information for each subsea pipeline, umbilical & stabilization material.

Error! Reference source not found. below summarises the current estimated overall breakdown of materials to be removed. These quantities relate to the subsea pipelines.

Table 10 - Estimated Inventories (Subsea Pipelines & Stabilisation Features)

Pipeline / Stabilisation Feature	Haz-Mat Bitumen Coal Tar	Haz-Mat	Concrete	Ferrous Metal	Non-Ferrous Metal	Plastics	Total
	Pipe coating	NORM	(Te)	(Te)	(Te)	(Te)	(Te)
	(Te)	(Te)					
Pipelines							
PL20	527.4	0	27,457.30	9,145.90	0	0	37,130.60
PL21	2,216.80	0	28,897.40	9,525.70	0	0	40,639.90
PL83	40.1	0	1,022.90	747.8	0	0	1,810.80
PL84	84.2	0	2,148.10	2,144.10	0	0	4,376.40
PL85	426.5	0	4,986.90	2,680.10	0	0	8,093.50
PL86	59.8	0	982.8	481.1	0	0	1,523.70
PL135.1	0	0	0	50.3	0	7.1	57.40
PL135.2	0	0	0	50.3	0	7.1	57.40
PL87	51.2	0	869.6	352	0	0	1,272.80
PL136.1	0	0	0	52.8	0	7.5	60.30
PL136.2	0	0	0	52.8	0	7.5	60.30
PL446	0	0	0	1.6	0	0.9	2.50
PL446.1	0	0	0	0.2	0	0.1	0.30
PL584	0	0	0	1,064.20	0	49.6	1,113.80
PL1173	0	0	0	426.2	0	4.4	430.60
PL1177	0	0	0	397.8	0	4.6	402.40
PL1325	0	0	0	28.8	0	3.1	31.90
PL1630	0	0	0	29.2	0	3.1	32.30

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Pipeline / Stabilisation Feature	Haz-Mat Bitumen Coal Tar	Haz- Mat	Concrete	Ferrous Metal	Non- Ferrous Metal	Plastics	Total
	Pipe coating	NORM	(Te)	(Te)	(Te)	(Te)	(Te)
	(Te)	(Te)					
Umbilicals							
PLU4689	0.8	0	0	51.3	0	11.7	63.80
U30-8 (redundant)	0.8	0	0	51.3	0	11.7	63.80
PLU4743	0.8	0	0	52.2	0	12.1	65.10
PLU4690	0.7	0	0	50.5	0	9.6	60.80
PLU4688	0.8	0	0	51.3	0	27.8	79.90
PL1174.1	0.65	0	0	47.1	0.4	20.9	69.05
PL1174.2	0.65	0	0	47.1	0.4	20.9	69.05
PL585	0.85	0	0	63.6	0	24.5	88.95
PL586	0.85	0	0	63.6	0	24.5	88.95
PL1323	2.1	0	0	143.6	5.4	93.5	244.60
PL1324	0	0	0	0.2	0.1	2.3	2.60
PL1629.1	0.025	0	0	1.53	0.075	0.63	2.25
PL1629.2	0.025	0	0	1.525	0.075	0.63	2.25
PL1629.3	0.025	0	0	1.525	0.075	0.63	2.25
PL1629.4	0.025	0	0	1.525	0.075	0.63	2.25
Concrete Mats	0	0	6,206.30	0	0	47.7	6,254.00
Froned Mats	0	0	0	0	0	46	46.00
Grout Bags	0	0	77	0	0	0	77.00
Total	3,415.10	0.00	72,648.30	27,858.80	6.60	450.70	104,379.50

Note: ENI UK recognise there will be a very small amount of plastic and rubber made up from gaskets/seals etc, this is deemed insignificant with regards to the waste table above but shall be managed and disposed of according to the relevant project waste management plan.

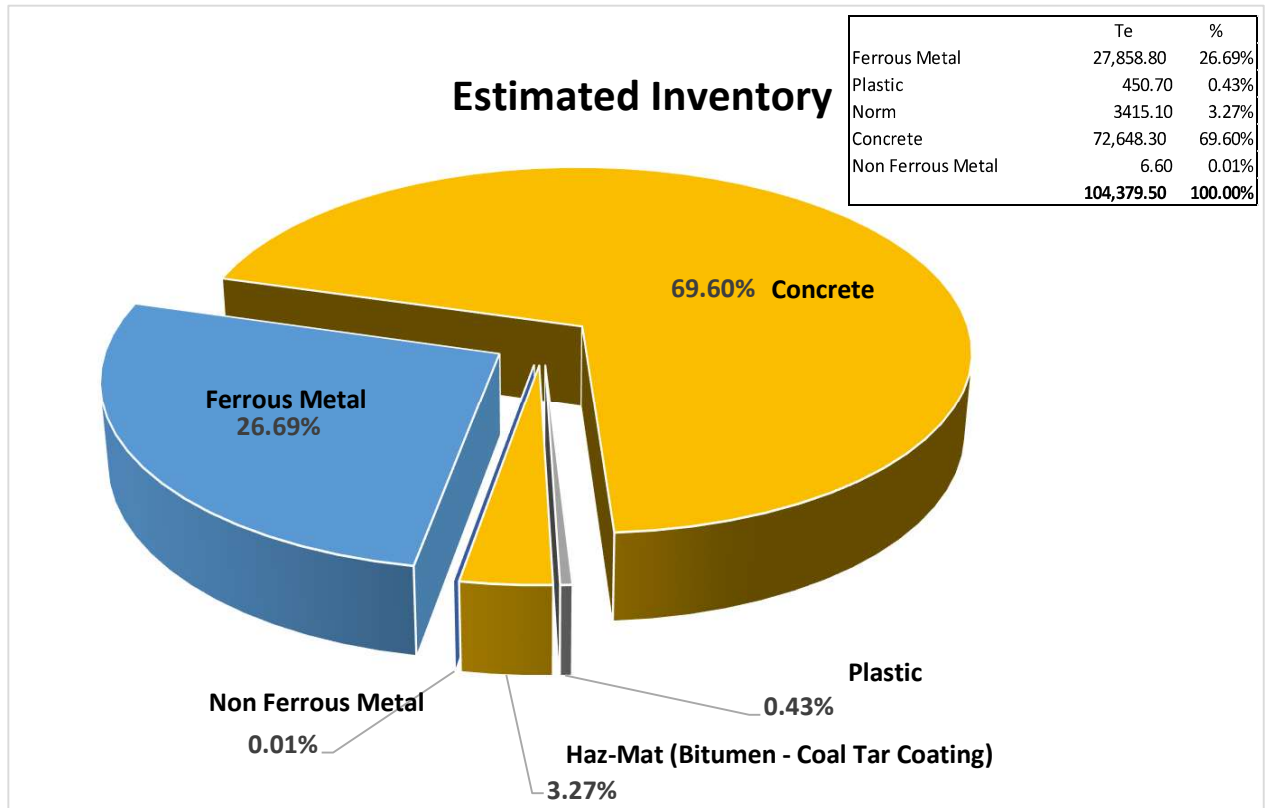


Figure 2-1: Estimated Inventory

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3.0 REMOVAL AND DISPOSAL OPTIONS

Eni UK 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. OPRED will be notified when waste disposal contracts have been finalised and disposal yard has been identified.

The re-use of pipelines and stabilisation materials (or parts thereof) is first in the order of preferred waste management options. ENI has assessed the possibility of re-use of PL21 and confirmed that it is not suitable for the proposed CCS initiative. PL20 is unsuitable for reuse. It has been retired from operation and internally been exposed to seawater and potential corrosion.

Concrete is estimated to account for the greatest proportion of the materials inventory. The current plan is to transport the pipeline ends, umbilicals and mattresses to an onshore decommissioning facility for re-use, recycling and disposal using an appropriately licenced contractor. Contractor and the site selection process are still in early stages and thus the potential for trans-frontier shipment of waste cannot be dismissed for certain at this stage.

Should any material be considered for removal and disposal outside of the UK, an application under the Trans-frontier Shipment of Waste Regulations shall be made to the Environment Agency. A final decision on the decommissioning method will be made following a commercial tendering process.

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

OPRED will be informed when final decommissioning methods including removal and disposal is made.

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3.1 Pipelines

3.1.1 Decommissioning Options

1A	Full Removal	Reverse Installation Reel Lay
1B	Full Removal	Reverse Installation S Lay
1C	Full Removal	Cut and Lift whole pipeline

Leave in Situ

2A	Partial Removal	Cut and Lift pipeline ends and exposed sections, Trench pipeline to 0.6m ToP
2B	Partial Removal	Cut and Lift pipeline ends, cut ends Trenched to 0.6m ToP
3A	Major Intervention	Cut and Lift pipeline ends, trench exposed sections to 0.6m ToP
3B	Major Intervention	Cut and Lift pipeline ends, trench FishSAFE spans to 0.6m ToP
3C	Major Intervention	Cut and Lift pipeline ends, trench pipeline to 3m ToP
4A	Minimum Intervention	Cut and Lift pipeline ends
4B	Minimum Intervention	Cut and Lift pipeline ends introduce accelerated corrosion into pipeline

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Table 11 - Subsea Pipelines(s) Decommissioning Options

Pipeline or Group (as per PWA)	Condition of line/ group (Surface laid/ Trenched/ Buried/ Spanning)	Whole or part of pipeline/ group	Decommissioning options considered ¹
Group 1: - Concrete Coated Export Pipelines PL20 & PL21	Trenched & Buried PL-20 = 1 x FISHSafe span of 40m PL 21 = 2 x FishSAFE spans of 14.1m / 11.2m	Whole	1C, 2B, 3A 4A
Group 2: - Concrete Coated Infield Pipeline (incl piggyback pipeline) PL83, PL84, PL85, PL86 (incl PL135.1 & PL135.2) PL87 (incl PL136.1 & PL136.2)	Trenched & Buried PL 83 / PL 84 / PL 86 / PL 87 = No FishSAFE Spans. PL 85 = 1 x FISHSafe span of 11.9m.	Whole	1C, 2B, 3A 4A
Group 3: - Non-Concrete Coated Infield Pipeline (incl piggyback umbilical) PL584 (incl 585 & PL586) PL1173 (incl PL1174.1, PL1174.2) PL1177 (incl PLU4688)	Trenched & Buried No FishSAFE Spans	Whole	1C, 2B, 3A 4A
Group 4: - Umbilicals (standalone) PLU4689, PLU4690, PLU4743, PL1323, U30-8	Trenched & Buried No FishSAFE Spans	Whole	1A, 2A, 3A 4A
Group 5: - Flexible Flowlines and Jumpers PL1324, PL1325, PL1629.1, PL1629.2, PL1629.3, PL1629.4, PL1630, PL446/PL446.1	Surface Laid	Whole	Full Removal (All Options Applicable)

Note 1: The option listed definitions, is as per Hewett Field Pipelines Comparative Assessment Report Eni document number 102800PLRV88503 Rev 01. This allows for flexibility and is based on the best options recommended in the CA for the different categories of either Full removal or leave-in-situ (partial removal / major intervention / min intervention).

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3.1.2 Trenching and Burial Methodologies

Unacceptable pipeline free spans will be removed by locally excavating the seabed shoulders either side of the span and subsequently lowering the pipeline deeper into the seabed, mitigating the span. The excavated trench may then be mechanically backfilled, burying the pipeline.

The specific trenching equipment employed will be determined by the offshore contractor, soil properties (measured from previous survey), the planned trench depth, the line size, the operating depth, and the operating distance. However, trenching and burial equipment may take the form of sled and ROV jetting, mass flow excavation and / or ploughing.

3.1.3 Comparative Assessment

Comparative Assessment is integral to the overall planning and approval of decommissioning options. ENI's Comparative Assessment process is aligned with the Oil & Gas UK Guidelines for Comparative Assessment in Decommissioning Programmes and OPRED Guidance Notes for the Decommissioning of Offshore Oil and Gas Installations and Pipelines.

ENI have scoped all of the infrastructure into logical groupings. All feasible decommissioning options for each of the infrastructure groups have been identified, assessed, ranked and screened, utilising the OPRED Guidance Notes: Decommissioning of Offshore Oil and Gas Installations and Pipelines to carry forward credible decommissioning options to be assessed through the Comparative Assessment process.

The Comparative Assessment process uses five assessment criteria, which are; Safety, Environment, Technical, Societal and Economic to compare the relative merits of each credible decommissioning option for each group of infrastructure. The 5 differentiating criteria and associated sub-criteria carry weightings which reflects ENI's position to prioritise Safety considerations.

An independent consultancy utilising its bespoke Multi Criteria Decision Analysis (MCDA) process was employed to facilitate Comparative Assessment workshops. The workshops were attended by specialists from the Operator, Fields Partners and representatives from key stakeholders namely:

- OPRED ODU;
- JNCC
- Natural England
- Petrofac
- ENI
- Xodus

Crown Estate, National Fisherman's Federation (NFFO) and the Health and Safety Executive were also invited but were unable to attend the evaluation workshop

At the evaluation workshop, each decommissioning option for each infrastructure grouping was assessed against each of the assessment criteria utilising a pairwise comparison system. The relative importance of each of the criteria was assessed in a qualitative way, supported by quantification where appropriate.

The process provides for differentiation between decommissioning options in each infrastructure group taking account of stakeholder views.

