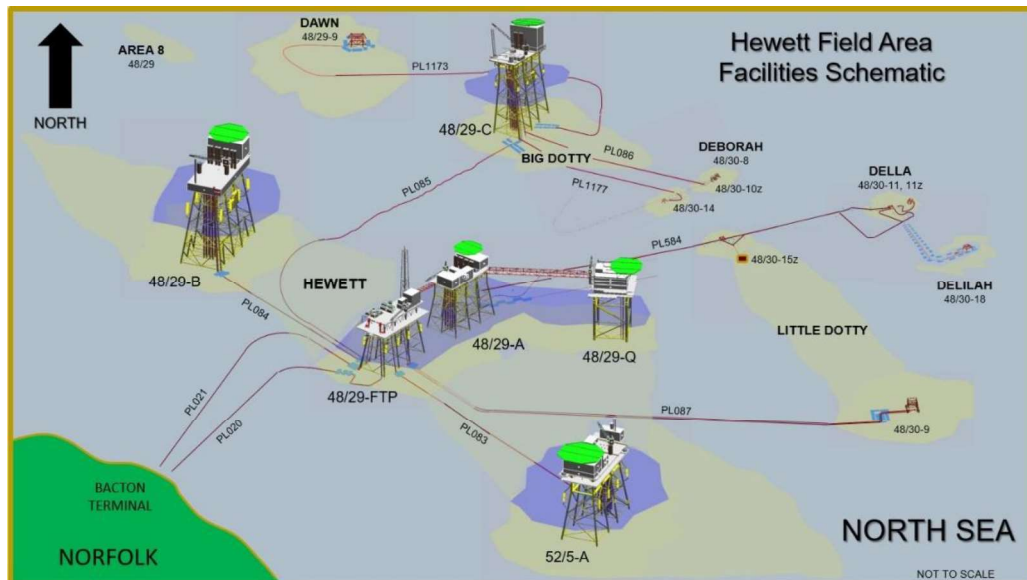



HEWETT AREA SUBSEA INSTALLATIONS COMBINED DECOMMISSIONING PROGRAMMES



DRAFT FOR CONSULTATION

December 2021

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: center;">Sheet of Sheets 2 / 48</p>
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Document Control

Approvals

	Name	Signature	Date
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Distribution List

Name	Company	No of Copies
Caitlyn Cox Decommissioning Manager	OPRED	1


Hold Record

HOLD	Sheet	Paragraph	Description
1			Partner letters of support
2		Annex A	Consultation Public Notices

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Terms and Abbreviations


Abbreviation	Explanation
BEIS	Department for Business, Energy & Industrial Strategy
CoP	Cessation of Production
EA	Environmental Appraisal
EC	European Commission
E&I	Electrical and instrumentation
EMT	Environmental Management Team
Eng	Engineering
Eni	Eni UK Limited
EU	European Union
FEED	Front End Engineering Design
FLO	Fisheries Liaison Officer
FTP	Field Terminal Platform
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
EPRD	Engineering, Preparation, Removals & Disposal
JNCC	Joint Nature Conservation Committee
km	Kilometre
LSA	Low Specific Activity scale
m ³	Cubic Metre
MTM	Midline Termination Module
N/A	Not Applicable
NFFO	National Federation of Fishermen's Organisations
nM	Nautical Mile
NORM	Naturally Occurring Radioactive Materials
NPAI	Not Permanently Attended Installation
NUI	Normally Unmanned Installation
OGUK	Oil & Gas UK
ODU	Offshore Decommissioning Unit
OGA	Oil and Gas Authority
OPEP	Oil Pollution Emergency Plan
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
OSPAR	Oslo-Paris Convention
P&A	Plug and Abandon / Plugging and Abandonment
PETS	Portal Environmental Tracking System
PEXA	Practice and Exercise Area
PFML	Petrofac Facilities Management Limited
PLEM	Pipeline End Manifold
PON	Petroleum Operations Notice
PWA	Pipeline Works Authorisation
RAF	Royal Air Force
SAC	Special areas of Conservation
SCAP	Supply Chain Action Plan
SFF	Scottish Fishermen's Federation
SNS	Southern North Sea
SOW	Scope of Work
SPA	Special Protection Area
SS	Subsea

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Abbreviation	Explanation
SSS	Side-Scan Sonar
STAP	Eni Standards and Procedures
Te	Metric Tonnes
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
WGS84	World Geodetic System of 1984
WHPS	Wellhead Protection Structure
WONS	Well Operations Notifications System

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1.0 EXECUTIVE SUMMARY

1.1 Combined Decommissioning Programmes

This document contains 4 decommissioning programmes for the removal of the subsea installations in the Hewett field, operations will take place at, Dawn, Deborah, Della, Delilah, Little Dotty Fields, including wellheads, protection structures and subsea manifold protection structures. All pipelines associated with each wellhead and protection structure will be flushed and disconnected/water gapped before any removal activities take place.

The facilities to be decommissioned consist of:

- 8 in number Subsea Wellhead Protection Structures (WHPS's):
 - Dawn Subsea Well 48/29-9
 - Deborah Subsea Well 48/30-8
 - Little Dotty Subsea Well 48/30-9 & 48/30-15z
 - Deborah Subsea Well 48/30-10
 - Deborah Subsea Well 48/30-14
 - Della Subsea Well 48/30-11z
 - Delilah Subsea Well 48/30-18
- 2 in number Subsea Manifold Protection Structures
 - Della Midline Termination Module (MTM)
 - Della Pipeline End Manifold (PLEM)

Note:

The Section 29 notice for the Hewett field installations also describes surface installations 48/29-FTP, 48/29-A, 48/29-Q, 48/29-B, 48/29-C and 52/5-A. These surface installations will not be affected by the proposals of these Programmes and their decommissioning are addressed in a separate decommissioning programme submitted to OPRED ODU.

1.2 Requirement for Decommissioning Programme(s)

Installation(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 1-5) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for the removal of the subsea installations detailed in Section 2.1 of this programme(s). No derogation from the general rule of OSPAR Decision 98/3 is required or sought.

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programme(s) is submitted in compliance with national and international regulations and OPRED guidelines.

The schedule outlined in this document is for the **Hewett Field Subsea Installations decommissioning projects**, anticipated to begin in 2022. The **Hewett Field Platforms decommissioning programs** has been approved in March 2021. The Subsea Pipelines & associated stabilisation Materials for pipelines only will be addressed in a separate decommissioning programme. Currently, the foreseen major project milestones for subsea installations decommissioning are as follows:


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Table 1-1 Decommissioning Programme(s) Milestones

Milestones	Approx. Date
Award of Hewett Field Underwater Services Contract	2020
Pre-Draft submission of Hewett Subsea Installations decommissioning programme(s)	2021
Approval of Subsea Installations DP	2022
Subsea Installations Removal & Disposal Window Start	2022
Subsea Installations Removal & Disposal Window End	2028
Submission of Close-Out report for Subsea Installation decommissioning programme(s)	2029

1.3 Introduction

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, Cessation of production applications have been submitted and approved for the following subsea installations covered by this document: consisting of five horizons vertically situated above each other, 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.

Table 1-2: Installation(s) Being Decommissioned

Installation (Offshore License no.)	COP Submission Date	COP Approval Date
Dawn 48/29-9	14/09/2010	23/09/2010
Deborah 48/30-8 (P.028 48/30a)	18/01/2019	12/02/2019
Deborah 48/30-10 (P.028 48/30a)	18/01/2019	12/02/2019
Deborah 48/30-14 (P.028 48/30a)	18/01/2019	12/02/2019
Little Dotty 48/30-9 (P.028 48/30a)	18/01/2019	12/02/2019
Little Dotty 48/30-15z (P.028 48/30a)	18/01/2019	12/02/2019
Della 48/30-11z (P.028 48/30a)	18/01/2019	12/02/2019
Delilah 48/30-18 (P.028 48/30a)	18/01/2019	12/02/2019
Midline Termination Module (MTM)	N/A	N/A
Pipeline End Manifold (PLEM)	N/A	N/A

See Figure 1-2, for relative layout of the facilities.

The following Marine Protected Areas are within 40km of the Hewett Field infrastructure (Figure 1-3), the potential impacts and associated controls regarding Marine Protection are outlined in the environmental appraisal associated with and referenced in this decommissioning programme(s).


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Table 1-3: Marine Protected Areas

Marine Protected Areas (within 40km of the Project)	
Special Area of Conservation (SAC)	<ul style="list-style-type: none"> Southern North Sea (48/29-9 = 3.7km; 48/30-8, 48/30-10, 48/30-14, 48/30-15z, 48/30-9, 48/30-11z, 48/30-18, 48/30-13, MTM and PLEM within) North Norfolk Sandbanks and Saturn Reef (48/29-9 = 7.2km; 48/30-8, 48/30-10 and 48/30-14 cluster = 4.4km; 48/30-9 = 7.9km; 48/30-11z = 3.5 km; 48/30-18 = 3.6km; MTM = 8.2km; PLEM = 3.7km); 48/30-15z = 8.1km; 48/30-13 = 4.2km) Hainsborough, Hammond and Winterton (48/29-9 = 9.5km; 48/30-8, 48/30-10 and 48/30-14 cluster = 6.2km; 48/30-15z = 1.8km; 48/30-9 = 0.9km; 48/30-11z = 5.8km; 48/30-18 = 5.7km; MTM = 1.8km; PLEM = 5.7km; 48/30-13 = 6.4km) The Wash and North Norfolk Coast (48/29-9 = 37.1km is the closest well)
Special Protection Area (SPA)	<ul style="list-style-type: none"> Greater Wash (48/29-9 = 20km; 48/30-8, 48/30-10, 48/30-14 cluster = 17.5km; 48/30-9 = 14.2km; 48/30-11z = 18.2km; 48/30-18 = 18.3km; MTM = 13.7km; PLEM = 18.2km; 48/30-15z = 13.7km; 48/30-13 = 17.4km)
Marine Conservation Zone (MCZ)	<ul style="list-style-type: none"> Cromer Shoal Chalk Beds (48/29-9 = 23km; 48/30-8, 48/30-10 and 48/30-14 = 26.9km; 48/30-9 = 26km; 48/30-11z, 48/30-18 = 28.7km and 48/30-15z = 24.6km; MTM = 24.3km; PLEM = 28.6km; 48/30-13 = 28/6km)

1.3.1 Fields

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.

1.4 Overview of Installation(s) Being Decommissioned

This document describes the decommissioning programmes, namely, Subsea Well-head/Xmas trees, 8 x WHPS, 1 x PLEM & 1 x MTM.

Subsea pipelines and umbilicals decommissioning will be addressed in a separate decommissioning programme to be submitted at a future time in accordance with relevant regulations at the time. The Hewett Field Platforms decommissioning program has now been approved.