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Table 12 - Outcome of Comparative Assessment

Pipeline or Group	Recommended Option	Justification
Group 1 – Concrete Coated Export Pipelines PL20 & PL21 Leave in Situ	Option 3A – Leave in Situ with major intervention; Disconnection and removal of the pipeline ends and spools (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed Exposed/spanning pipeline sections trenched to a minimum depth of burial of 0.6m ToP. Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ	Comparatively assessed as preferred option. The majority of the pipelines are sufficiently trenched and buried and stable posing no risk to marine users. Minimal seabed disturbance, lower energy use, reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas Retrenching safer than cutting and lifting
Group 2 – Concrete Coated Infield Pipeline (incl piggyback pipeline) PL83, PL84, PL85, PL86 (incl piggybacked lines: - PL135.1 & PL135.2) PL87 (incl piggybacked lines PL136.1 & PL136.2) Leave in Situ	Option 3A – Leave in Situ with major intervention; Disconnection and removal of the pipeline ends and spools (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed Exposed/spanning pipeline sections trenched to a minimum depth of burial of 0.6m ToP. Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ	Comparatively assessed as preferred option. The majority of the pipelines are sufficiently trenched and buried and stable posing no risk to marine users. Minimal seabed disturbance, lower energy use, reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas Retrenching safer than cutting and lifting

Pipeline or Group	Recommended Option	Justification
Group 3 – Non Concrete Coated Infield Pipeline (incl piggyback umbilical) PL584 (incl PL 585 & PL586) PL1173 (incl piggybacked Umbilical PL1174.1/.2) PL1177 (incl piggybacked umbilical PLU4688) Leave in Situ	Option 3A – Leave in Situ with major intervention; Disconnection and removal of the pipeline ends and spools (already completed). Cut ends within trench left to naturally backfill due to dynamic seabed Exposed/spanning pipeline sections trenched to a minimum depth of burial of 0.6m ToP. Exposed Stabilisation mats recovered. Buried Stabilisation mats left in Situ	Comparatively assessed as preferred option. The majority of the pipelines are sufficiently trenched and buried and stable posing no risk to marine users. Minimal seabed disturbance, lower energy use, reduced risk to personnel engaged in the activity. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas Retrenching safer than cutting and lifting Recover and transport ashore for recycling or other waste treatment as appropriate.
Group 4 – Umbilicals (standalone) PLU4689, PLU4690, PLU4743, PL1323, U30-8 Full Removal	Option 1A - Full Removal Reverse Installation Reel Lay Disconnection of the umbilical ends and recovery of the entire line by reverse installation utilising Reel Lay vessel. Umbilical will be de-buried if required. Stabilisation mats over umbilical will be removed and recovered Returned to shore for recycling or appropriate treatment and disposal.	Comparatively assessed as preferred option. The majority of the pipelines are sufficiently trenched and buried however depth of burial is poor on lines. Preferred option with respect to Seabed disturbance, legacy risk and societal perspective. No requirement to introduce new material (Rock Placement) into SAC & MCZ protected areas Meets regulatory convention requirements

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Pipeline or Group	Recommended Option	Justification
Group 5 – Flexible Flowlines and Jumpers PL1324, PL1325, PL1629.1, PL1629.2, PL1629.3, PL1629.4, PL1630, PL446, PL446.1 Full Removal	Full Removal Returned to shore for recycling or appropriate treatment and disposal.	Items are surface laid and recoverable Meets regulatory convention requirements Recover and transport ashore for recycling or other waste treatment as appropriate.

3.2 Pipeline Stabilisation Materials

Table 13 - Pipeline Stabilisation Feature

Stabilisation Feature	Number	Option	Disposal Route if applicable
Concrete Mats (exposed)	674 ¹	Full Removal It is intended that the mattresses will be recovered to shore, however, in the event of practical difficulties and it cannot be recovered safely OPRED will be consulted to discuss alternative approaches	Recover and transport ashore for recycling or other waste treatment as appropriate.
Concrete Mats (buried)	75 ¹	Leave in situ. Mattresses are buried with minimum 0.6m cover and are part of pipeline stabilisation feature	Not Applicable
FronD Mats	896	Leave in situ. FronD Mats are buried with minimum 0.6m cover and are part of pipeline stabilisation feature.	Not Applicable

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Stabilisation Feature	Number	Option	Disposal Route if applicable
		Visual surveys show that there is very little visible evidence of the mats on the seabed. The fronds are between 1.2m & 1.5m long therefore it can be concluded that the mattresses are fully buried to at least 1.2m deep and catching / retaining sand as per their original design purpose.	
Grout Bags	3062	Full Removal if exposed. Buried will be left in situ. It is intended that the bags will be recovered to shore, however if it cannot be recovered safely or in the event of practical difficulties OPRED will be consulted to discuss alternative approaches.	Recover and transport ashore for recycling or other waste treatment as appropriate.
Rock Placement	unknown	Leave in situ.	Not Applicable

¹ Mattresses will be surveyed for burial depth and condition prior to removal. Quantities between “Left in Situ” and “Recovered” may change depending upon burial status and state at time of recovery. Mattress recovery will endeavour to meet the above criteria wherever possible where environmental criteria and safety are not compromised. Should any data contradictory to the context of the DP be identified, this will be discussed, and a way forward agreed with OPRED.

For protection and stabilisation features (such as concrete mattresses), where they protect a pipeline left in-situ and these protection / stabilisation features become exposed or partially buried, they shall remain in-situ to maintain the pipeline protection / stability.

An assessment will be performed to determine if the feature can be recovered on a case-by-case basis, without impacting the pipeline protection / stabilisation. If not OPRED will be consulted where the recovery of exposed / partially buried features is not deemed feasible.

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3.3 Waste Streams

NORM is not anticipated but is still considered below for completeness. Table 14 - Waste Stream Management Methods below provides an overview of the main waste streams associated with the Decommissioning Project activities and outlines the scheme for their management. Detailed waste inventories and active management plans will be developed to cover each phase of the project to ensure that all waste is systematically identified, characterised and effectively managed to ensure compliance with Regulatory and Company requirements. Equipment and materials re-use opportunities will be identified and evaluated to reduce waste quantities wherever viable and practicable.

Table 14 - Waste Stream Management Methods

Waste Stream	Removal and Disposal Method
Steel	Steel will be removed by dismantling. The scrap metals will be transported to suitably-licensed facilities for processing.
Marine growth if found	Removed onshore. Disposed of according to guidelines.
NORM/LSA Scale	NORM will be managed under company procedures and the contractor waste management plan and in adherence to all relevant legislation. All necessary permits and consents in place prior to removal activities. An RPS shall be present during the pipeline ends, spools and jumpers, if NORM is detected the removed material shall be transported under the dangerous goods act by an appropriately licensed carrier. Once onshore, it shall be decontaminated at a pre-determined site licensed for handling radioactive materials.
Asbestos	Asbestos is not anticipated within the subsea pipelines, Umbilicals or stabilisation mats. In the unlikely event that asbestos is recovered it will be dealt with and disposed of in accordance with guidelines and company policies.
Other hazardous wastes	Any other hazardous waste streams identified will be classified accordingly and transported onshore for disposal at an appropriately licenced facility.
Onshore Dismantling sites	Only appropriately licenced disposal yard(s) and waste contractor(s) will be selected. Disposal yard and contractor selection process will require a proven disposal track record and waste stream management throughout the deconstruction process and will consider ability to deliver innovative recycling options. OPRED will be informed when an appropriate waste contractor with disposal sites has been selected.

3.4 Waste Management Plan

Active waste management plans will be established and developed for each stage / phase of the project to ensure that effective prior arrangements are in place for all waste management and disposal activities. In addition, an audit programme will be developed to ensure that all waste disposal routes and facilities are fully audited to ensure regulatory compliance prior to commencement of activities.

Table 15 - Inventory Disposition

	Total Inventory Tonnage	Planned tonnage to shore	Planned left <i>in situ</i>
Subsea Pipelines	104,379.50	7,086.0	97,673.50

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

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4.0 ENVIRONMENTAL APPRAISAL OVERVIEW

Eni UK Limited has prepared a stand-alone Environmental Appraisal (EA) document describing Environmental Impact Assessment process and assessing environmental impact of the decommissioning activities contained within this document.

Section 4.1 below provides an overview of the environmental sensitivities in the area of the Hewett field subsea installations and Section 4.2 summarises potential impacts associated with the decommissioning operations as well as proposed mitigation measures.

4.1 Environmental Sensitivities (Summary)

Table 16 - Environmental Sensitivities

Environmental Receptor	Main Features	
Conservation interests	Special Areas of Conservation (SAC)	- All pipelines partially within the Southern North Sea SAC - PL20, PL21, PL083, PL084, PL085 and PL087 partially within the Hainborough, Hammond and Winterton SAC
	Special Protection Areas (SPA)	PL20 and PL21 partially within the Greater Wash SPA
	Marine Conservation Zones (MCZ)	PL20 and PL21 partially within the Cromer Shoal Chalk Beds MCZ
Seabed	The main sediment type observed on the seabed surrounding the pipelines is sand with small scale ripples and varying proportions of shell fragments. This sediment type has been classified as the EUNIS biotope complex 'Faunal communities of Atlantic circalittoral sand' (MC521). Within this main habitat, patches of the biotope '<i>Sabellaria spinulosa</i> on stable Atlantic circalittoral mixed sediment' (MC2211) were regularly observed, along with smaller areas of the biotope 'Piddocks with a sparse associated fauna in Atlantic circalittoral very soft chalk or clay' (MC1251). Aggregations of <i>Sabellaria spinulosa</i> (potential EC Habitats Directive Annex I reef habitats) were encountered during the pipeline survey: eight transects had patches which were classified at a maximum reefiness of 'high', 'medium' on nine transects, 'low' on nine transects and 'not a reef' on 14 transects. <i>S. spinulosa</i> was regularly observed throughout the majority of the offshore pipeline survey area, with the proportion of the 'low' reef to 'high' reef categories ranging from 6.7 % to 72.5 %. The seabed is of extremely dynamic nature and is subjected to strong hydrodynamic disturbance. Distinct sandy bed forms, mainly consisting of small-scale ripples, with varying proportions of shell fragments were observed throughout the pipeline survey area.	
Fish	Several species use the seabed in the area around the Hewett field as spawning and nursery grounds at different times of the year. Spawning: sand eel, whiting, sole and lemon sole. Nursery: sand eel, herring, mackerel, whiting, cod, plaice, sole, lemon sole, thornback ray and tope shark.	

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Environmental Receptor	Main Features
Fisheries	Fishing effort (ICES rectangles 34F1 and 35F1) is regarded as low and predominantly coastal, using vessels less than 10 metres in length with static fishing gear (pots and traps) with the dominant catch being shellfish. There is also presence of beam trawls targeting demersal fish.
Marine Mammals	EU Habitats Directive Annex II / IV Species: - All pipelines lie in an area of importance for Harbour porpoise (<i>Phocoena phocoena</i>) – Southern North Sea SAC. The site includes key winter and summer habitat for this species. - Other Annex II / IV species that could be present in the vicinity of the field include white-beaked dolphin (<i>Lagenorhynchus albirostris</i>), minke whale (<i>Balaenoptera acutorostrata</i>), grey seal (<i>Halichoerus grypus</i>) and harbour (common) seal (<i>Phoca vitulina</i>).
Birds	The most abundant species likely to be present in the vicinity of the Hewett field are fulmar, kittiwake and guillemot in the breeding season, kittiwake, great black-backed gull, guillemot and razorbill over winter and guillemot in the post-breeding dispersal period. The nearest SPA is the Greater Wash SPA designated for the EU Birds Directive Annex I bird species and regularly occurring migratory bird species. Seabird vulnerability to oil pollution in the Hewett field varies throughout the year and is extremely high and very high in the winter and spring months (October to April) and high to medium May to September.
Other Users of the Sea	Shipping: High to very high density with busy ports of Immingham as well as Great Yarmouth and Rotterdam. Oil and Gas: Well developed industry. Several decommissioning programmes within the wider Southern North Sea already approved with works underway and several more decommissioning programmes under consideration. Renewables: Several wind farm areas at different stages of the consenting process within the vicinity of the Hewett field with closest two active north-west approximately 26.5km (Dudgeon) and 31.8km (Sheringham Shoal) and one in pre-planning south-east approximately 32km (East Anglia North Tranche One West). Military Defence: Not within the Hewett field, however a military Practice and Exercise area (PEXA) used by the Royal Air Force (RAF) is situated approximately 60 km to the north. Submarine Cables and Pipelines: 30" Shell Leman Pipeline AP to Bacton pipeline (PL21) approx. 2.0km from 48/29a 30" Shell Leman Pipeline AP to Bacton pipeline (PL84) approx. 3.5km from 48/29b 30" Shell Leman Pipeline AP to Bacton pipeline (PL584/585) approx. 4.5km from 48/30-11 30" Shell Leman Pipeline AP to Bacton pipeline (PL1323) approx. 2.3km from 48/29a 30" Shell Leman Pipeline AP to Bacton pipeline (PL20) approx. 2.0km from 48/29a 30" Shell Leman Pipeline from Leman to Bacton Gas Terminal, crossing under PL85 at approx. KP8.755.

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Environmental Receptor	Main Features
	- Telephone Cable (Bacton Borkum No. 2 AJ), crossing under PL85 at KP4.130; 24" IOG Gas Export Trunkline from Thames to Bacton Gas Terminal, crossing under PL1173 at KP4.432. Marine Archaeology and Wrecks: A total of 8 known shipwrecks within the Hewett field, but none are protected. Fishing: Commercial fishing interaction with the pipelines. Free-span pipelines that have been identified as a risk will be reburied / retrenched to mitigate snagging. Pipelines shall be monitored for developing free-span and mitigation measures instigated as required. Aggregate Extraction: The nearest active licenced aggregate extraction site is located approximately 55km south of the Hewett field. There is also an extraction option area located to the north.
Atmosphere	The wind regime around the Hewett field with large variations in wind direction and speed leads to rapid dispersion and dilution of atmospheric emissions. Offshore decommissioning operations and onshore waste processing will be the main source of atmospheric emissions. It is expected that these emissions will be localised.

4.2 Potential Environmental Impacts and their Management

There will be some environmental impacts associated with the decommissioning of the subsea pipelines / umbilicals and associated stabilisation features. However, the impacts will be managed such that they are localised, short-term and of low significance following implementation of the proposed mitigation measures contained within the Environmental Appraisal. Long-term, environmental, cumulative and trans-boundary environmental impacts are expected to be negligible. Eni UK and Petrofac Facilities Management Ltd (Duty Holder) operate Environmental Management Systems independently certified to ISO14001:2015.

Hewett decommissioning programme activity is fully integrated within the scope of these management systems.

Table 17 - Environmental Impact Management

Activity	Main Impacts	Management
Pipeline End removal Concrete Mattress removal Pipeline Trenching	The activities of cutting and removing sections of pipelines as well as mattress removal using lift vessels may cause localised environmental impacts, including: - Temporary placement of equipment, potential dropped objects, - Underwater noise from vessels, cutting and excavation. - Discharges to the marine environment from vessels. - Accidental hydrocarbon and chemical releases to the marine environment. - Production of waste materials.	Mitigation measures proposed: - Seabed disturbance - Post-decommissioning survey to recover any debris. - Minimise potential for dropped objects. - Noise and seabed habitat disturbance - Design the works to minimise the overall area of disturbance. - Plan and execute activities as efficiently as possible and select equipment and

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	• Energy use and associated atmospheric emissions. • Physical presence of vessels with the potential to cause short-term disruption to other users of the sea. The impacts listed are expected to be localised, short-term and of low significance provided the implementation of the mitigation measures proposed.	removal method to minimise seabed disturbance, cutting and vessel operations. ▪ Back-up plan for practical difficulties in removing the mattresses or pipelines. ▪ No use of explosives. • Vessel Discharges and Spills ▪ OPEP in place to deal with emergency spills. • Contractor management ▪ Prior to contract award, full technical and HSE evaluation undertaken, pre-mobilisation audits. ▪ Risk assessments and monitoring of performance will be undertaken. • Waste ▪ Waste hierarchy will be followed in full compliance with EU and UK waste legislation and Duty of Care. • Vessels: various emissions ▪ On board operating procedures to address fuel efficiency and type (ultra-low sulphur), noise, waste management and any discharges. ▪ Minimise durations of operations. • Vessels: physical presence ▪ Minimise durations of operations. ▪ Vessel Management Plan and Navigational Risk Assessment.
Physical Presence	The DP vessels (DSV/RLV/CSV) required for the proposed decommissioning operations will be present on location within existing 500m safety exclusion zones surrounding the Hewett subsea pipelines or platforms for some of the pipeline decommissioning work required. These exclusion zones are clearly marked on navigation charts and have been in place since the field's facilities were installed. This work, as well as work undertaken outside existing 500m safety exclusion	The operations will be undertaken by a carefully selected specialist contractor in compliance with all national and international regulations for shipping, including the appropriate signals and lights, and the regulations defined by the International Maritime Organisation for avoiding collisions at sea. An operating criteria for weather conditions (e.g., wind, waves and visibility) will be established and operations suspended if the criteria are not met. An Eni representative will be on-board each vessel at all times to ensure

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	zones, will also have the following embedded mitigation. Notifications will be made to regular users of the area via fisheries notices, Notices to Mariners and NAVTEX/NAVAREA warnings. Operations will be planned to minimise the number of boat movement, as far as reasonably practicable.	compliance with approved operating procedures. Operations will be planned to minimise the number of boat movements, as far as reasonably practicable. Communications and positioning equipment will be placed on-board the vessels to maintain communications with other shipping vessels and provide accurate information on the position of the vessels. Eni has therefore concluded that impacts arising from physical presence of the DSV and CSV do not warrant further assessment.
Energy Use and Atmospheric Emissions	Atmospheric emissions will be produced as a result of the fuel consumed by offshore vessels, equipment and generators. The main environmental effects of the emission of gases to the atmosphere are: • Direct or indirect contribution to global warming (CO, CO₂, CH₄ and N₂O); and • Contribution to photochemical pollutant formation and local air pollution (Particulates, NO_x, SO_x, VOCs). It is predicted that the atmospheric emissions generated will result in localised and short-term impacts on air quality, with prevailing metocean conditions expected to lead to the rapid dispersion and dilution of the emissions. The contribution to UKCS and global atmospheric emissions will be negligible. To place this in context, the estimated CO₂e emissions predicted to be generated by the proposed Hewett subsea pipelines decommissioning options equate to approximately 0.109% of the total UK offshore CO₂e emissions in 2018 (14,630,000 tonnes; OGUK, 2019) and less than 0.004% of the UK net total CO₂e emissions in 2019 (351,100,000; BEIS, 2021).	To minimise the emissions generated, Eni will look to reduce vessel time in the field as far as practicable. In addition, Eni's contractor selection process will aim to ensure that the engines, generators and other combustion plant on the vessels to be used during the proposed decommissioning activities are maintained and correctly operated to ensure that they work as efficiently as possible. Eni has therefore concluded that impacts arising from energy use and atmospheric emissions do not warrant further assessment.

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Physical presence of infrastructure decommissioned in situ	Eni propose to leave sections of pipelines in-situ after completion of the decommissioning activities, which have the potential to impact commercial fishing, including snagging risk on in-situ pipelines. The majority of Hewett subsea pipelines are located within ICES Rectangle 35F1. The export pipelines (PL020 & PL021) cross into 34F1 as they approach Bacton. It should be noted that the decommissioning option for PL020 & PL021 are 'leave in situ'. Fishing effort from 2010 to 2014 within ICES Rectangle 35F1 was generally low, with less than 100 days fished per year, with peak effort during the summer months. The dominant gear types within ICES Rectangle 35F1 were beam trawls targeting demersal or near demersal fish and shellfish. More up-to-date fisheries data is unavailable for ICES Rectangle 35F1 and the data from Marine Scotland only takes account of UK registered vessels; however, foreign vessels particularly those from Greece, Italy, Spain and Portugal are also known to undertake commercial fishing activities within UK waters	There is relatively limited fishing effort recorded near the Hewett field, with the majority of North Sea fishing effort concentrated in the north of the region, on the Dogger Bank, within the Wash and along the Suffolk coast. A fisheries Interaction Risk Assessment has been undertaken within the Hewett Field Area which identifies the intensity of fishing within the vicinity of the subsea infrastructure. The study shows fishing pressure throughout the Hewett Field Area is generally low with an average of 0 to 73 hours of fishing per year between 2009 and 2017. The low number of fishing hours in the Hewett field area would limit the potential for snagging on in-situ pipelines. In addition to this, the majority of pipelines which will remain in-situ will remain buried within the trench with which they were installed.
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5.0 INTERESTED PARTY CONSULTATIONS

Consultations Summary

A detailed Stakeholder Engagement Plan will be developed by the decommissioning project to ensure all potentially interested parties will be consulted. Over the forthcoming months engagement will be undertaken and any expectations, issues or concerns raised by the consultees will be addressed by the project.

The stakeholder engagement process for this decommissioning programme(s) has not yet commenced. This section will be updated with the conclusion of the discussions regarding the decommissioning of the Hewett Field pipelines.

Table 18 - Statutory Consultees List

Consultee	Description
NFFO	National Federation of Fishermen's Organisations
SFF	Scottish Fishermen's Federation
NIFPO	Northern Ireland Fish Producers' Organisation
GMSL	Global Marine Group
NSTA	North Sea Transition Authority (ENI UK Limited has consulted with NSTA under S29(2A) of the Petroleum Act)

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6.0 PROGRAMMES MANAGEMENT

6.1 Project Management and Verification

An Eni UK Limited Decommissioning Project Management team has been set up to manage suitable sub-contractors for the removal of the pipelines and associated materials. Standard procedures for operational control and hazard identification and management will be used.

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

Where possible, the work will be coordinated with other decommissioning operations in the SNS. The Management team will monitor and track the process of consents and the consultations required as part of this process. Any changes in detail to the offshore removal programme will be discussed and agreed with OPRED.

6.2 Post-Decommissioning Debris Clearance and Verification

Seabed surveys will establish the extent of any debris or other field related materials on the seabed.

Any oil & gas related debris found during the surveys will be assessed and dealt with appropriately during the subsea 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 decommissioning of the subsea pipelines, further post decommissioning survey work will be undertaken to determine if any debris remains within a 500m radius of installation sites and along the pipeline routes. Pipeline survey will be conducted along a 100m corridor of pipeline routes, 50m either side of the pipeline route Seabed clearance verification will be obtained, using a suitably qualified independent body, following the decommissioning activities. Initial survey will be conducted using non-intrusive seabed verification techniques.

For the Subsea Pipelines & stabilisation mats that are left situ, on completion of all decommissioning activities a risk-based surveillance / inspection & management programme will be submitted to OPRED for approval. This will be implemented once the final decommissioning activities have been completed and ensures appropriate risk management activity are in place.

6.3 Schedule

Activity / Milestone	2022				2023				2024				2025				2026				2027				2028				2029				2030				2031			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Pipeline DP Pre Draft Submission																																								
Pipeline DP & EA Submission																																								
Pipeline Pre-Decommission Survey																																								
Pipeline DP Approval																																								
Pipeline Pre-Com Surveys																																								
Pipeline Removal Window																																								
Pipeline As Left Survey Window																																								
Pipeline Onshore Recycling																																								
Pipeline Post-Decommissioning Survey																																								
Closeout Report Issue																																								

Figure 6-1: Hewett Pipelines Decommissioning Schedule

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6.4 Costs

To be provided separately to OPRED.

6.5 Close Out

In accordance with the OPRED Guidelines, a close out report will be submitted to OPRED within 1 year of the completion of the offshore decommissioning scope including debris clearance, verification of seabed clearance and the first post-decommissioning environmental survey. The report will detail the outcomes of surveys as well as explain any major variances from the programme(s).

6.6 Post-Decommissioning Monitoring and Evaluation

This decommissioning programme(s) relates only to the decommissioning of the Hewett Subsea Pipelines and associated stabilisation features which as per document which are both left in-situ or partially removed and returned to shore for reuse, recycling, or disposal.

Once the pipeline decommissioning works have been completed, a post-decommissioning Environmental Seabed Survey will be undertaken which will include a further suite of Side Scan Sonar and MBES work covering the same geographical area as in the Pre-decommissioning Environmental Seabed Survey. 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.

All pipeline routes and installation sites will be the subject of oilfield debris clearance and as-left verification surveys when decommissioning activity has concluded. All snag hazards created by drilling and/or production related activities will be removed or mitigated as part of the execution of the Decommissioning Programmes.

The main risk from infrastructure remaining in situ is the potential for interaction with other users of the sea, specifically from fishing related activities. Where the infrastructure is trenched below seabed level or trenched & buried below, the effect of interaction with other users of the sea is considered to be negligible.

The infrastructure is currently shown on Admiralty Charts and the FishSAFE system. When decommissioning activities have been completed, updated information will be made available to update Admiralty Charts and FishSAFE system.

Survey of all pipelines was previously performed in 2021 and survey of the remaining pipelines / jumpers / umbilicals containing HC or requiring flushing was performed in 2023 (Refer to Sections 1.3, 2.1 & Annex C – Pipeline Burial Status).

The S29 holders recognise their commitment to undertake post-decommissioning monitoring of infrastructure left *in situ*. After the post-decommissioning survey reports have been submitted to OPRED and reviewed, a post-decommissioning monitoring survey regime, scope and frequency, will be agreed with OPRED.

6.7 Management of Residual Liability

Section 29 Holders in the Hewett Area recognise that they will continue to retain ownership of, and residual liability for all decommissioned items allowed to remain in place through acceptance of the results of the CA process. The Hewett Field section 29 holders undertake;

- To contact OPRED in advance, in the event that any parties to the Decommissioning Programmes will no longer have a presence in the UK, to provide details of the organisation or individual who will act in their place.
- To notify OPRED of any organisation/individual that will engage with OPRED on future legacy and liability matters.
- To notify OPRED of any organisational/individual that will be the contact point for any future third party claims for damage caused by pipelines left in place.

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- To ensure that any alternative organisation/individual will have appropriate authority for, and knowledge of the DPs, to engage with OPRED.
- To ensure that any alternative organisation/individual will have access to appropriate funding to carry out any actions relating to the residual legacy and liability as outlined in the approved DPs.

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7.0 SUPPORTING DOCUMENTS

Table 19 - Supporting Documents

ID	Description	Document Number
1	Hewett Field Map – Field Location in UKCS	128000PFDG09656
2	Hewett Field Map – Offshore Windfarm Sites	102800PFDG09655
3	Hewett Field Map – Area Overview	102800PFDG09657
4	Subsea Asset Material Inventory List	102800PUEF87004
5	Stakeholder Engagement Plan	102800PFPA09620
6	Environmental Appraisal	102800PZRV04820
7	Physe, 2013. Hewett Field – Met Ocean Criteria. Volume 2 – Operational Presentations. Ref: C522-R582-13 (1D).	-
8	Hewett Vessel Traffic Survey (VTS) and Collision Risk Assessment (CRA) A-301712-S15-REPT-001	A-301712-S15-REPT-001
9	Hewett Decommissioning Programme - Platforms	ENIUK-#831627-v3G
10	Hewett Decommissioning Programme - Subsea Structures	ENIUK-#918327 v3
11	Hewett Pipelines Comparative Assessment	102800PLRV88503
12	Fisheries Interaction Risk Assessment Technical Note	102800PLRV88505

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8.0 PARTNER LETTER(S) OF SUPPORT

Table 20 - Attachments

ID	Title	Document Number
1	HOLD 1	

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9.0 ANNEX A – CONSULTATION PUBLIC NOTICES & CORRESPONDENCE

Table 21 - Consultation Public Notices and Consultee Correspondence

Ref.	Document Number	Title
2	HOLD 2	

10.0 ANNEX B - DECOMMISSIONING ONSHORE PIPELINE



Figure 10-1: PL20 & PL21 Bacton Approach (Indicative Only)

The onshore pipelines will be decommissioned and abandoned in accordance with the Pipelines Act 1962, Regulations 25, the Pipelines Safety Regulations 1996, and the BSI Code of Practice for steel pipelines on land PD 8010-1:2015+A1:2016.

The pipelines will be flushed clean of hydrocarbons and toxic materials, then disconnected and sealed. The abandonment plan for the onshore sections of the pipelines out to the MLWS has not been fully defined. Where the pipelines are to be decommissioned in situ, they may be filled with a suitable filler and left buried. A record will be kept of all in situ pipelines indicating their contents, location, size, and depth of burial.