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Table 1-4: General Field Information

Field Information			
Field(s)	Dawn, Deborah, Della, Delilah, Little 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.
Subsea Installation(s)			
Subsea Installations		Number of Wells	
Number	Type	Subsea	
10	WHPS & Manifold Protections Structures, Xmas Trees	8	

Table 1-5: Installation(s) Section 29 Notice Holders Details

Section 29 Notice Holder(s)	Registration Number	Equity Interest (%) <i>If zero show 0%</i>
Chrysaor Petroleum Company U.K. Limited	00792712	0%
Eni Hewett Limited	SC090159	0%
Eni LNS Limited	00970280	0%
Eni UK Limited	00862823	89.31333%
Perenco Gas (UK) Limited	00715529	10.68667%


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1.5 Summary of Proposed Decommissioning Solutions

The well-heads/Xmas trees and subsea structures will be removed to shore for recycling. A final decision on the exact decommissioning method will be made following engagement with the nominated contractor tasked with executing these removal scopes.

Table 1-6: Summary of Decommissioning Solutions

Proposed Decommissioning Solution	Reason for Selection
1. Subsea Installation(s) 8 x WHPS, 1 x PLEM & 1 x MTM	
<p>Complete removal (3m below seabed), dismantlement and reuse/recycling and disposal. If 3m is not achievable, OPRED will be informed.</p> <p>Valves and Piping Tees contained within both the PLEM and MTM are to be removed along with the structures.</p> <p>For the base case scenario, the intent is to remove Mud Mats providing WHPS stabilization, if however due to integrity of the mud mats and these cannot be safely removed to shore they will remain in-situ and OPRED will be advised.</p> <p>Removed by Construction Support Vessel or Dive support vessel (CSV, DSV), transported to appropriate land-based facility for dismantlement, recycling and disposal.</p> <p>Off the eight (8) WHPS, six (6) are piled and two (2) are integral.</p>	<p>Meets regulatory and OSPAR convention requirements</p>
2. Wellheads/xmas trees	
<p>Complete removal (3m below seabed), dismantlement and reuse/recycling and disposal. If 3m is not achievable, OPRED will be informed</p> <p>Removed by Construction Support Vessel or Dive support vessel (CSV, DSV), transported to appropriate land-based facility for dismantlement, recycling and disposal.</p> <p>Wells will be Abandoned in accordance with Oil & Gas UK Guidelines for the Suspension and Abandonment of Wells.</p> <p>Well abandonment will be undertaken in accordance with approved well designs, applicable legislation, Permits Licences, Consents, Notifications and Approvals will be applied for commensurate with the work, and any associated conditions will be complied with and verified</p>	<p>All subsea wells will be abandoned prior to removal of wellheads, xmas trees and WHPSs in order to meet OGA and HSE regulatory requirements.</p>

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Proposed Decommissioning Solution	Reason for Selection
<p>3. Interdependencies</p> <p>Removal of subsea well-heads/xmas trees and structures can only occur after the completion of the following decommissioning activities:</p> <ul style="list-style-type: none"> • Subsea well P&A; • Flushing and cleaning of associated pipelines/umbilicals; • Disconnection of pipeline tie-in spool pieces; <p>All disconnected pipeline ends will be protected with existing stabilization materials.</p> <p>Small areas of seabed sediment local to piles may be temporarily displaced to allow structure pile cutting. It is anticipated that localised impacts to the seabed have a good potential for recovery.</p> <p>Once removal method has been defined, OPRED will be informed.</p>	

1.6 Field Location Including Field Layout and Adjacent Facilities

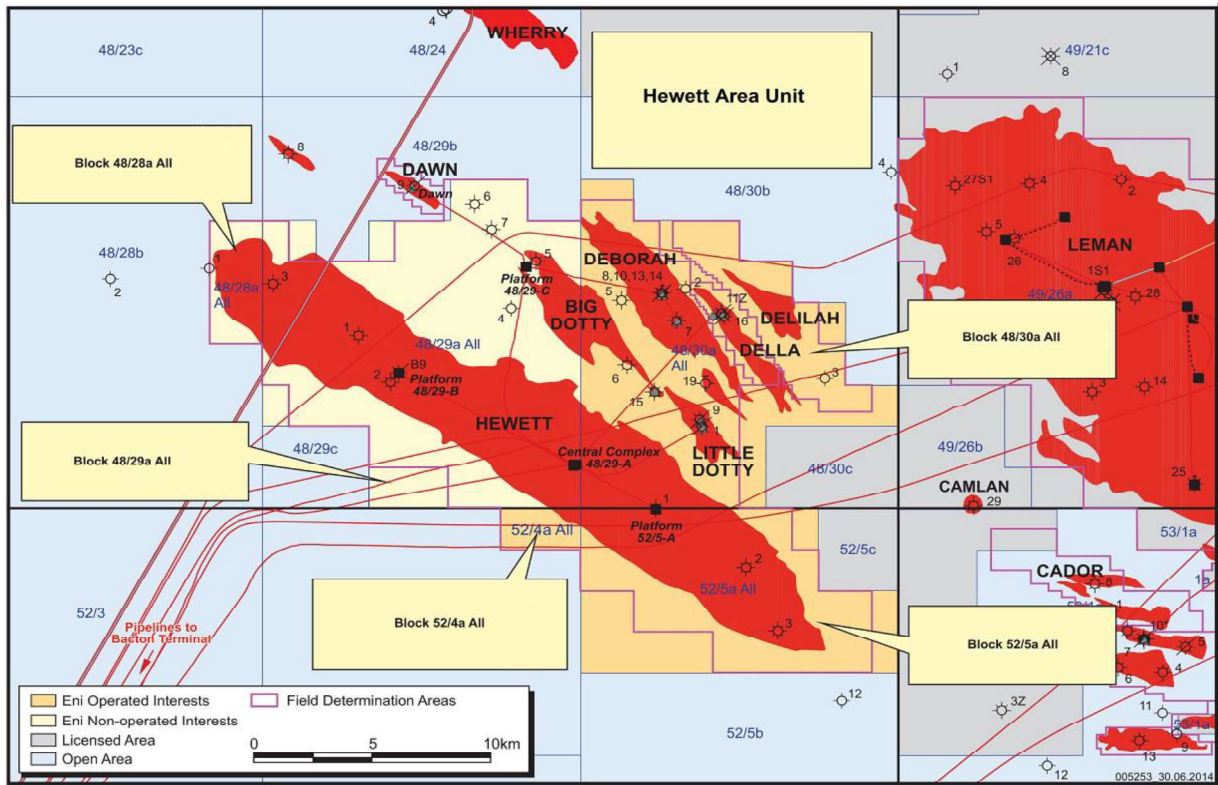


Figure 1-1: Field Location

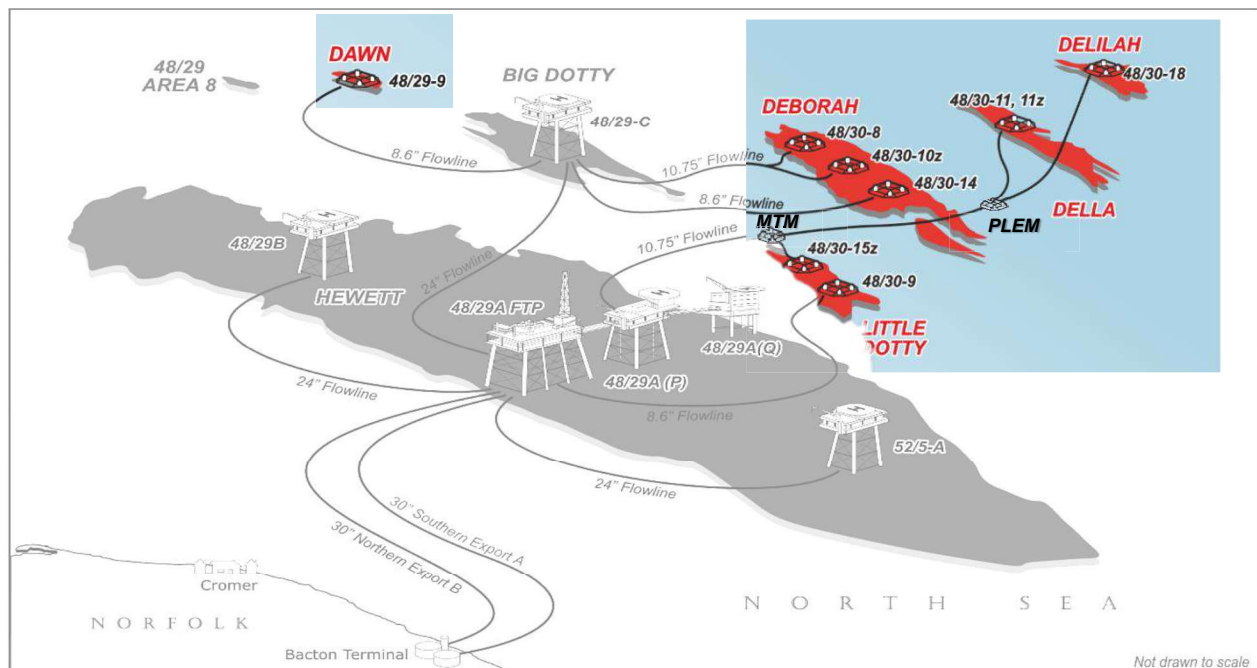



Figure 1-2: Field Layout – showing subsea equipment subject to this DP




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1.6.1 Adjacent facilities


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

Table 1-7: Adjacent Facilities


Operator	Name	Type	Distance/Direction	Information	Status
Eni, Perenco	PL20	30" gas export pipeline	From Hewett Sphere Launcher on Platform 48/29-FTP to Sphere Launcher at Bacton Gas Terminal, 27.9km long	Pipeline is disconnected midline with a length of pipe removed. Crosses under PL121 Shell 30" Gas Line from Leman to Bacton	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL21	30" gas export pipeline	From Hewett Sphere Launcher on Platform 48/29-FTP to Sphere Receiver at Bacton Gas Terminal, 32.8km long	Crosses over PL121 Shell 30" Gas Line from Leman to Bacton	Out of Use
Eni, Perenco	PL83	24" gas export pipeline	From Sphere Launcher on Platform 52/5-A to Sphere Receiver on Platform 48/29-FTP, 4.0km long	No pipeline crossings	Out of Use
Eni, Perenco	PL84	24" gas export pipeline	From Hewett 48/29-B Vent Valve to Hewett 48/29-FTP Vent Valve, 8.6km long	Crosses over PL121 Shell 30" Gas Line from Leman to Bacton	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL85	24" gas export pipeline	From Sphere Launcher on Platform 48/29-C to Sphere Receiver on Platform 48/29-FTP, 10.5km long	Crosses under PL1177 8" Gas line from Deborah Well 48/30-14 to Platform 48/29-C. Crosses under PL121 Gas line from Leman to Bacton. Crosses over Telephone Cable (Bacton Borkum No. 2 AJ)	Out of Use
Eni, Perenco	PL86	10.75" gas export pipeline	From Deborah Subsea Well 48/30-8 to Drilling Production Platform 48/29-C, 5.9km long	No pipeline crossings	Out of Use
Eni, Perenco	PL135.1	2.375" chemical pipeline	From Drilling Production Platform 48/29-C to Deborah Subsea Wells 48/30-8 and 48/30-10, 5.9km long	Piggybacked to PL86. No pipeline crossings	Out-of-use