The option to use a suitable filler material for the onshore abandoned in situ pipeline sections would be based on an option selection assessment, as well as comprehensive stakeholder engagement.

Structural degradation of the pipelines will be a long-term process caused by corrosion and the eventual

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collapse of the pipelines under their own weight, the weight of the pipeline coating material and that of the overlying soil or substrate. It is anticipated that failure of the pipelines due to through-wall degradation would only begin to occur after many decades (i.e., 60 to 100 years) and is expected to take several hundred years to fully degrade.

During this process, degradation products derived from the exterior and interior of the pipe will breakdown and potentially become bioavailable in the immediate vicinity. Pathways from the pipelines to the receptors would be via the interstitial spaces in substrate.

The release of degradation products is expected to occur at a slow rate and therefore expected to have a minimal impact on the surrounding environment. The area that could be biologically impacted would likely be limited to a few metres on either side of the pipeline.

The primary degradation products will originate from the following pipeline components:

- Pipeline Scale
- Steel
- Coal Tar Enamel coating
- Coating
- Sacrificial anodes

Complete failure of water filled buried pipelines has a potential for subsidence of the overlying substrate.

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11.0 ANNEX C – PIPELINE BURIAL STATUS

The following details the pipeline burial status

Table 22 - Pipeline Burial Status

Pipeline ID	Percentage of Pipeline Exposed	Percentage of Pipeline Buried with DOC > 0 & DOC < 0.6m	Percentage of Pipeline Buried with DOC > 0.6m	Decommissioning Solution
PL20	6%	42%	52%	Leave In-Situ
PL21 ⁴	35%	54%	11%	Leave In-Situ
PL83	13%	32%	55%	Leave In-Situ
PL84	26%	28%	46%	Leave In-Situ
PL85 ⁴	31%	50%	19%	Leave In-Situ
PL86	4%	35%	61%	Leave In-Situ
PL135.1 / .2 ³	Refer to PL86	-	-	Leave In-Situ
PL446	Surface laid	-	-	Full Removal
PL446.1	Surface laid	-	-	Full Removal
PL87	2%	27%	72%	Leave In-Situ
PL136.1 / .2 ³	Refer to PL87	-	-	Leave In-Situ
PLU4743 ¹	Refer to PL87	-	-	Full Removal
PL1173	5%	31%	64%	Leave In-Situ
PL1174.1 / .2	5%	31%	64%	Leave In-Situ
PL1177	0%	25%	75%	Leave In-Situ
PLU4688	Refer to PL1177	-	-	Leave In-Situ
PLU4689 ¹	29.2%	-	70.8%	Full Removal
PLU4690 ¹	28.0%	-	72.0%	Full Removal
PL1323 ⁴	3%	22%	75%	Full Removal
PL1324	Surface laid	-	-	Full Removal
PL1325	18.5 %	81.5 %	0.0 %	Full Removal
PL1629.1 / .2/ .3 / .4	Surface laid	-	-	Full Removal
PL1630 ⁴	4%	73%	23%	Full Removal
PL584 ⁴	8%	53%	39%	Leave In-Situ
PL58 ⁵ / PL586 ²	Refer to PL584	-	-	Full Removal
PLU30-8 (Redundant)	-	-	-	Full Removal

Note:

1. Only burial indicator currently provided
2. PL585 and PL586 are control umbilical piggybacked to PL584 hence share same burial depth
3. Separate service pipelines piggyback to an infield pipeline between well and platforms
4. Results from 2023 Survey

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The following FishSAFE spans were identified in the 2023 pipeline surveys.

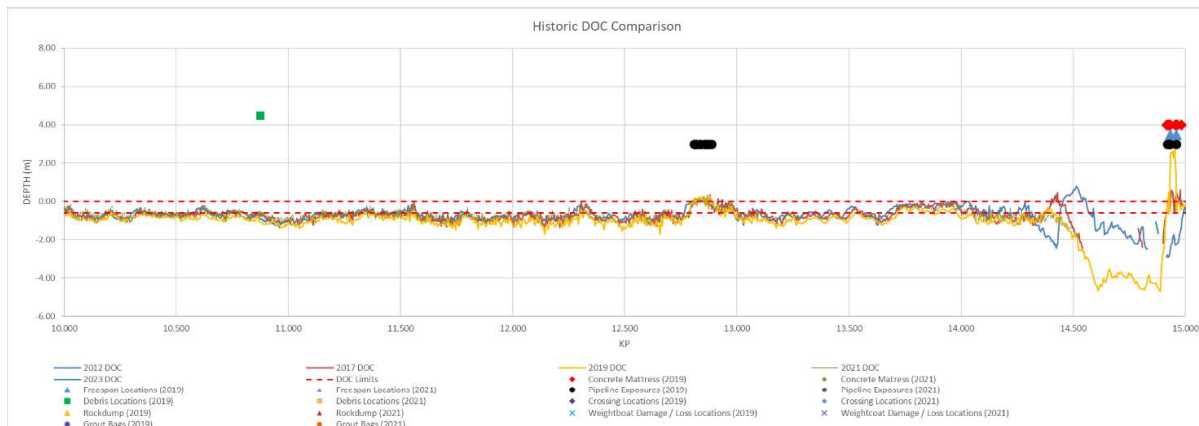
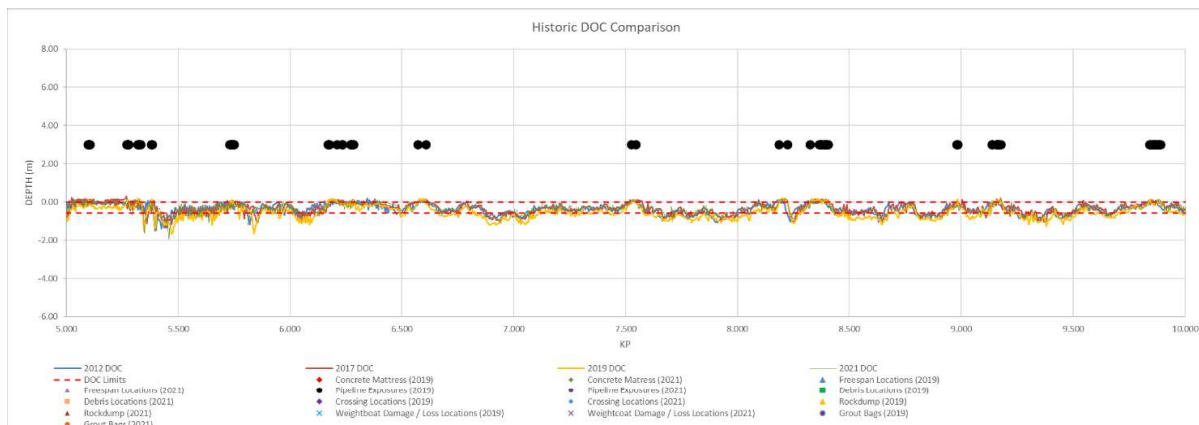
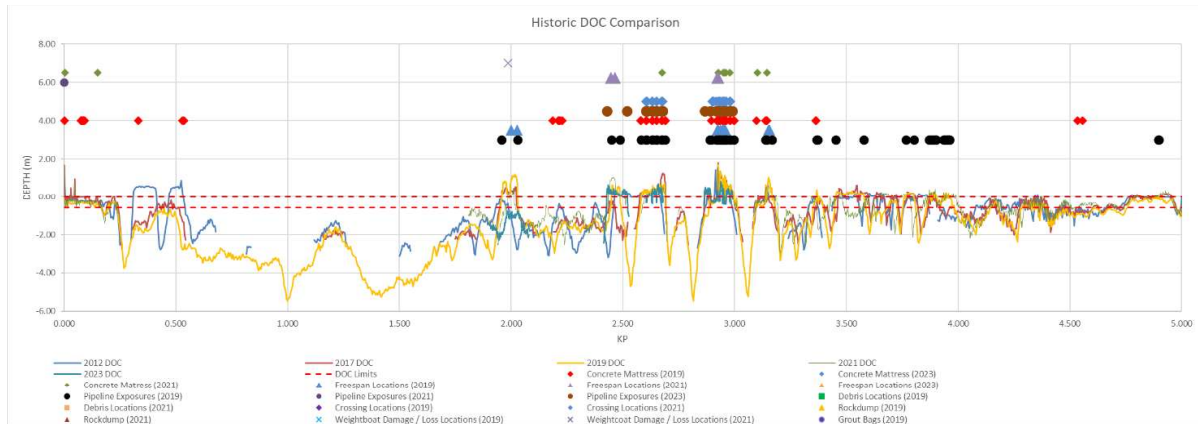
Table 23 - FishSAFE Spans exceedances

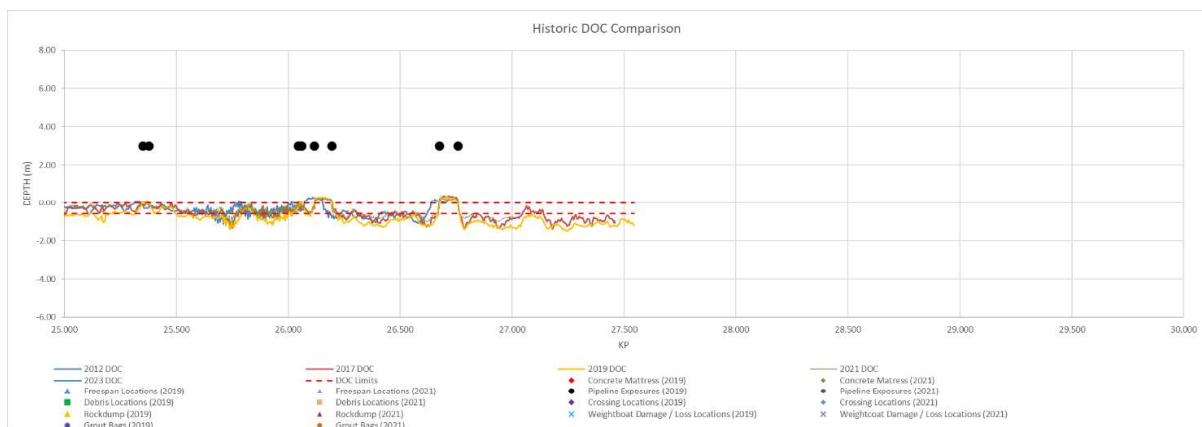
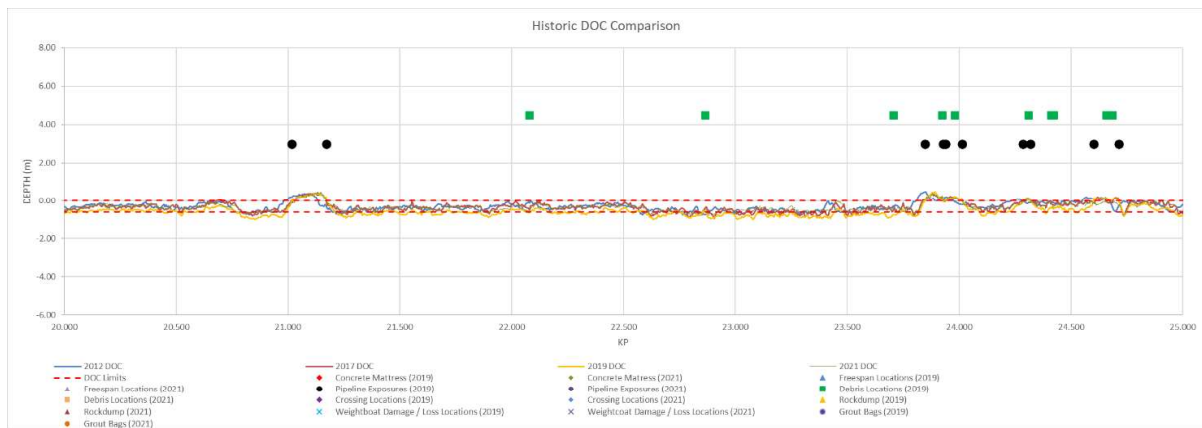
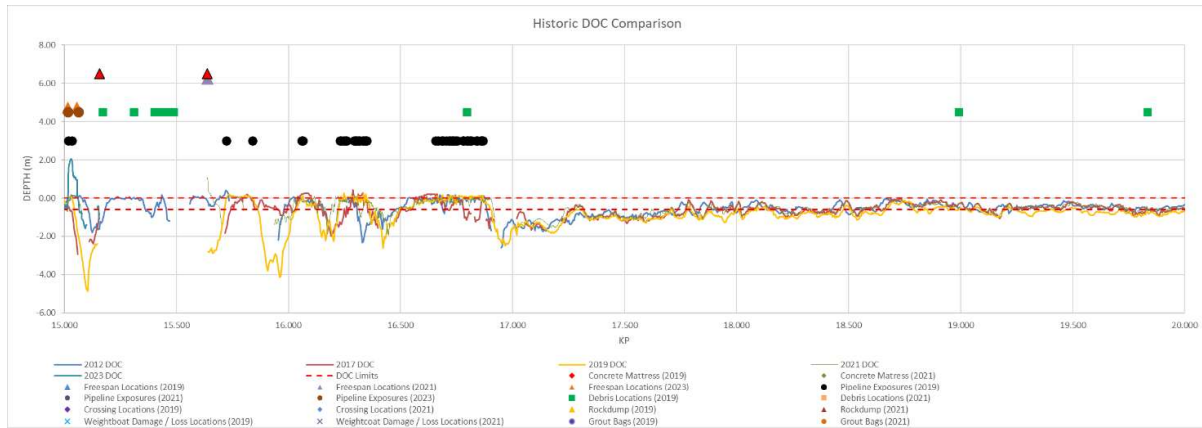
Span ID	Pipeline	KP Start	KP Finish	Freespan Length (m)	Freespan Max Height (m)
1	PL20	15.015	15.055	40.0	1.13
2	PL21	0.272	0.286	14.1	0.85
3	PL21	0.393	0.404	11.2	1.86
4	PL85	10.148	10.160	11.9	0.99

The locations of the FishSAFE Spans and the fishing activity within the Hewett Field are shown in Figure 11-1. As can be seen the majority of the Fishing activity occurs around the midpoint of PL20 & 21.