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Operator	Name	Type	Distance/Direction	Information	Status
Eni, Perenco	PL135.2	2.375" chemical pipeline	From Drilling Production Platform 48/29-C to Deborah Subsea Well 48/30-14, 5.9km long	Piggybacked to PL86. No pipeline crossings	Out-of-use
Eni, Perenco	PL446	8.3" OD gas export flowline jumper hose	From Deborah Subsea Well No. 48/30-10 to PL86 tee, 0.016km long	No pipeline crossing.	Out of Use
Eni, Perenco	PL446.1	4.6" OD service line jumper hose	From PL135A tee to Deborah Subsea Well No. 48/30-10, 0.07km long	No pipeline crossing	Out of Use
Eni, Perenco	PLU4689	3.0" control umbilical	From Topside Hydraulic Control Panel on Platform 48/29-C to Subsea Hydraulic Control System at Deborah Subsea Well 48/30-8, 5.9km long	Hydraulic control umbilical running parallel to PL86. No umbilical crossings	Out of Use
Eni, Perenco	PLU4690	2.8" control umbilical	From Topside Hydraulic Control Panel on Platform 48/29-C to Subsea Hydraulic Control System at Deborah Subsea Well 48/30-10, 5.9km long	Hydraulic control umbilical running parallel to PL86. No umbilical crossings	Out of Use
Eni, Perenco	PL1173	8.625" gas export pipeline	From Dawn Subsea Well No. 48/29-9 to Hewett Platform 48/29-C, 6.1km long	Crosses over PL370 IOG 24" Gas Line Thames to Bacton	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL1174.1-2	2 no. 0.75" NB chemical cores (Part of 4.9" EHCI umbilical)	From Hewett Platform 48/29-C to Dawn Subsea Well No. 48/29-9, 6.2km long	Piggybacked to PL1173. Crosses over PL370 IOG 24" Gas Line Thames to Bacton	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL1177	8.625" gas export pipeline	From Hewett Platform 48/29-C to Deborah Subsea Well No. 48/30-14, 5.8km long	Crosses over PL85 24" Gas Line 48/29-C to 48/29-FTP	Out of Use
Eni, Perenco	PLU4688	6.0" hydraulic control umbilical	From Topside Umbilical Termination on Platform 48/29-C to Subsea Umbilical Termination at	Piggy-back to PL1177. Crosses over PL85 24" Gas Line 48/29-C to 48/29-FTP	Out of Use

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Operator	Name	Type	Distance/Direction	Information	Status
			Deborah Well 48/30-14, 6.0km long		
Eni, Perenco	PL87	8.625" gas export pipeline	From Little Dotty Subsea Well 48/30-9 to Drilling Production Platform 48/29-FTP, 6.2km long	No pipeline crossings.	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL136.1	2.375" chemical pipeline	From Drilling Production Platform 48/29-FTP to Little Dotty Subsea Well 48/30-9, 6.2km long	Piggybacked to PL87. No pipeline crossings.	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL136.2	2.375" chemical pipeline	From Drilling Production Platform 48/29-C to Little Dotty Subsea Well 48/30- 9, 6.2km long	Piggybacked to PL87. No pipeline crossings	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PLU4743	6.0" hydraulic control umbilical	From Topside Hydraulic Control Panel on Platform 48/29-FTP to Subsea Umbilical Termination at Little Dotty Subsea Well 48/30- 9, 7.7km long	Hydraulic control umbilical running parallel to PL87. No pipeline crossings	Out-of-use
Eni, Perenco	PL584	10.75" gas export pipeline	From Della Subsea Well 48/30-11z, with midline tie-backs from Delilah Subsea Well 48/30-18 & Little Dotty Subsea Well 48/30-15z to Platform 48/29-A, 9.2km long	Cross over PL585 /586 disused Della umbilical Crosses over PL121 Shell 30" Gas Line from Leman to Bacton	Out of Use
Eni, Perenco	PL585	0.5" NB chemical core (part of 3.8" Della hydraulic CI umbilical)	From Platform 48/29-A to Della Subsea Well 48/30- 11z, 10.4km long	One of the chemical cores forming part of the Della control umbilical running parallel to PL584. Cross under PL584 Della gas export pipeline Crosses over PL121 Shell 30" Gas Line from Leman to Bacton Crosses under PL1630 Delilah 8" NB Production Flowline. Crosses under PL1629 Delilah 6.4" umbilical	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL586	0.5" NB chemical core (part of 3.8" Della hydraulic	From Platform 48/29-A to Della Well Subsea 48/30- 11z, 10.4km long	One of the chemical cores forming part of the Della control umbilical running parallel to PL584. Cross under	Out-of-use (Interim Pipeline Regime)

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Operator	Name	Type	Distance/Direction	Information	Status
		CI umbilical)		PL584 Della gas export pipeline Crosses over PL121 Shell 30" Gas Line from Leman to Bacton Crosses under PL1630 Delilah 8" NB Production Flowline. Crosses under PL1629 Delilah 6.4" umbilical	
Eni, Perenco	PL1323.1-5	5.2" EHCI umbilical	From Hewett Platform 48/29-A to SUT at Della Subsea Well 48/30-11z, 9.7km long.	EHCI control umbilical running parallel to PL584. Crosses over PL121 Shell 30" Gas Line from Leman to Bacton Crosses over PL585 /PL586 disused Della umbilical Crosses under PL1630 Delilah 8"NB production flowline Crosses under PL1629 6.4" Delilah umbilical	Out of use
Eni, Perenco	PL1324.1-3	4.7" EHCI umbilical jumper	From SUT at MTM to SUT at Little Dotty Subsea Well 48/30-15z, 0.246km long	EHCI control umbilical jumper running parallel to PL1325	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL1325	10.3" OD gas export flexible flowline	From Little Dotty Subsea Well 48/30-15z to MTM, 0.254km long	Running parallel to PL1324	Out-of-use (Interim Pipeline Regime)
Eni, Perenco	PL1629.1-4	6.4" EHCI umbilical jumper	From JUT at PLEM to SUT at Delilah Subsea Well 48/30-18, 0.260km long	EHCI control umbilical jumper running parallel to PL1630	Out-of-use
Eni, Perenco	PL1630	10.8" OD gas export flexible flowline	From Delilah Subsea Well 48/30-18 to PLEM, 0.259km long	Running parallel to PL1629	Out-of-use
Eni, Perenco	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	Operational

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Operator	Name	Type	Distance/Direction	Information	Status
				Bacton Gas Terminal via PL21	
Eni, Perenco	Platform 48/29-A	Offshore Gas Platform		Gas production from Della, Little Dotty & Delilah are routed towards 48/29-A	Operational
Eni, Perenco	Platform 48/29-C	Offshore Gas Platform		Gas production from Dawn and Deborah Subsea Wells are routed towards 48/29-FTP	Operational
Eni, Perenco	Bacton Gas Terminal	Onshore Gas Terminal		Gas production from Hewett Satellite Subsea Wells are routed towards 48/29-FTP	Operational
Impacts of Decommissioning Proposals					
There are no direct impacts on adjacent facilities from the decommissioning / removal of the Hewett Subsea Wells and associated infrastructure. Short term environmental impacts associated with this activity are detailed in Section 4.					

1.7 Industrial Implications

ENI UK Limited is actively engaging with the market and other operators decommissioning in the SNS (e.g. Perenco, Harbour Energy) to maximise the value of past lessons learned and will be taking advantage of industry conferences to present the project to prospective contractors. Several contractual approaches are under consideration, including the use of Underwater Services.


2.0 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation & Wellhead/Xmas Tree:

Table 2-1: Subsea Features

Field	Subsea Well	Well Status	Subsea Structure	Weight (tonnes)	Dimensions (m)	Block	Location (WGS84)	Water Depth (m)	Description
Dawn	48/29-9	Shut-in	Wellhead/ Tree	33.2	-	48/29	53° 05.2'11"N 01° 51.087'E	33	Well is shut in, will undergo plug and abandonment.
			WHPS (piled)	27.3	11.0 L x 11.0 W x 4.9 H				Open framed steel protection structure positioned over the wellhead and tree, providing protection against damage resulting from trawl board impact or snagging, dropped objects.
Deborah	48/30-8	Shut-in	Wellhead/ Tree	26	-	48/30	53° 05.2'16"N 01° 51.070'E	38	Well is shut in, will undergo plug and abandonment.
			WHPS (piled)	29.3	7.7 L x 7.7 W x 9.8 H				Open framed steel protection structure positioned over the wellhead and tree, providing protection against damage resulting from trawl board impact or snagging, dropped objects.
	48/30-10	Shut-in	Wellhead/ Tree	35	-		53° 05.2'16"N 01° 51.082'E		Well is shut in, will undergo plug and abandonment.
			WHPS (piled)	17.5	9.0 L x 12.0 W x 10.7 H				Open framed steel protection structure positioned over the wellhead and tree, providing

Field	Subsea Well	Well Status	Subsea Structure	Weight (tonnes)	Dimensions (m)	Block	Location (WGS84)	Water Depth (m)	Description
Little Dotty									protection against damage resulting from trawl board impact or snagging, dropped objects.
			Wellhead/ Tree	33.2	-		53° 05.174'N 01° 51.017'E		Well has been plugged and abandoned.
	48/30-14	Shut-in	WHPS (piled)	28.5	11.5 L x 11.5 W x 5.5 H				Open framed steel protection structure positioned over the wellhead and tree, providing protection against damage resulting from trawl board impact or snagging, dropped objects.
			Wellhead/ Tree	26	-		53° 05.216'N 01° 51.070'E		Well is shut in, will undergo plug and abandonment.
	48/30-9	Shut-in	WHPS (piled)	20.6	7.7 L x 7.7 W x 7.0 H			35	Open framed steel protection structure positioned over the wellhead and tree, providing protection against damage resulting from trawl board impact or snagging, dropped objects.
Delilah			Wellhead/ Tree	32.58	-		53° 02.865'N 01° 50.780'E		Well has been plugged and abandoned.
	48/30-15z	Shut-in	WHPS (integral)	39.8	8.5 L x 8.5 W x 7.2 H			38	Xmas Tree is protected by integral protective structure
	48/30-18	Shut-in	Wellhead/	32.58	-		53° 04.646'N	38	Well is shut in, will undergo plug and abandonment.