PL20 Depth of Burial

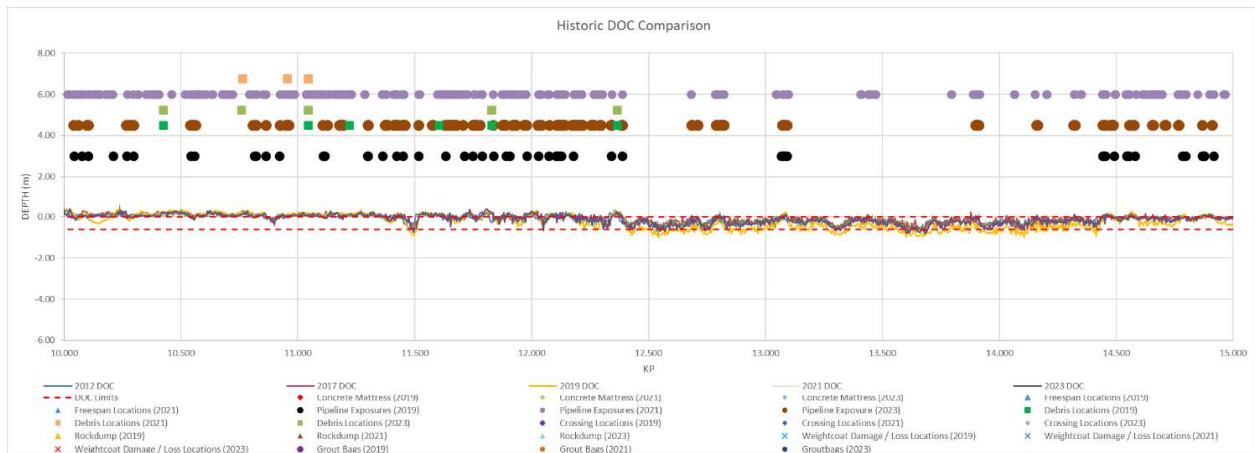
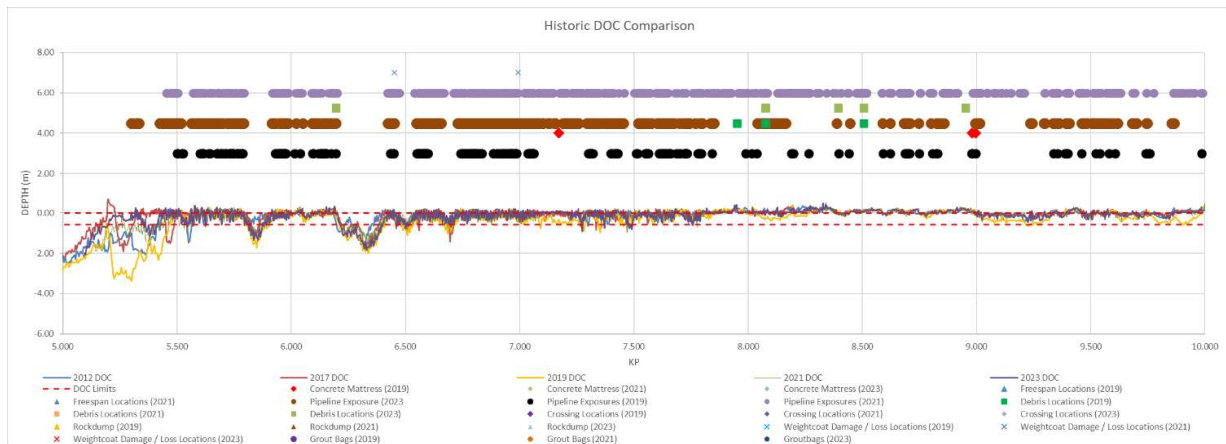
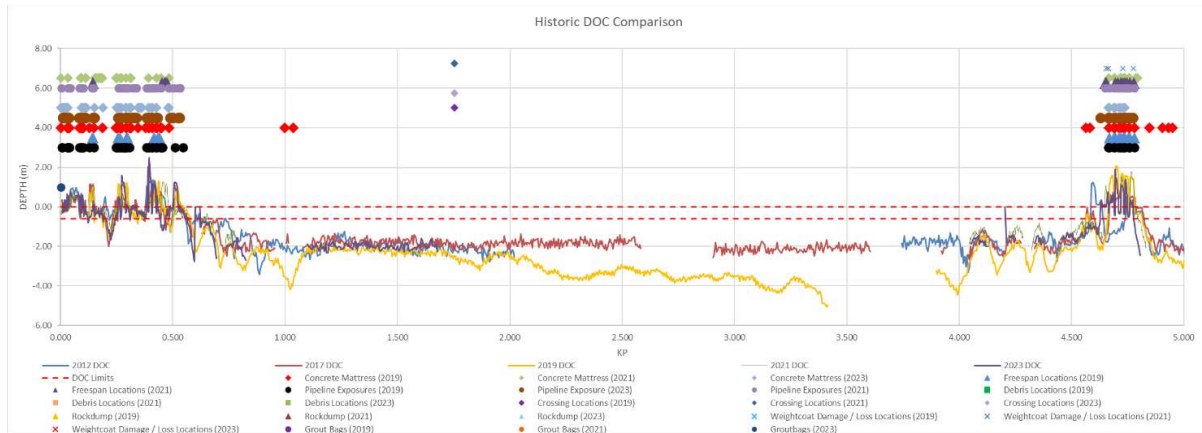
The following provides depth of burial profiles from pipeline surveys performed in 2012, 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Hewett 48/29A-FTP platform increasing towards the shore.

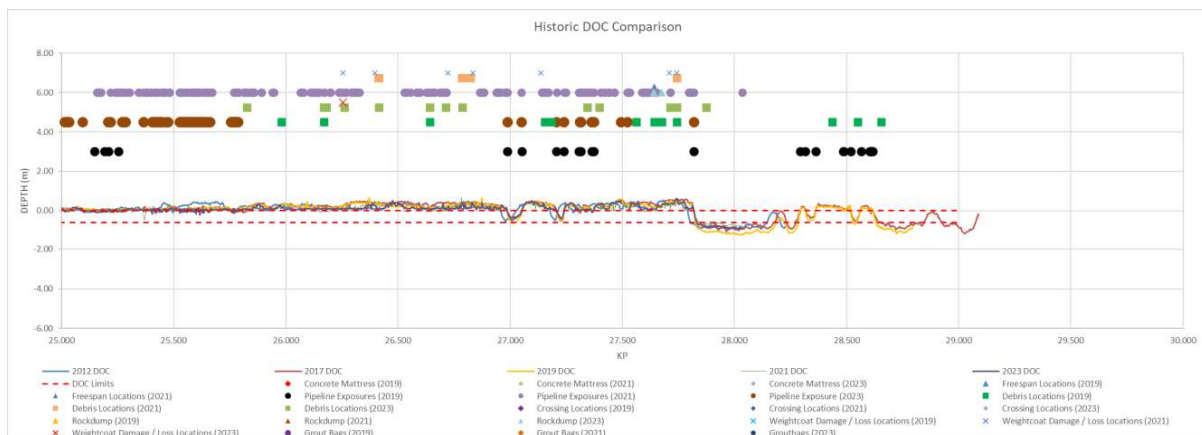
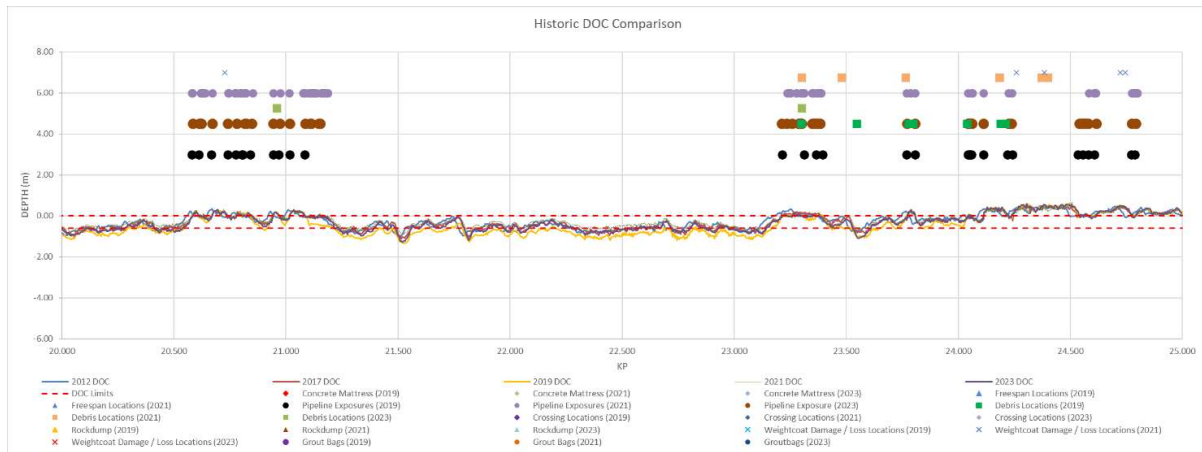
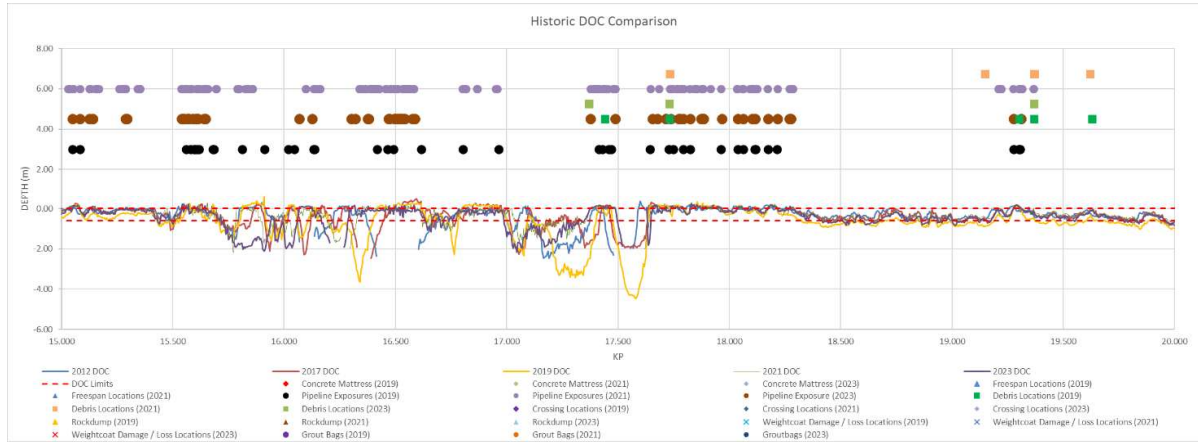




PL21 Depth of Burial

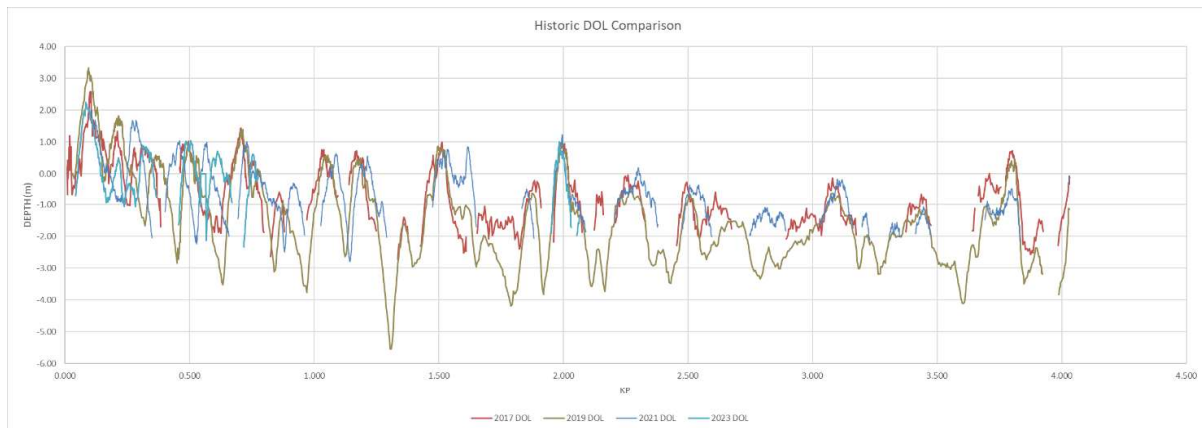
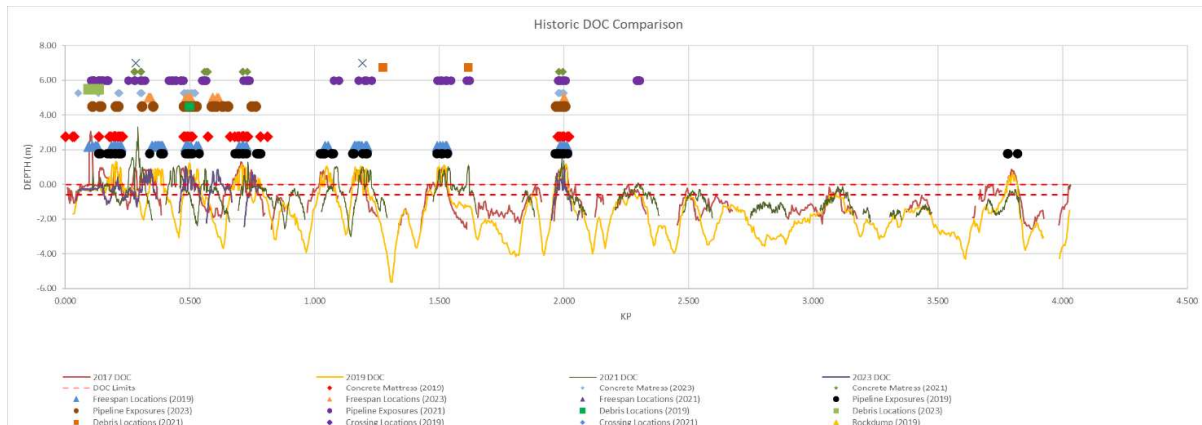
The following provides depth of burial profiles from pipeline surveys performed in 2012, 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Hewett 48/29A-FTP platform increasing towards the shore.