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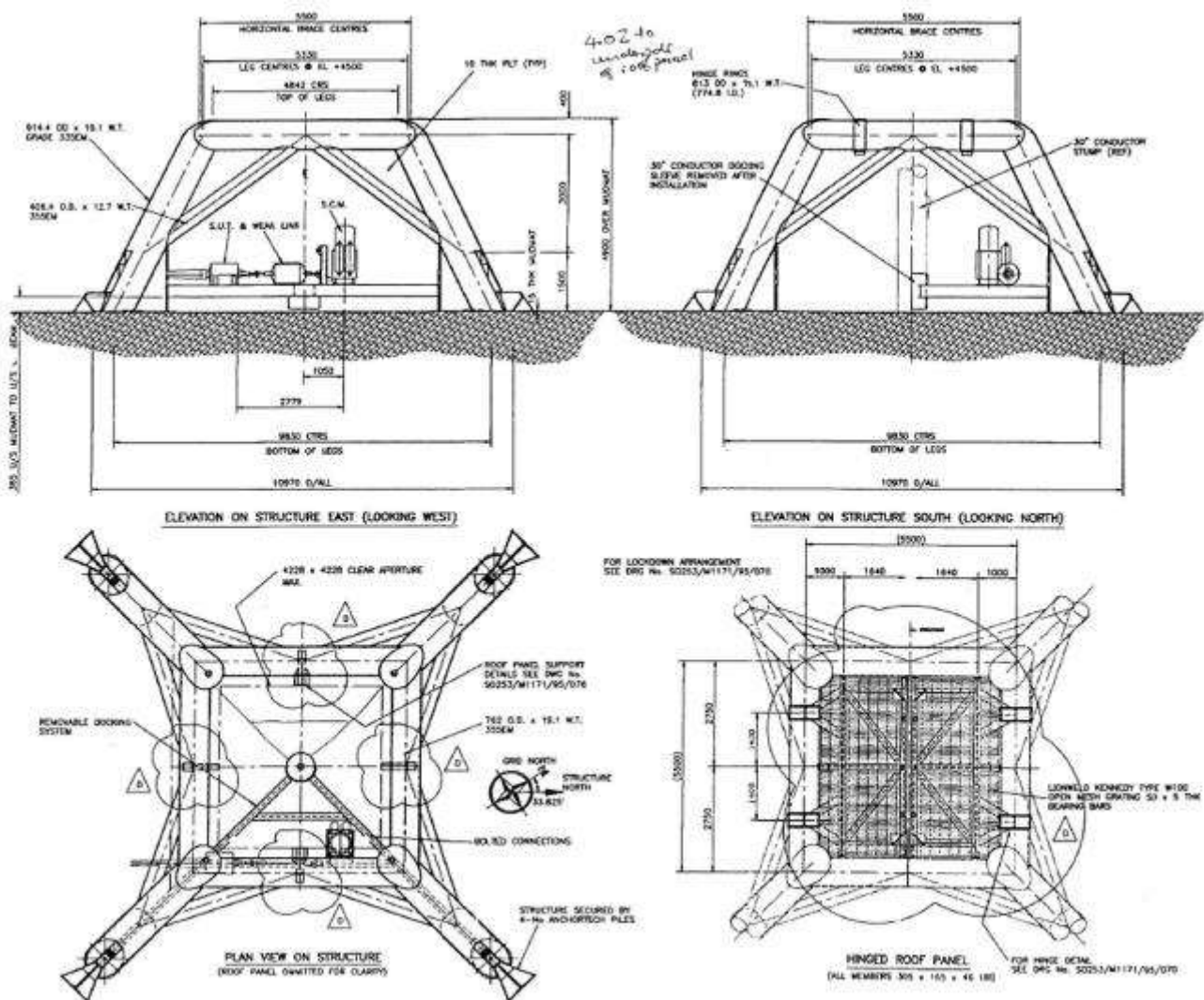
Field	Subsea Well	Well Status	Subsea Structure	Weight (tonnes)	Dimensions (m)	Block	Location (WGS84)	Water Depth (m)	Description
Della	48/30-11Z	Shut-in	Tree				01° 53.447'E		
			WHPS (integral)	39.8	8.5 L x 8.5 W x 7.2 H				Xmas Tree is protected by integral protective structure
			Wellhead/Tree	35	-		53° 04.730'N 01° 53.340'E	33	Well is shut in, will undergo plug and abandonment.
			WHPS (piled)	24.1	13.1 L x 13.1 W x 7.0 H				Open framed steel protection structure positioned over the wellhead and tree, providing protection against damage resulting from trawl board impact or snagging, dropped objects.
-	-	-	MTM	26.18	11.4 L x 10.9 W x 3.9 H	48/30	53° 02.938'N 01° 50.568'E	33	Structure is supported by mud mats, and by four steel piles which are connected to structure with grouted connections.
-	-	-	PLEM	26.18	11.4 L x 10.9 W x 3.9 H		53° 04.722'N 01° 53.312'E	38	Structure is supported by mud mats, and by four steel piles which are connected to structure with grouted connections.
-	48/30-13 ¹	Abandoned	Wellhead	27	-		53° 05.216'N 01° 51.083'E	38	

¹ The removal of Wellhead 48/30-13 is not covered by the Petroleum Act and has been included in this table for information purposes alone.

2.1.1 Dawn Subsea Well 48/29-9

Dawn Field is a subsea satellite well 48/29-9 is in Block 48/29 in Hewett Field (5887663.30N 412615.96E) at a water depth of 33m (LAT) approximately. The subsea satellite well is tied back to Hewett 48/29-C Platform by a 6.3km length 8-inch gas production rigid flowline PL1177. The control of the well and chemical supply (mono-ethylene glycol or MEG) was via a subsea control umbilical.

The subsea facility is located approximately seven kilometres west by north west of the Hewett 48/29-C Platform, is a single slot well protected by a wellhead protection structure (WHPS).



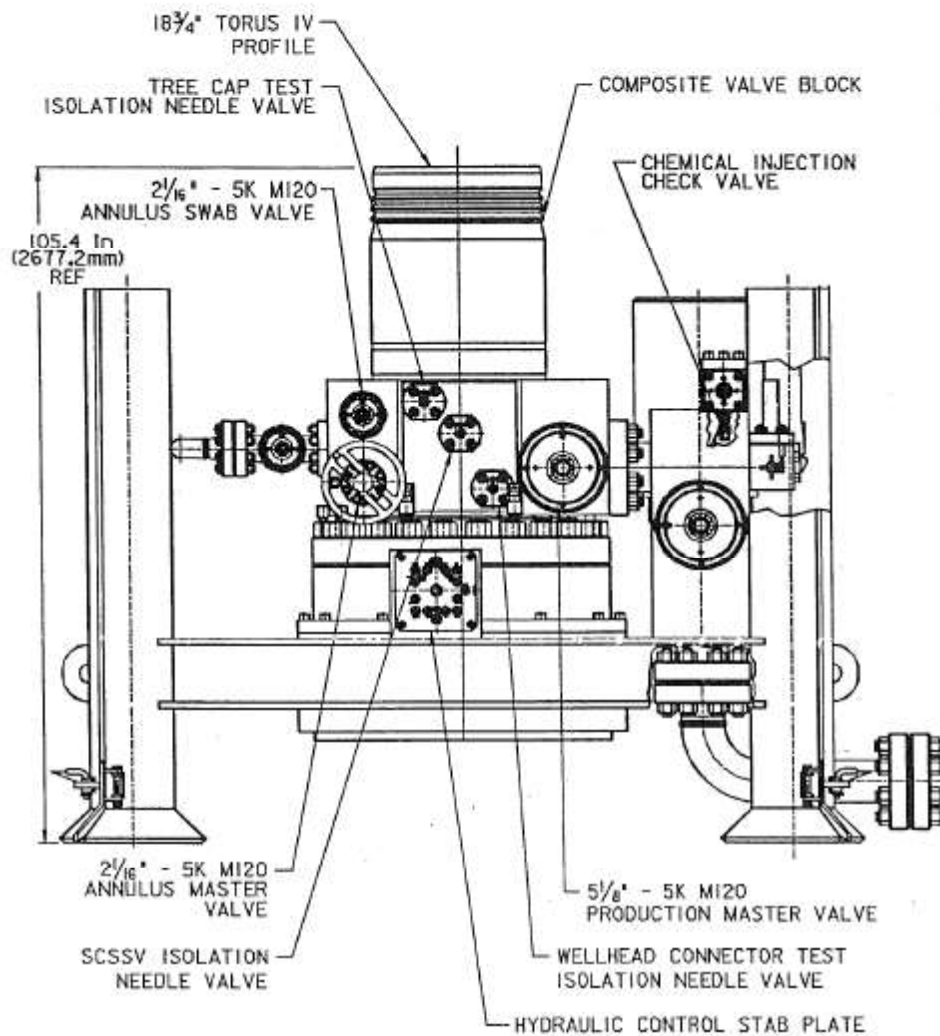


Figure 2-1: General Arrangement of Dawn Wellhead Protection Structure and Xmas Tree

2.1.2 Deborah Subsea Wells 48/30-8, 48/30-10 & 48/30-14

Deborah Field is a cluster of subsea satellite wells 48/30-8, 48/30-10 and 48/30-14 located in Block 48/30 in Hewett Field at a water depth of 38m (LAT) approximately. The subsea satellite wells are tied back to Hewett 48/29-C Platform by:

1. 5.9km length 10-inch gas production rigid flowline PL86 (Well 48/30-8 and 48/30-10);
2. 5.8km length 8-inch gas production rigid flowline PL1177 (Well 48/30-14). Please note that PL1177 has been cleaned and flushed from HC and disconnected from 48/30-14 well

The control of the wells is via individual subsea control umbilical's containing a bundle of electrical control cables, hydraulic control cores/hoses:

1. 5.9km length electro hydraulic control umbilical PLU4689 (Well 48/30-8);
2. 5.9km length electro hydraulic control umbilical PLU4690 (Well 48/30-10);
3. 6.0km length electro hydraulic control umbilical PLU4688 (Well 48/30-14);

The Deborah subsea facilities are located approximately six kilometres east of the Hewett 48/29-C Platform, they are single slot wells protected by a wellhead protection structures (WHPS's).

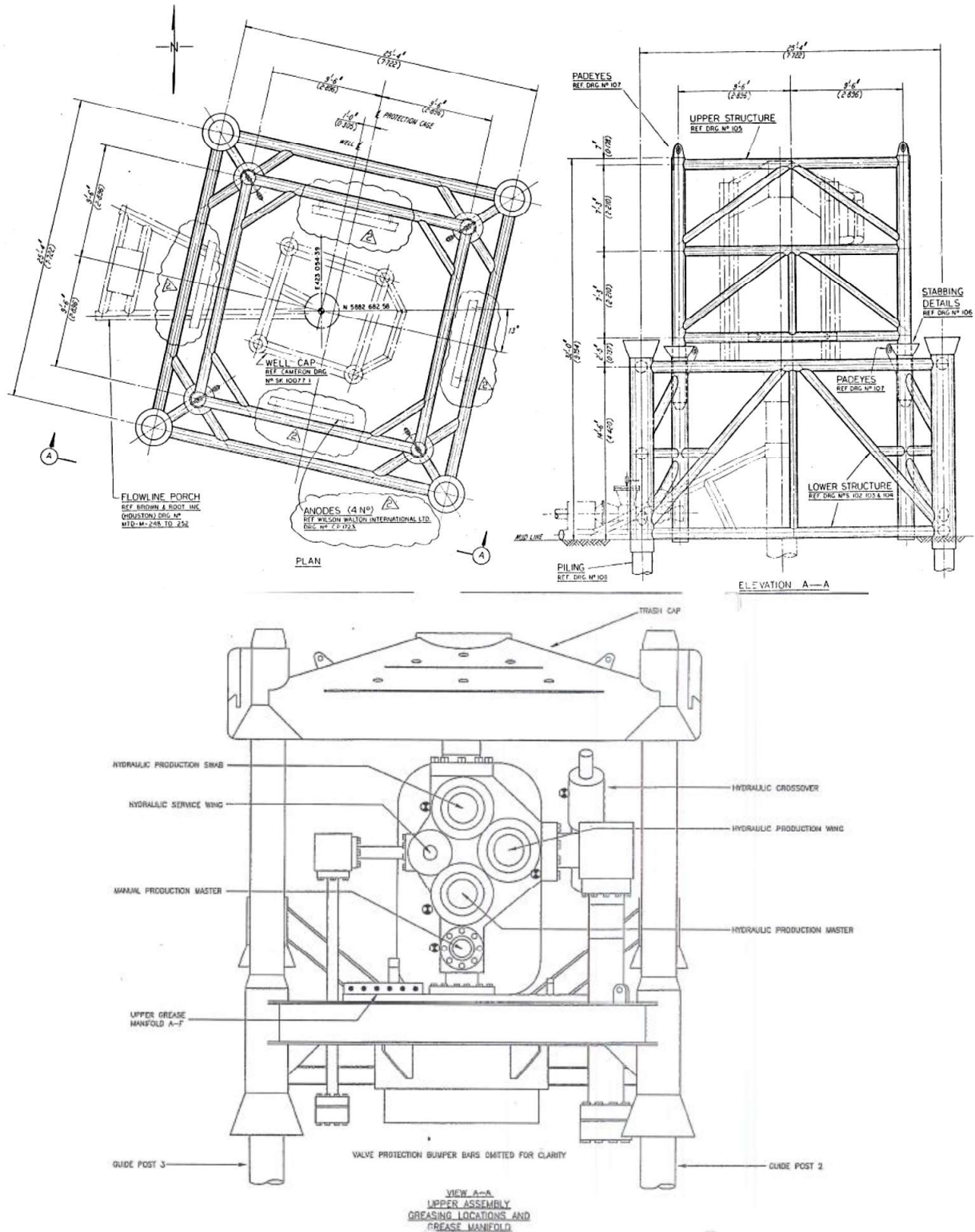


Figure 2-2: General Arrangement of Deborah 48/30-8 Wellhead Protection Structure and Xmas Tree

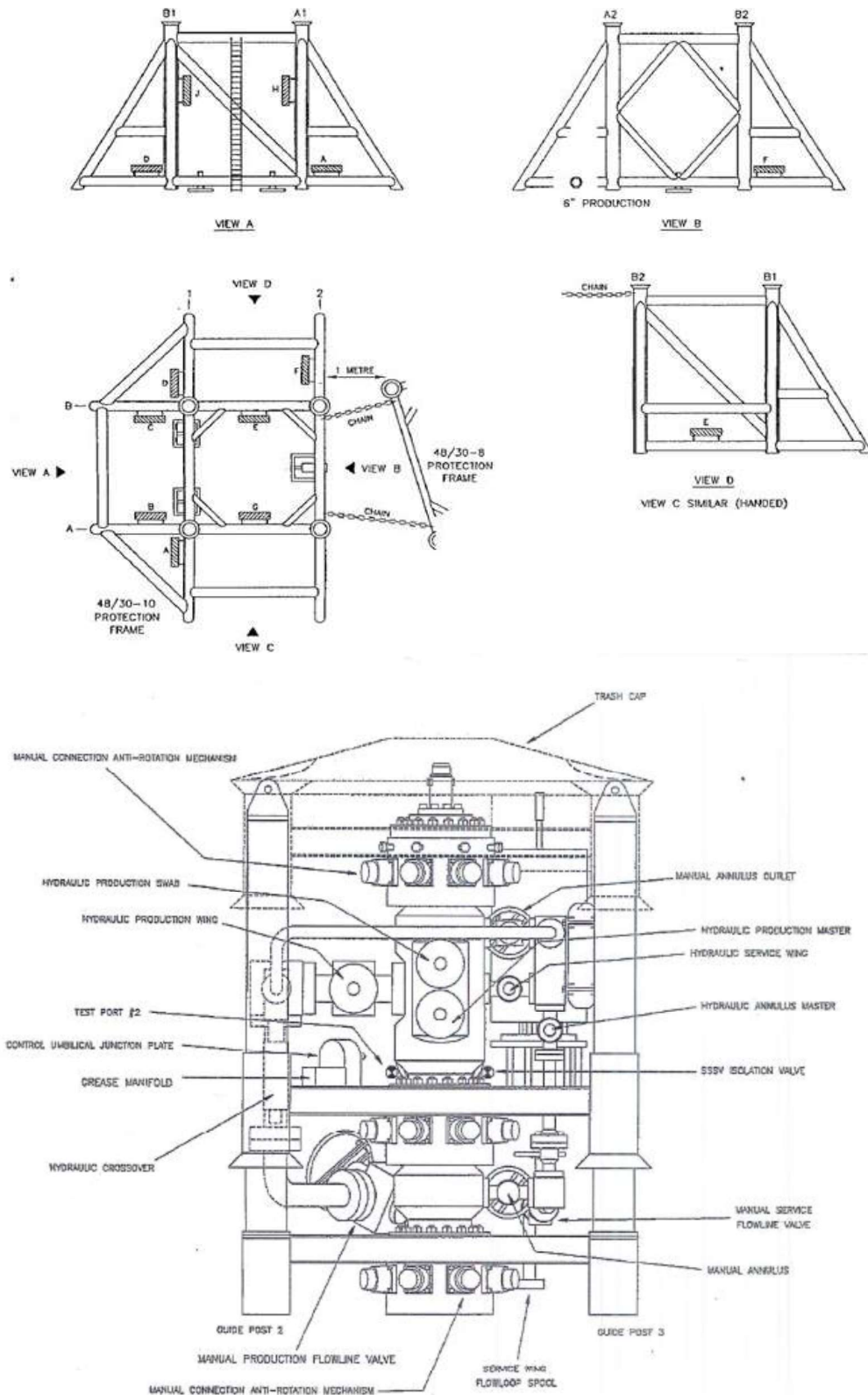


Figure 2-3: General Arrangement of Deborah 48/30-10 Wellhead Protection Structure and Xmas Tree

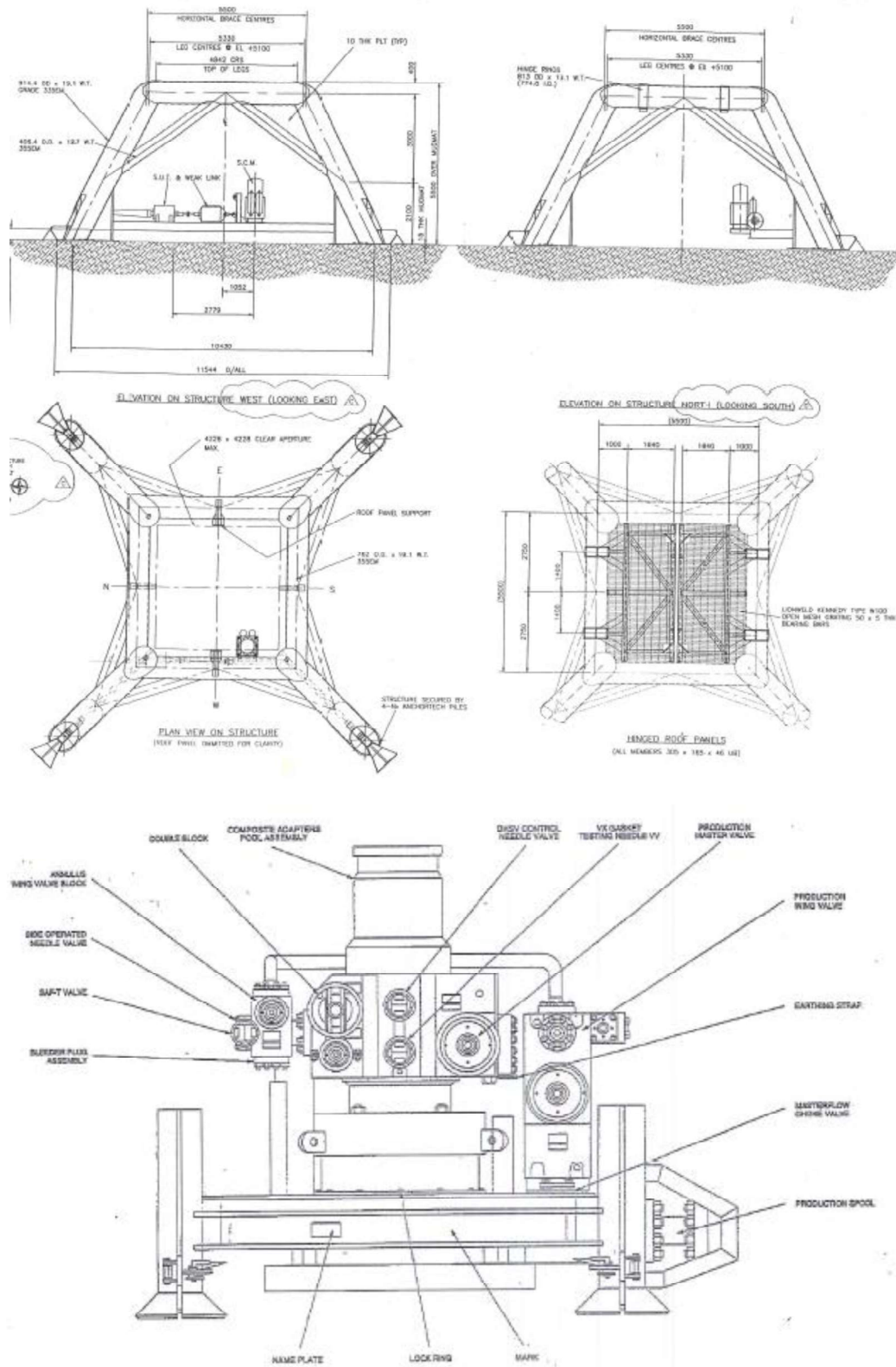


Figure 2-4: General Arrangement of Deborah 48/30-14 Wellhead Protection Structure and Xmas Tree