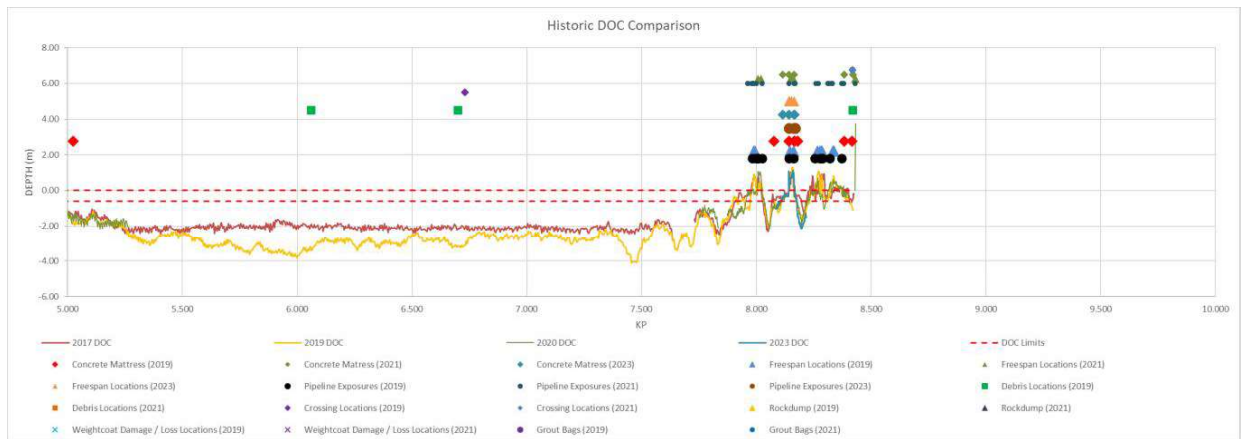
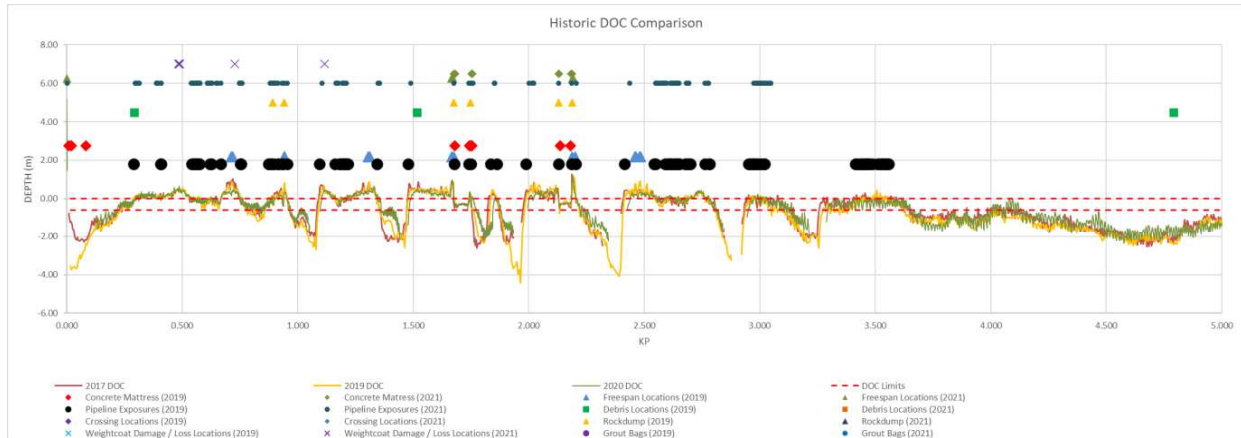
PL83 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Hewett 52/5-A platform increasing towards the Hewett 48/29A-FTP platform.



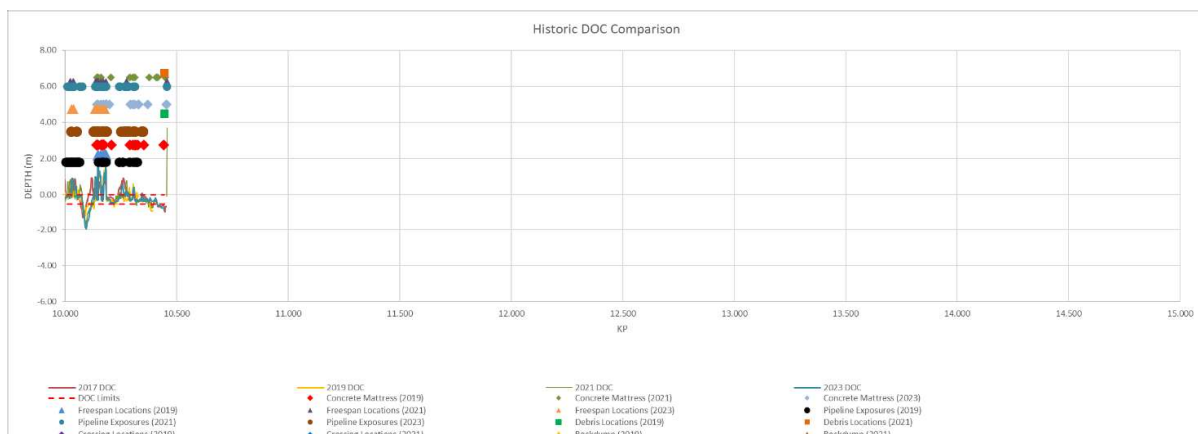
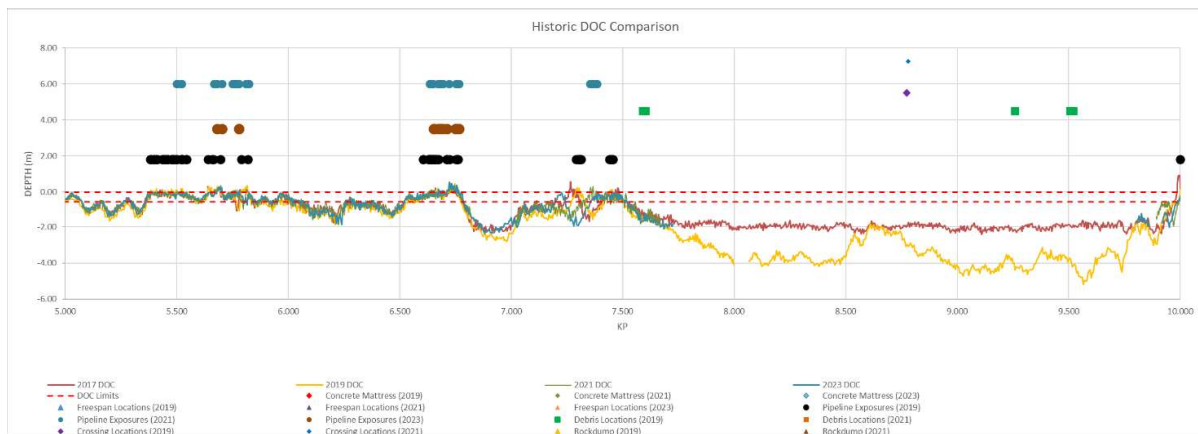
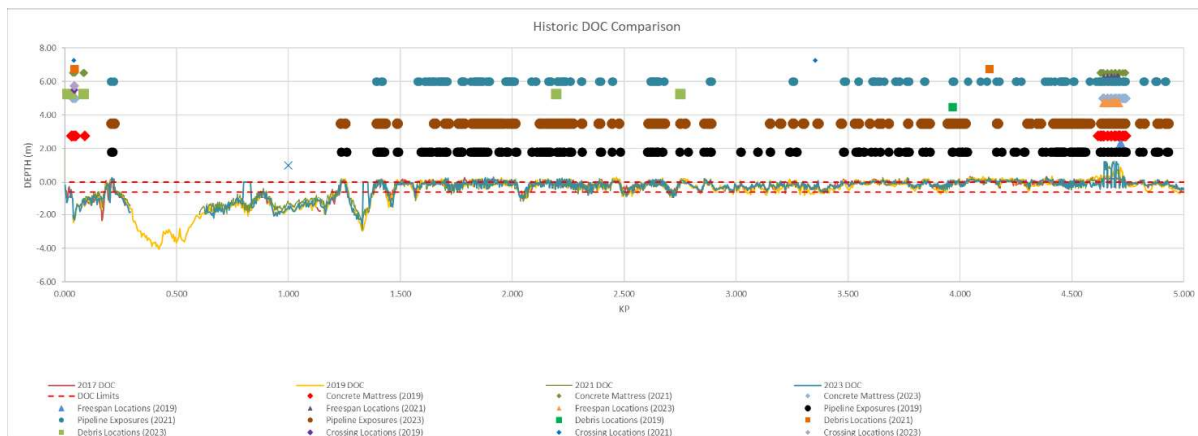
PL84 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019 & 2023. The KP points are ordered from KP 0.0 at the Hewett 48/29-B platform increasing towards the Hewett 48/29A-FTP platform.



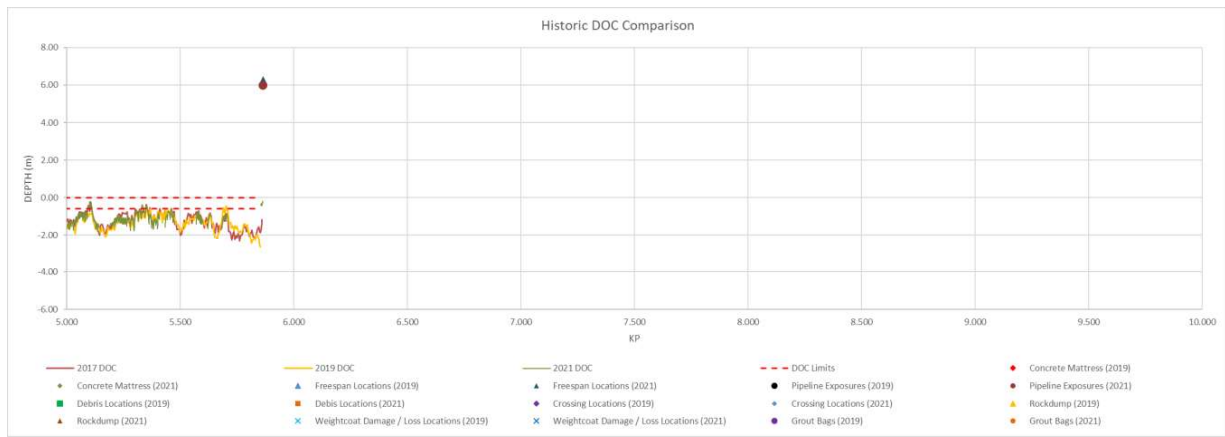
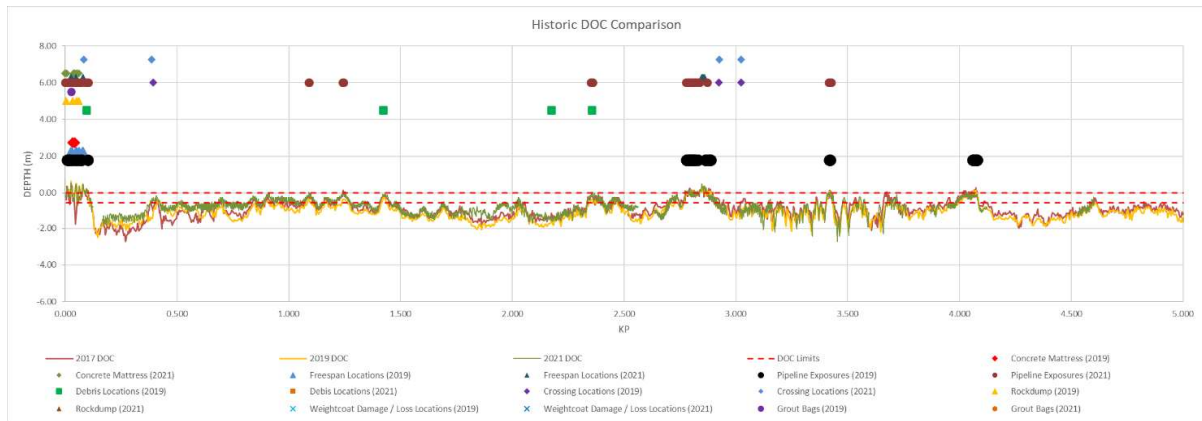
PL85 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Hewett 48/29-C platform increasing towards the Hewett 48/29A-FTP platform.