2.1.3 Little Dotty Subsea Well 48/30-9

Little Dotty Field is a subsea satellite well 48/30-9 is in Block 48/30 in Hewett Field (5876957.21N 424577.45E) at a water depth of 35m approximately. The subsea satellite well is tied back to Hewett 48/29-FTP Platform by a 6.2km length 8-inch gas production rigid flowline PL87. The chemical supply (mono-ethylene glycol or MEG) was via PL136.1 and PL136.2 2-inch service pipelines. The control of the well was via a subsea control umbilical containing a bundle of hydraulic control cores/hoses.

The subsea facility is located approximately six kilometres east by north east of the Hewett 48/29-FTP Platform, is a single slot well protected by a wellhead protection structure (WHPS).

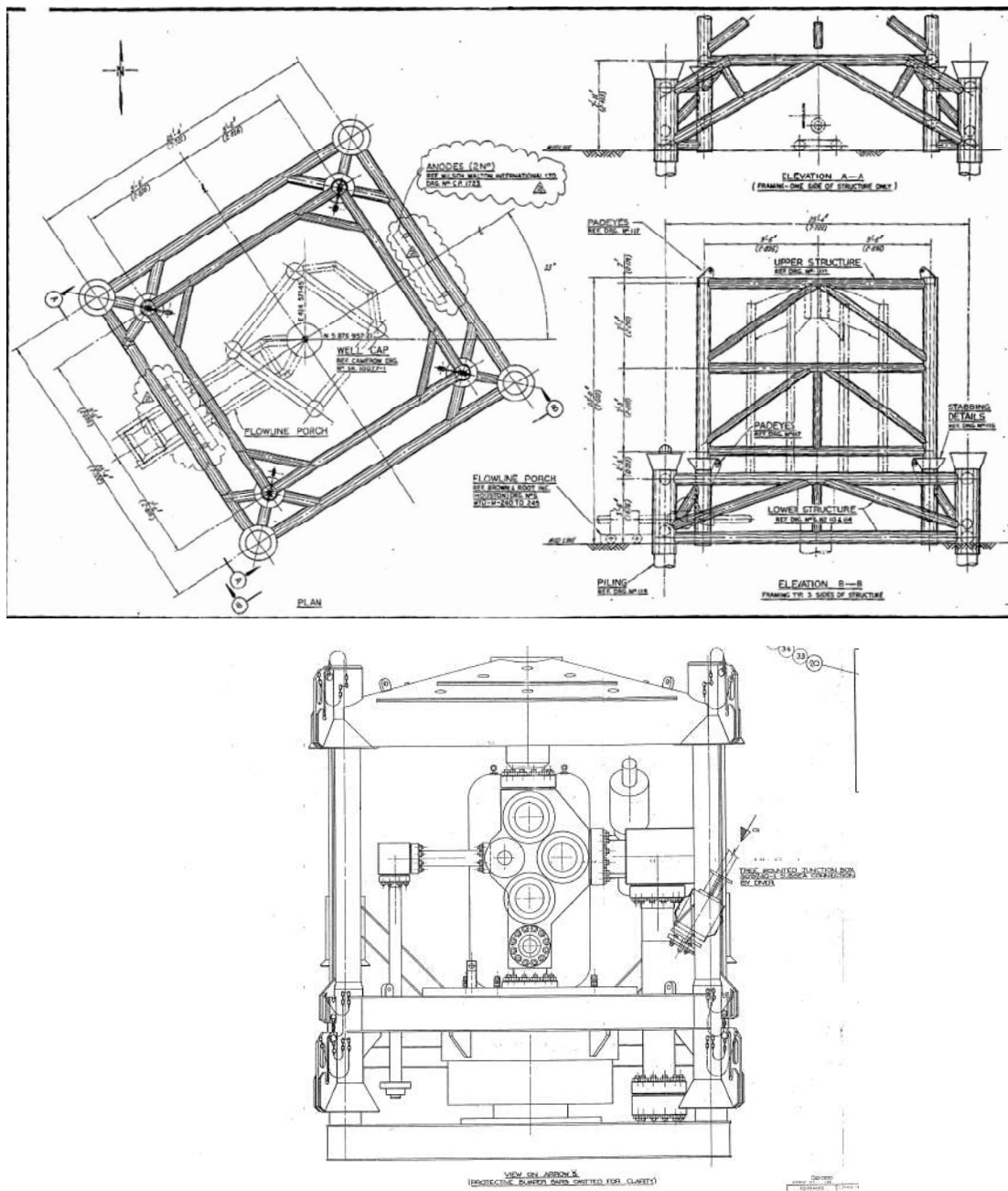


Figure 2-5: General Arrangement of Little Dotty 48/30-9 Wellhead Protection Structure and Xmas Tree

2.1.4 Della Subsea Well 48/30-11z

Della field is a subsea satellite well 48/30-11z and it is in Block 48/30 in Hewett Field (588174.89N 425568.28E) at a water depth of 33m (LAT) approximately.

The production of the subsea well is via PL584 10-inch Della gas production rigid flowline routed to Hewett 48/29-A Platform. The subsea well is tied back to the main pipeline by a 6-inch flexible flowline jumper from the X-tree to the Pipeline end manifold (PLEM) tee where the production is routed onward to Hewett 48/29-A Platform.

The subsea facility which is located approximately nine kilometres north east of the Hewett 48/29-A Platform, is a single slot well protected by a wellhead protection structure (WHPS).

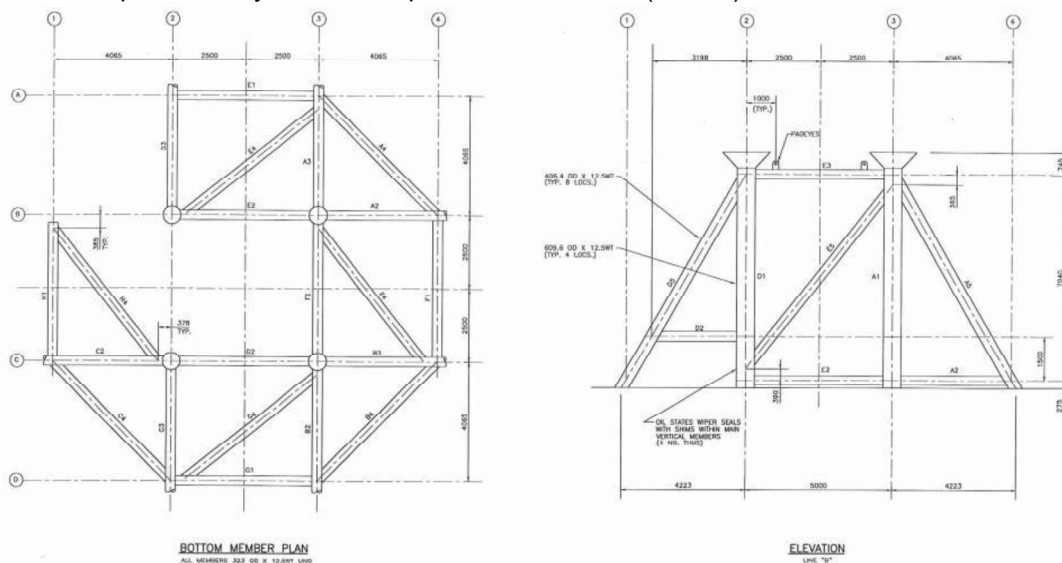



Figure 2-6: General Arrangement of Della 48/30-11z Wellhead Protection Structure and Xmas Tree

2.1.5 Little Dotty Subsea Well 48/30-15z

Little Dotty field is a subsea satellite well 48/30-15z and it is located in Block 48/30a in Hewett Field at a water depth of approximately 38m (LAT). The production of the subsea well is via PL1325 8 inch flexible gas

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production flowline connected to the Midline Termination Module (MTM) on PL584 10 inch Della gas production rigid flowline where the production is routed onward to Hewett 48/29-A Platform. PL1325 8 inch has been flushed, cleaned and disconnected from the MTM and 48/30-15z well.

An umbilical with methanol cores (PL1324. 1-3) is connected between the Little Dotty Xmas tree and the MTM structure where it is tied into the umbilical PL1323. PL1324 1-3 has been flushed, cleaned and disconnected from the MTM and 48/30-15z well.

The subsea facility which is located approximately five kilometres north east of the Hewett 48/29-A Platform, is a single slot well protected by an integral protective structure.

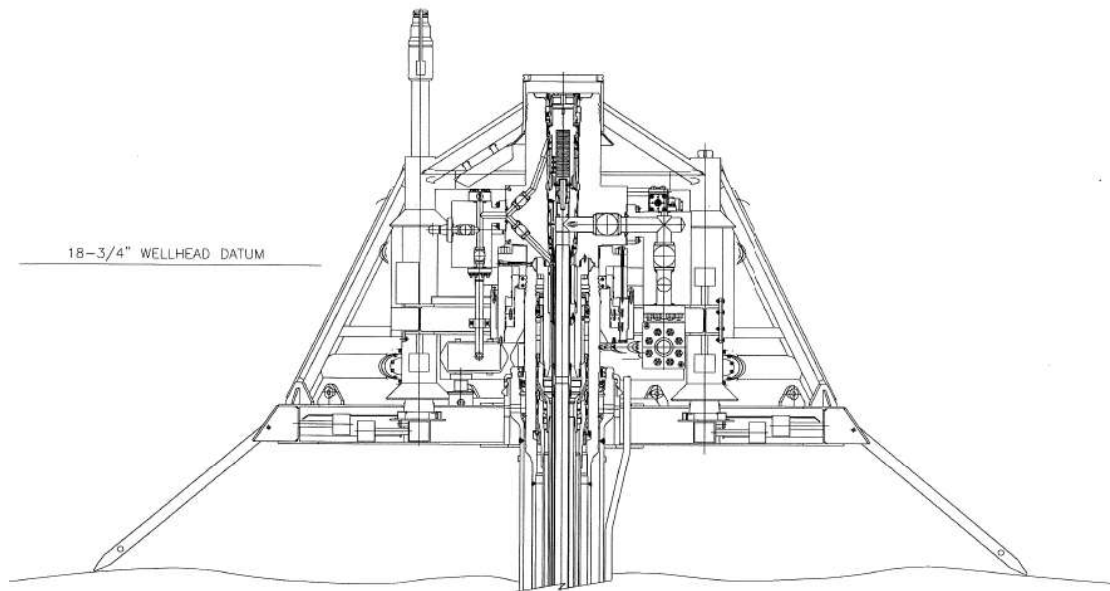


Figure 2-7 General Arrangement of Little Dotty 48/30-15z Wellhead Protection Structure and Xmas Tree (Integral)

2.1.6 Delilah Subsea Well 48/30-18

The Delilah Field is accessed via a single slot subsea well (48/30-18) located approximately 8.6 km southeast of the Hewett 48/29-C Platform in Block 48/30 at a water depth of 38m LAT. Production of the well is via an 8-inch production flowline (PL1629) and umbilical routed to the 48/29-A Platform. The 48/30-18 xmas tree is protected by an integral protective structure,

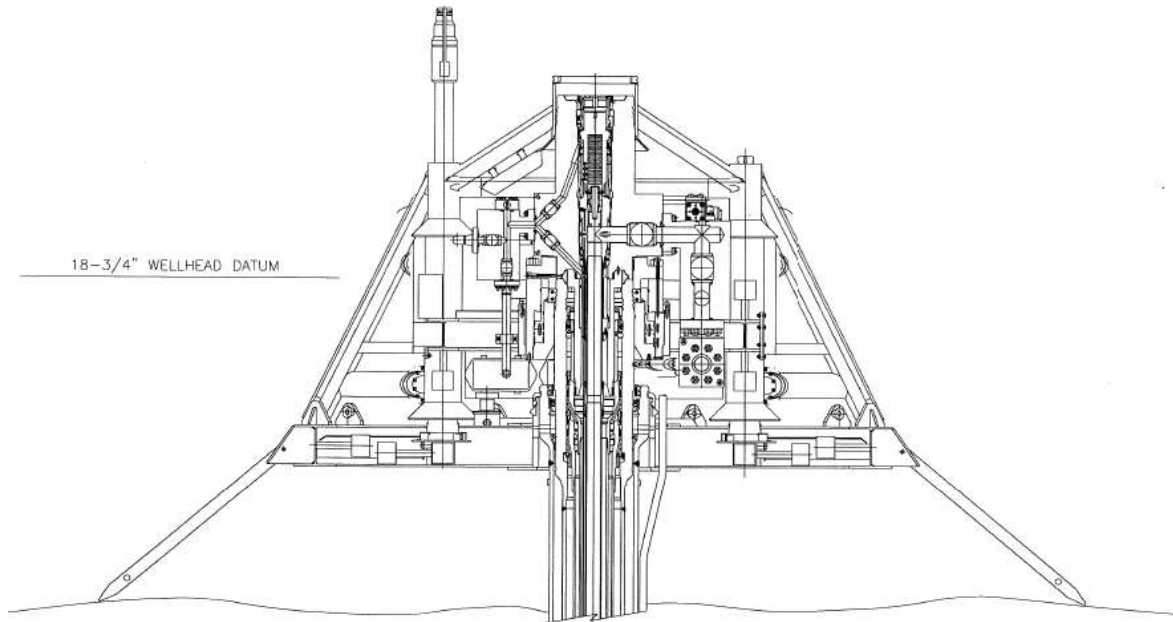


Figure 2-8: General Arrangement of Delilah 48/30-18 Wellhead Protection Structure and Xmas Tree (Integral)

2.1.7 Midline Termination Module (MTM)

Midline Termination Module (MTM) is an open framed steel protection structure positioned over the piping tee and valves which facilitates tie-in of PL1325 8-inch flexible flowline from Little Dotty into PL584 Della 10 inch gas production pipeline, and the control system which includes hydraulic SCM and the SUT connected to Little Dotty Well via an umbilical jumper. PL1325 8 inch has been flushed, cleaned and disconnected from the MTM and 48/30-15z well.

The overall size of Little Dotty MTM is 11.4m long x 10.9m wide x 3.85m high.

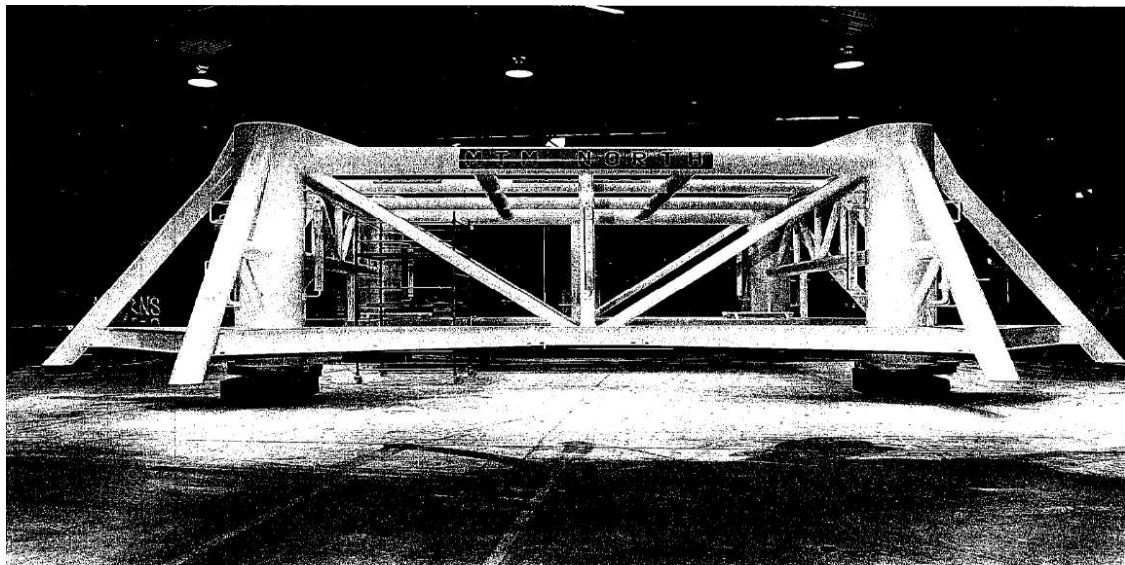


Figure 2-9: Midline Termination Module (MTM)

2.1.8 Pipeline End Manifold (PLEM)

The Pipeline End Manifold (PLEM) is an open framed steel protection structure positioned over the piping tee and valves which facilitates tie-in of 6 inch flexible flowline from Della Well and PL1630 8 inch flexible flowline from Delilah Well into PL584 Della 10 inch gas production pipeline, and the control system which includes hydraulic SCM and the SUT connected to Della and Delilah Well via umbilical jumpers. The structure also provides protection for the Della and Delilah venturi flowmeters.

The general arrangement of the PLEM Structure is in most respects identical to that of the Little Dotty MTM structure. The overall size of Little Dotty MTM is 11.4m long x 10.9m wide x 3.85m high

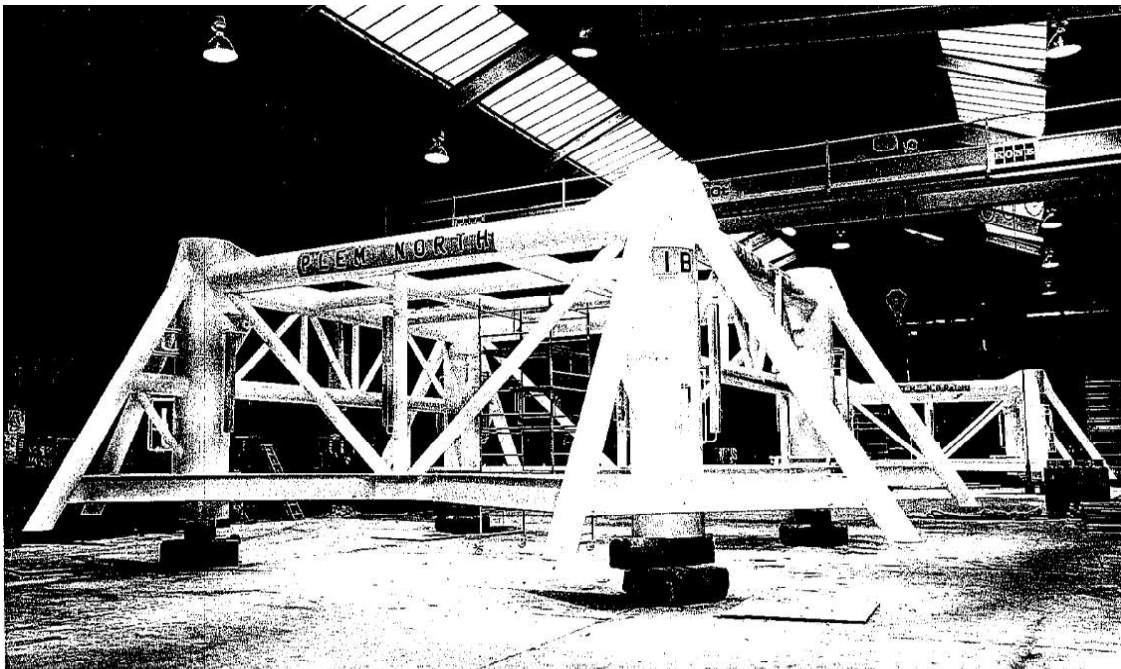



Figure 2-10: Pipeline End Termination Manifold (PLEM)

2.2 Wells

There are 8 subsea wells which are noted below:

Table 2-2: Well Information

Subsea Wells	Designation *	Current Status	Category of Well
48/29-9	Gas Condensate	Shut In	SS 3-3-3
48/30-8	Gas Condensate	Shut In	SS 3-3-3
48/30-9	Gas Condensate	Shut In	SS 3-3-3
48/30-10	Gas Condensate	Shut In	SS 3-3-3
48/30-11z	Gas Condensate	Shut In	SS 3-3-3
48/30-14	Gas Condensate	Shut In	SS 3-3-3
48/30-15z	Gas Condensate	Shut In	SS 3-3-3
48/30-18	Gas Condensate	Shut In	SS 3-3-3

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*For details of well categorisation see OGUK Guidelines for the Suspension or Abandonment of Wells, Issue 5, July 2015.