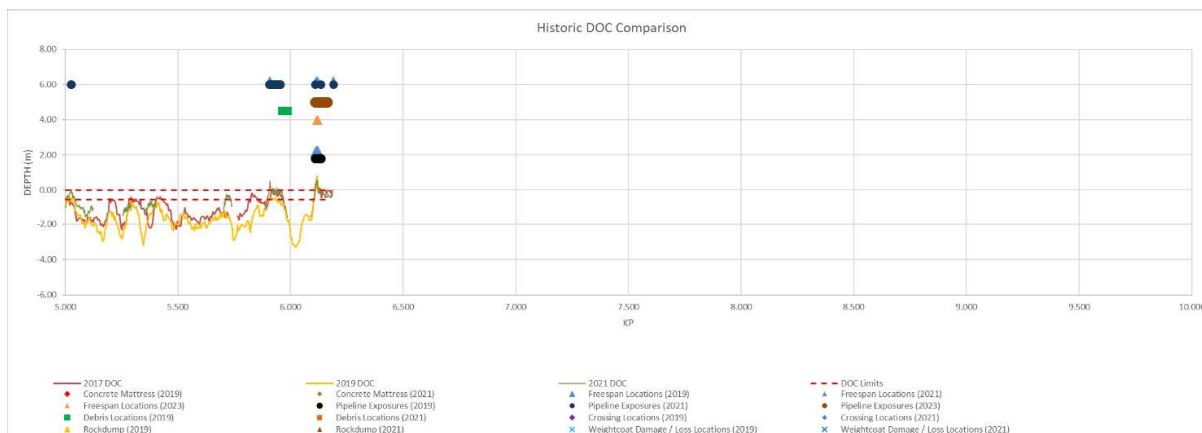
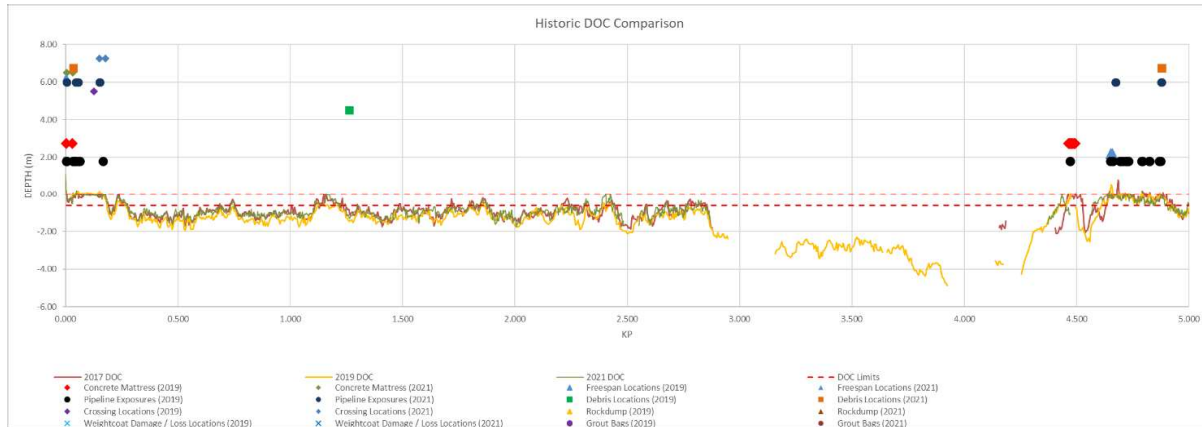
PL86 (Incl PL135.1 & PL135.2) Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019 & 2021. The KP points are ordered from KP 0.0 at the Deborah 48/30-8 Subsea Well increasing towards the Hewett 48/29-C platform.



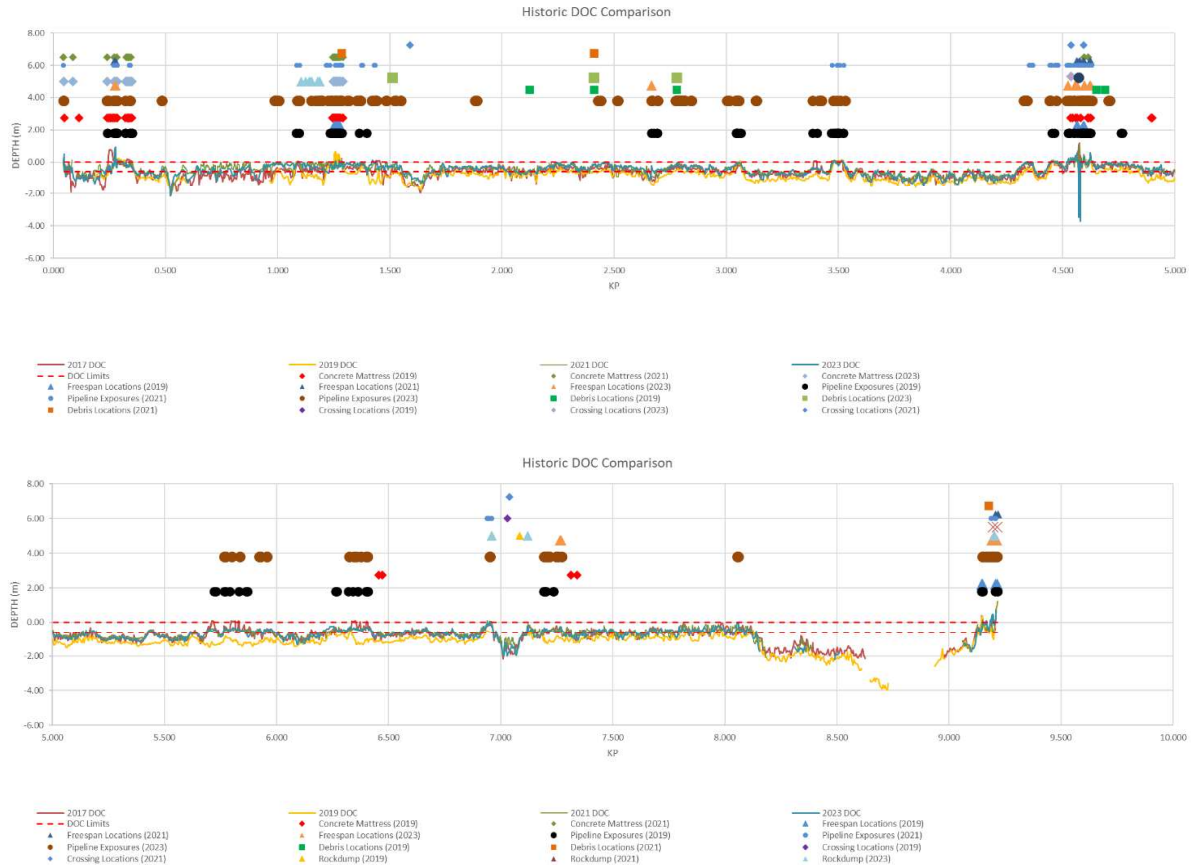
PL87 (Incl PL136.1 & PL136.2) Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Little Dotty 48/30-9 Subsea Well increasing towards the Hewett 48/29A-FTP platform.



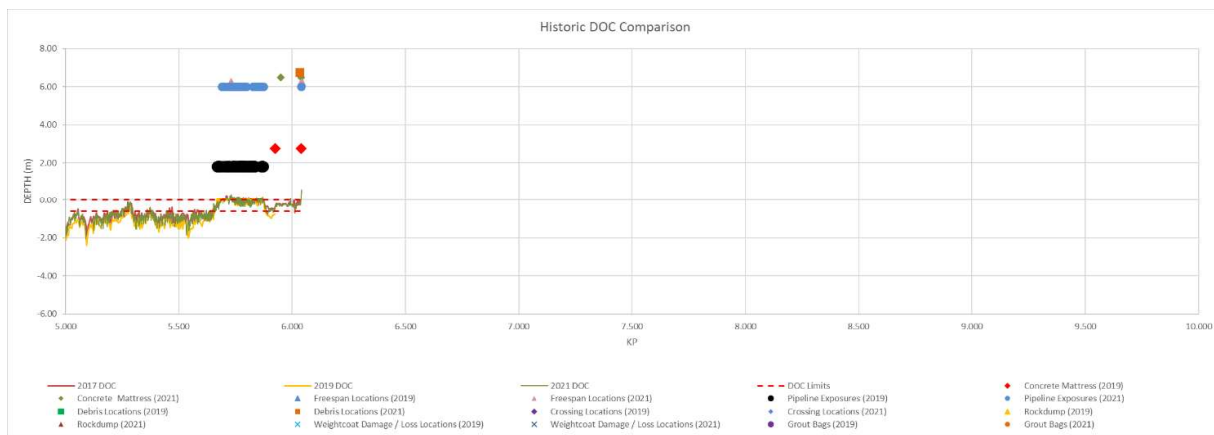
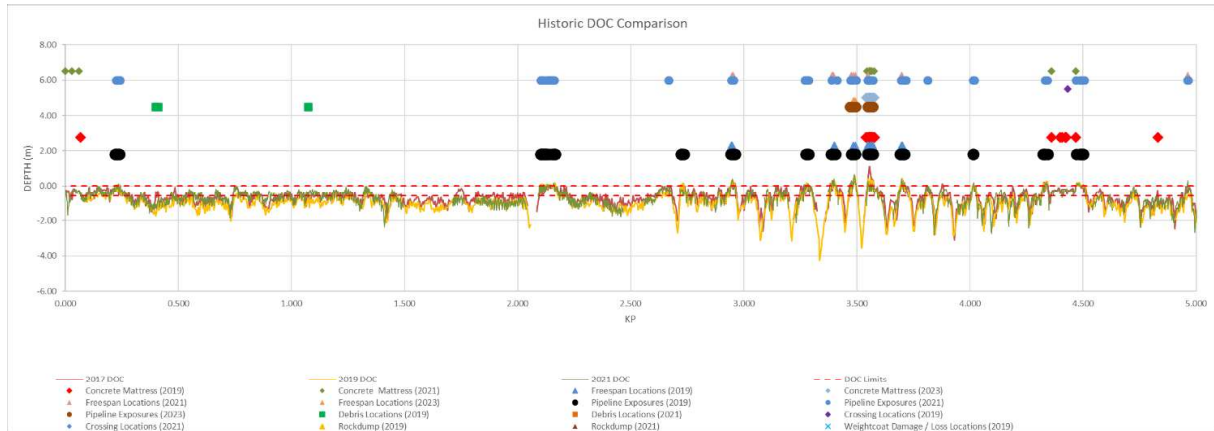
PL584 (Incl PL585 & PL586) Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Della 48/30-11 Subsea Well increasing towards the Hewett 48/29A-FTP platform.



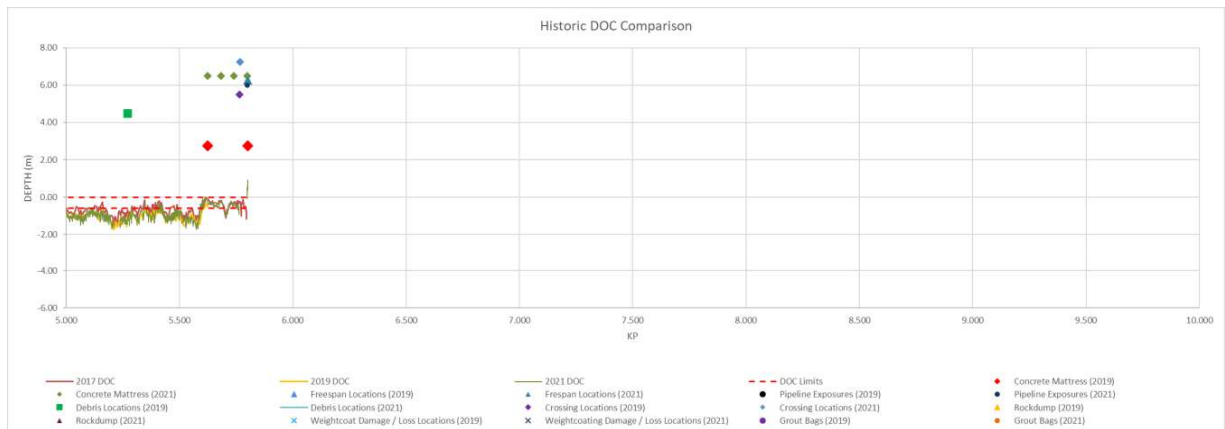
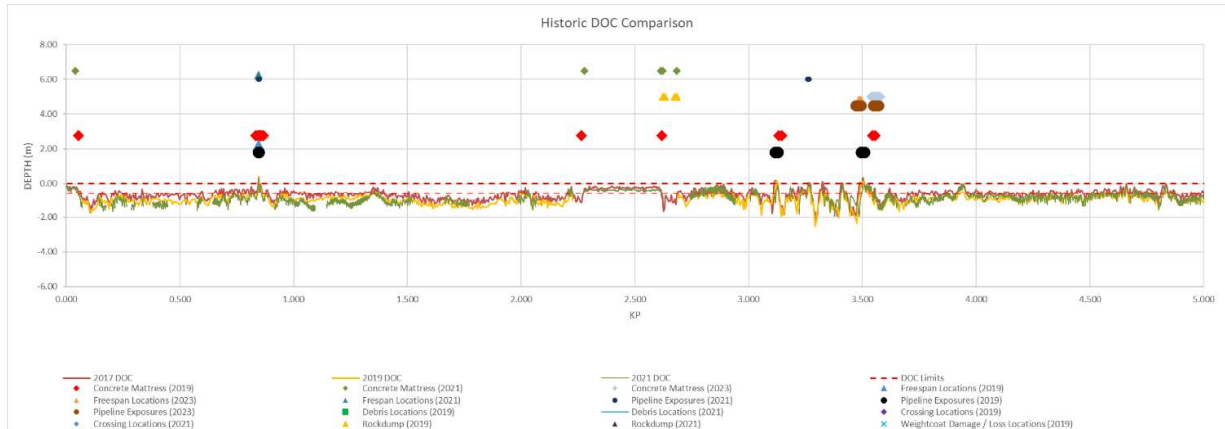
PL1173 (Incl PL1174) Depth of Burial

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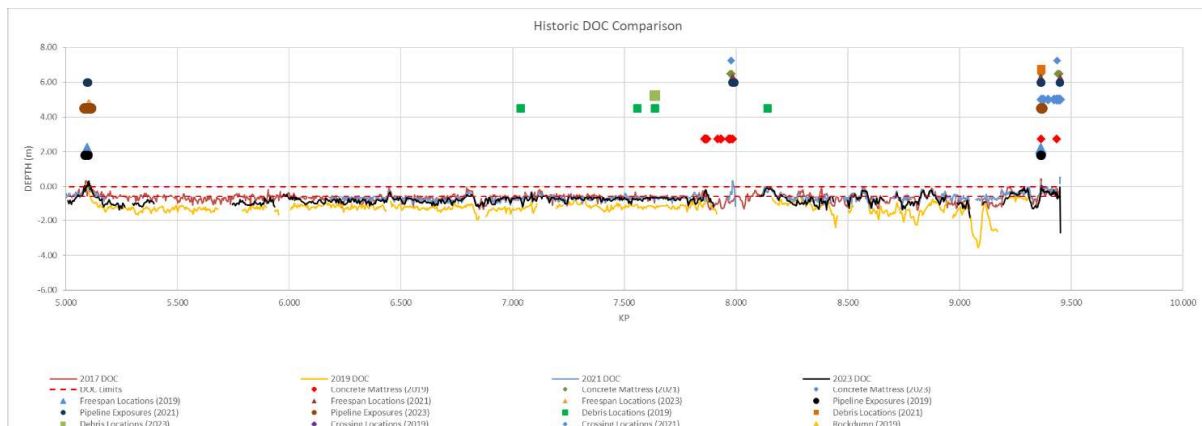
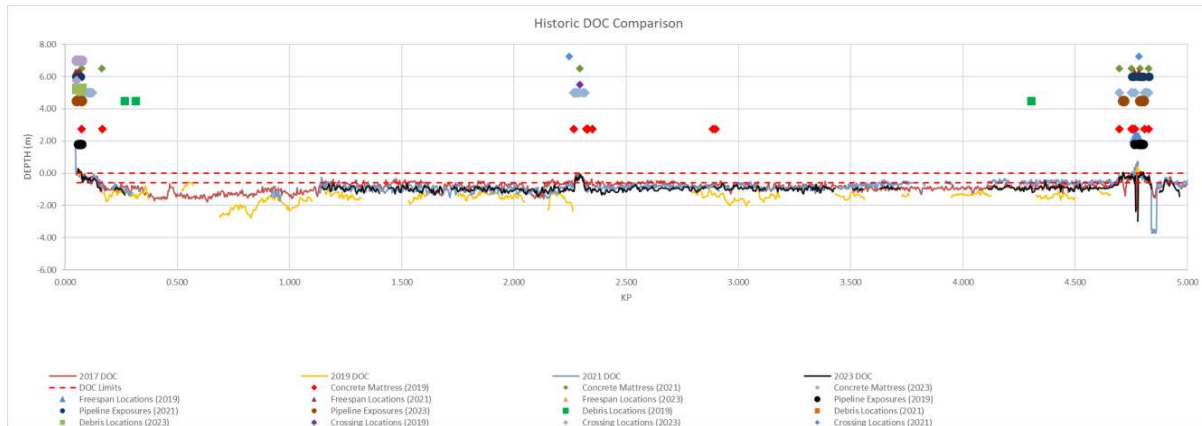
PL1177 (Incl PLU4688) Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Deborah 48/30-14 Subsea Well increasing towards the Hewett 48/29-C platform.



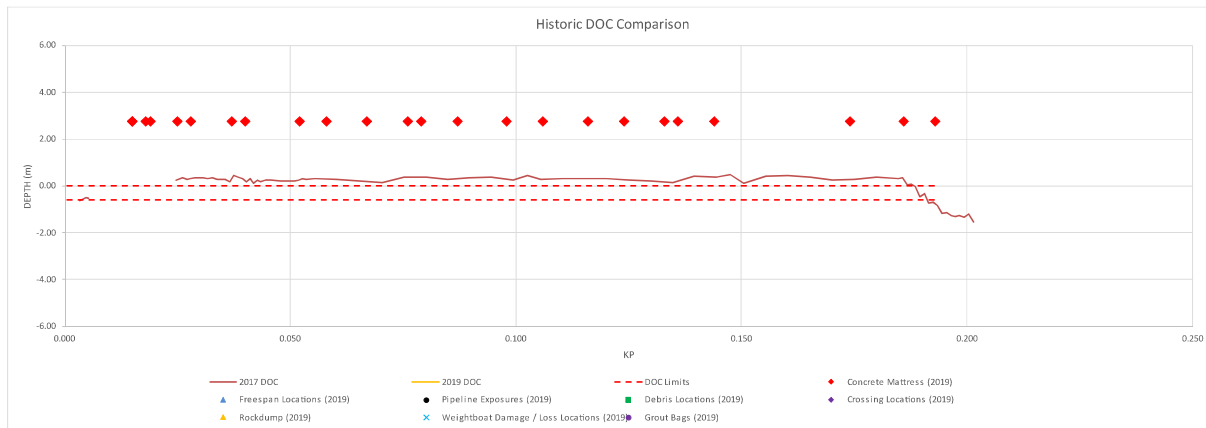
PL1323 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at the Hewett 48/29A-FTP platform increasing towards the Della 48/30-11 Subsea Well.



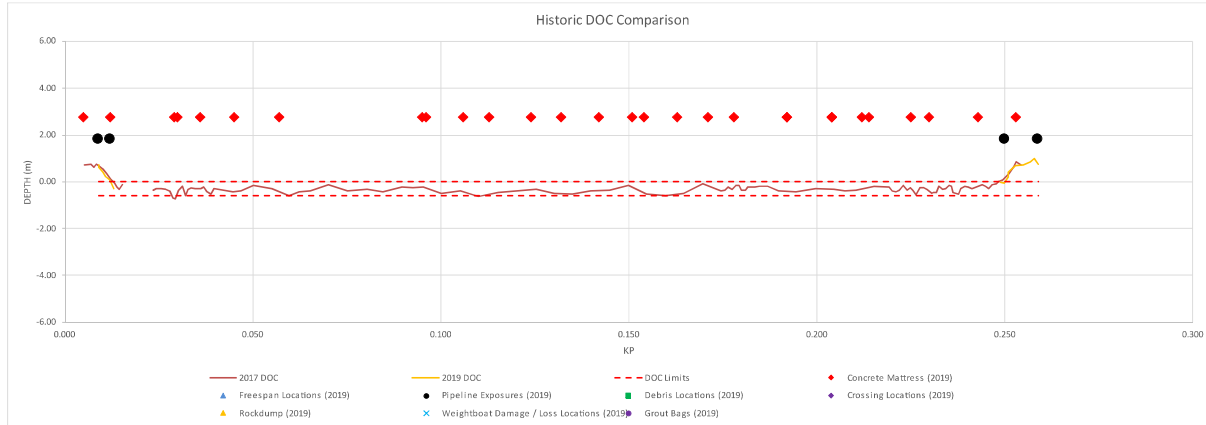
PL1324 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017 and 2019. The KP points are ordered from KP 0.0 at the MTM increasing towards Little Dotty 48/30-15 Subsea Well.



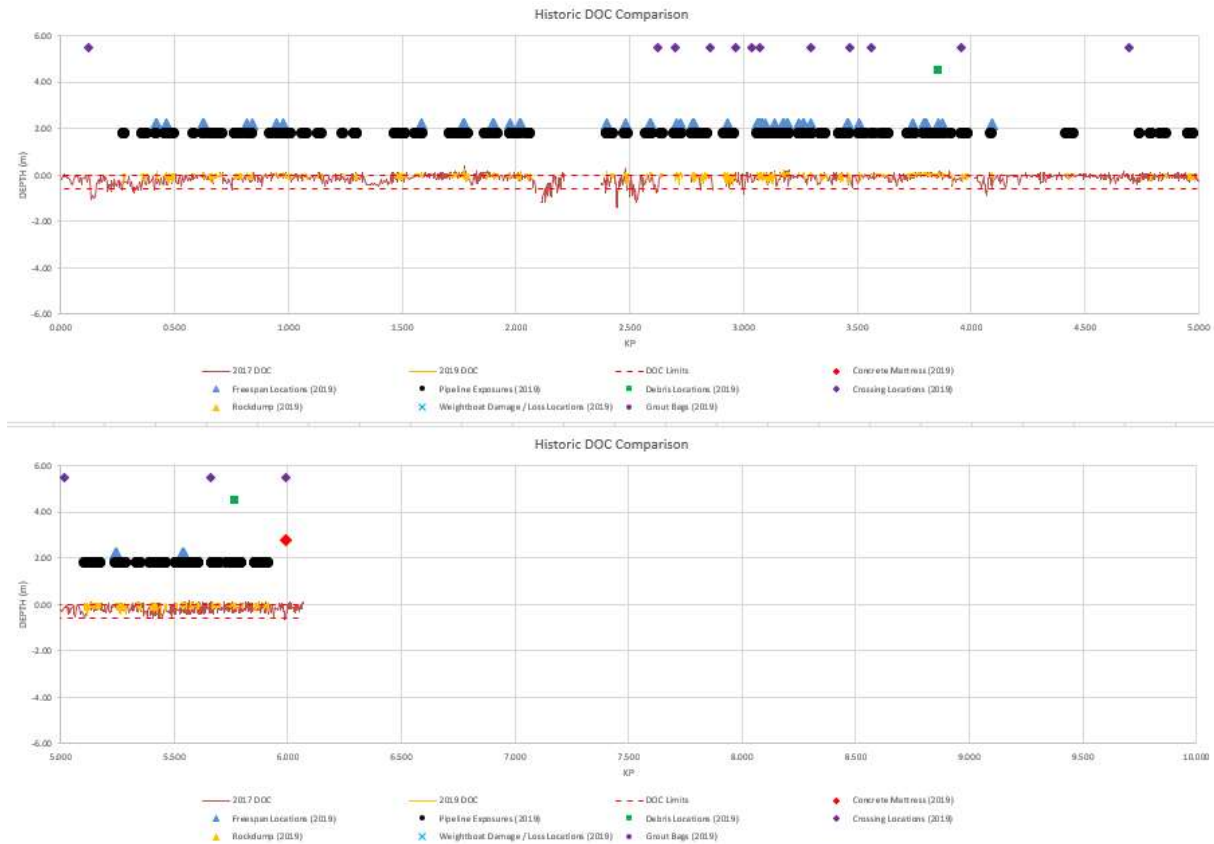
PL1325 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017 and 2019. The KP points are ordered from KP 0.0 at the MTM increasing towards Little Dotty 48/30-15 Subsea Well.



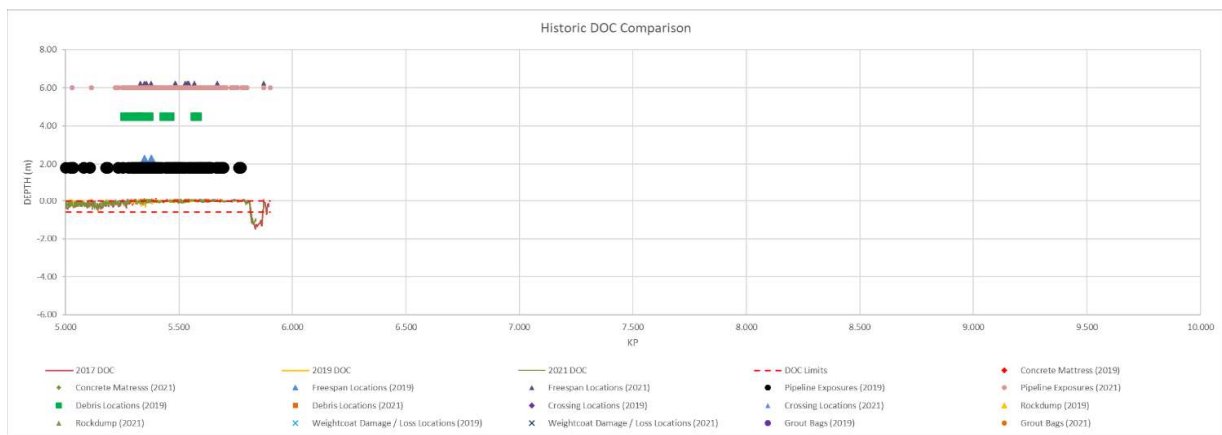
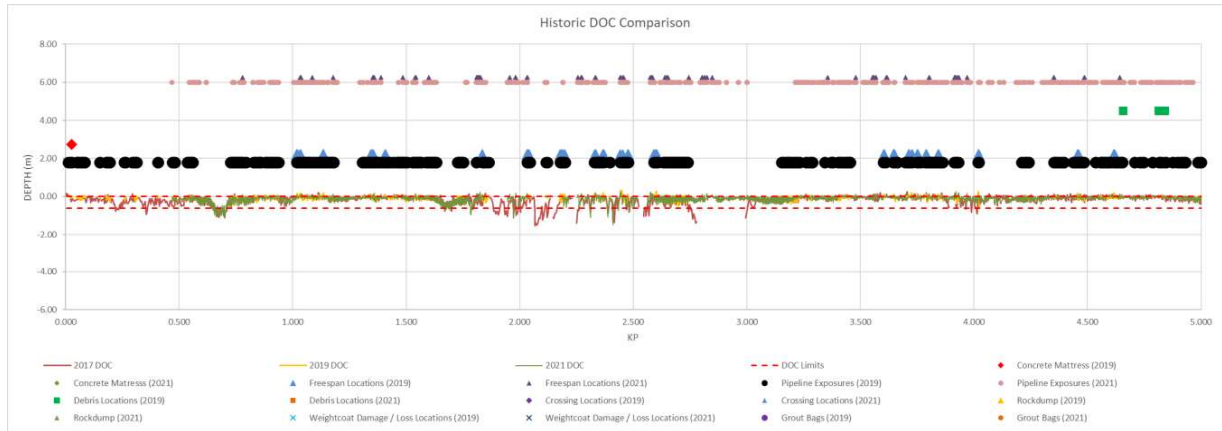
PLU4689 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017 & 2019. The KP points are ordered from KP 0.0 at the Hewett 48/29-C platform increasing towards the Deborah 48/30-8 Subsea Well.



PLU4690 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2017, 2019 & 2021. The KP points are ordered from KP 0.0 at the Hewett 48/29-C platform increasing towards the Deborah 48/30-10 Subsea Well.



PL1630 Depth of Burial

The following provides depth of burial profiles from pipeline surveys performed in 2019, 2021 & 2023. The KP points are ordered from KP 0.0 at well 48/30-18 increasing towards the Della PLEM 48/30-11 Subsea Well.