2.3 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 installation.

The table below summarises the current estimated overall breakdown of materials to be removed. These quantities relate to the subsea installations and are limited to everything above the seabed outline (3m below seabed) – wells materials and structure piling below this level are not included, will be left in place, in accordance with guidance. Concrete mats will not be removed, but base case scenario is to remove Mud Mats providing WHPS stabilization, if however due to integrity of the mud mats and these cannot be safely removed to shore they will remain in-situ and OPRED will be advised.


Table 2-3: Estimated Inventories (Subsea Installations, Wellhead/Xmas Trees)

Structure	Haz-Mat / NORM (Te)	Concrete (Te)	Ferrous Metal (Te)	Non-Ferrous Metal (Te)	Plastics (Te)	Rubber (Te)	Total (Te)
48/29-9	0	N/A	60.5	N/A	N/A	N/A	60.5
48/30-8	0	N/A	55.3	N/A	N/A	N/A	55.3
48/30-9	0	N/A	46.6	N/A	N/A	N/A	46.6
48/30-10	0	N/A	52.5	N/A	N/A	N/A	52.5
48/30-11z	0	N/A	59.1	N/A	N/A	N/A	59.1
48/30-14	0	N/A	61.7	N/A	N/A	N/A	61.7
48/30-15z	0	N/A	72.38	N/A	N/A	N/A	72.38
48/30-18	0	N/A	72.38	N/A	N/A	N/A	72.38
MTM	0	N/A	26.18	N/A	N/A	N/A	26.18
PLEM	0	N/A	26.18	N/A	N/A	N/A	26.18
48/30-13 ¹	0	N/A	27.00	N/A	N/A	N/A	27.00
Total	0	N/A	559.82	N/A	N/A	N/A	559.82

¹ Removal of 48/30-13 Wellhead is not covered by the Petroleum Act as it is an E&A well and is only included within the table for information purposes.

Note: Eni UK Limited 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.

The amount of NORM Waste is unknown at this time, however there remains a possibility that it will be present during decommissioning activities.

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3.0 REMOVAL AND DISPOSAL OPTIONS

The decommissioning strategy is at an early stage of definition, with the aim of determining the most cost-efficient approach to executing the works in a safe manner. A number of contractual and technical approaches are under consideration. A final decision on decommissioning methods, including removal and disposal, will be made following a commercial tendering process.

Eni UK Limited 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.

As the re-use of installations (or parts thereof) is first in the order of preferred waste management options, it has been fully assessed and deemed unfeasible due to the age and the extent to which the subsea installations have passed their design life.

Recyclable metals, predominantly steel, is estimated to account for the greatest proportion of the materials inventory. The current plan is to transport the structures (wellhead protection structures and manifold structures) 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 structures 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.

3.1 Installations

Table 3-1: Subsea Installation(s) Decommissioning Options

Subsea installation(s)	Number	Option	Disposal Route (if applicable)
Wellheads/Xmas trees/WHPS	8	Full recovery as part of MODU campaign to P&A wells Full recovery by CSV / DSV following P&A campaign	Return to shore for reuse or recycling
Manifolds	2	Full recovery by CSV / DSV following P&A campaign	Return to shore for reuse or recycling

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3.2 Wells

The Hewett satellite wells to be abandoned, as listed in Section 2.2 (Table 2-3) will be plugged and abandoned in accordance with OGUK Guidelines for the suspension and abandonment of wells.


A Master Application Template (MAT) and the supporting Subsidiary Application Templates (SATs) have been submitted in support of all well plug and abandonment activities.

3.3 Waste Streams

The table 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 3-2: 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 removal of the WHPS, if NORM is detected the removed structure 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 installations and systems.
Other hazardous wastes	No other hazardous waste is anticipated.
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.

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: center;">Sheet of Sheets 36 / 48</p>
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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 3-3: Inventory Disposition

	Total Inventory Tonnage	Planned tonnage to shore	Planned left <i>in situ</i>
Installations¹	559.82	559.82	0

¹ Waste tonnage associated with the disposal of 48/30-13 wellhead is included in Table 3.3.

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%.

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: center;">Sheet of Sheets 37 / 48</p>
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4.0 ENVIRONMENTAL APPRAISAL OVERVIEW


Eni UK Limited has prepared a stand-alone Environmental Appraisal (EA) document – ECMS#927385 Hewett Area Subsea Installations EA Report 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 4-1: Environmental Sensitivities ¹

Environmental Receptor	Main Features	
Conservation interests	Special Areas of Conservation (SAC)	<ul style="list-style-type: none"> Southern North Sea (48/29-9 = 3.7km; 48/30-8, 48/30-10, 48/30-14, 48/30-15z, 48/30-9, 48/30-11z, 48/30-18, 48/30-13, MTM and PLEM within) North Norfolk Sandbanks and Saturn Reef (48/29-9 = 7.2km; 48/30-8, 48/30-10 and 48/30-14 cluster = 4.4km; 48/30-9 = 7.9km; 48/30-11z = 3.5 km; 48/30-18 = 3.6km; MTM = 8.2km; PLEM = 3.7km); 48/30-15z = 8.1km; 48/30-13 = 4.2km) Hainsborough, Hammond and Winterton (48/29-9 = 9.5km; 48/30-8, 48/30-10 and 48/30-14 cluster = 6.2km; 48/30-15z = 1.8km; 48/30-9 = 0.9km; 48/30-11z = 5.8km; 48/30-18 = 5.7km; MTM = 1.8km; PLEM = 5.7km; 48/30-13 = 6.4km) The Wash and North Norfolk Coast (48/29-9 = 37.1km is the closest well)
	Special Protection Areas (SPA)	<ul style="list-style-type: none"> Greater Wash (48/29-9 = 20km; 48/30-8, 48/30-10, 48/30-14 cluster = 17.5km; 48/30-9 = 14.2km; 48/30-11z = 18.2km; 48/30-18 = 18.3km; MTM = 13.7km; PLEM = 18.2km; 48/30-15z = 13.7km; 48/30-13 = 17.4km)
	Marine Conservation Zones (MCZ)	<ul style="list-style-type: none"> Cromer Shoal Chalk Beds (48/29-9 = 23km; 48/30-8, 48/30-10 and 48/30-14 = 26.9km; 48/30-9 = 26km; 48/30-11z, 48/30-18 = 28.7km and 48/30-15z = 24.6km; MTM = 24.3km; PLEM = 28.6km; 48/30-13 = 28/6km)
Seabed	<p>The seabed around subsea structures is classified as the EUNIS biotope complex 'Circalittoral coarse sediment' (A5.14). Benthic fauna is characteristic for this region of the SNS.</p> <p>Aggregations of <i>Sabellaria spinulosa</i> (potential EC Habitats Directive Annex I reef habitats) were encountered as follows:</p> <ul style="list-style-type: none"> Majority of a 'no reef' and some 'low reef' classification at 48/30-9, 48/30-8, 48/30-10, 48/30-14, 48/29-9 and 40/30-13 transects. Majority of a 'no reef' with some of a 'low reef' and 'medium reef' classification at 48/30-11z, 40/30-15z and 48/30-18 transects. <p>The seabed is of extremely dynamic nature and is subjected to strong hydrodynamic disturbance. Distinct sandy bed forms, including sand waves and mega ripples, are observed near the subsea wells.</p>	
Fish	<p>Several species use the seabed in the area around the Hewett field as spawning and nursery grounds at different times of the year.</p>	

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Environmental Receptor	Main Features
	<p>Spawning: herring, mackerel, sprat, cod, plaice, thornback ray, sand eel, whiting, sole and lemon sole.</p> <p>Nursery: sand eel, herring, mackerel, whiting, cod, plaice, lemon sole, thornback ray.</p>
Fisheries	<p>Fishing effort (ICES rectangles 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.</p>
Marine Mammals	<p>EU Habitats Directive Annex II / IV Species:</p> <ul style="list-style-type: none"> All wells (except Dawn; 48/29-9) , the MTM and PLEM 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	<p>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.</p> <p>The nearest SPA is the Greater Wash SPA (approx. 14km) designated for the EU Birds Directive Annex I bird species and regularly occurring migratory bird species.</p> <p>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.</p>
Other Users of the Sea	<p>Shipping: High to very high density with busy ports of Grimsby and Immingham as well as Great Yarmouth and Lowestoft.</p> <p>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.</p> <p>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 20km (Dudgeon) and 32km (Sheringham Shoal) and one in pre-planning south-east approximately 32km (East Anglia North Tranche One West).</p> <p>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.</p> <p>Submarine Cables and Pipelines:</p> <ul style="list-style-type: none"> One telecommunication cable (inactive) situated approximately 2km south of Deborah subsea well cluster (48/30-8, 48/30-10, and 48/30-14). One telecommunication cable (inactive) situated approximately 900m and 1km south of subsea wells 48/30-18 and 48-30-11z respectively. 30" Shell Leman AP to Bacton pipeline (PL25) approximately 1km west-north west from well 48/30-9 and 1.1km South of the 48/30-15z well.

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Environmental Receptor	Main Features
	<p>Marine Archaeology and Wrecks: A total of 8 known shipwrecks within the Hewett field, but none are protected.</p> <p>Aggregate Extraction: The nearest active licenced aggregate extraction site is located approximately 50km south of the Hewett field. There is also an extraction option area located to the north.</p>
Atmosphere	<p>The wind regime around the Hewett field with large variations in wind direction and speed leads to rapid dispersion and dilution of atmospheric emissions.</p> <p>Offshore decommissioning operations and onshore waste processing will be the main source of atmospheric emissions. It is expected that these emissions will be localised.</p>

¹ The removal of Wellhead 48/30-13 is not covered by the Petroleum Act and has been included in this table for information purposes alone.


4.2 Potential Environmental Impacts and their Management

There will be some environmental impacts associated with the decommissioning of the subsea installations. 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 EA. Long-term, environmental, cumulative and trans-boundary environmental impacts are expected to be negligible.


Eni operates under a Health, Safety and Environmental Integrated Management System, certified to ISO14001:2015 and has established contractor selection and management procedures. Eni will develop an interface document for the Project when a removals contractor is appointed to help ensure the mitigation measures identified within the EA are successfully implemented during the proposed decommissioning activities.

Table 4-2: Environmental Impact Management of Subsea Installations Removal Activities


Main Impacts	Management
<p>The activities of cutting the structure piles and wellheads/xmas trees and lifting the subsea installations from the seabed may cause localised adverse environmental impacts, including:</p> <ul style="list-style-type: none"> Seabed disturbance from: <ul style="list-style-type: none"> Excavation of piles; Abrasive cutting discharge (i.e. garnet); Removal of subsea installations, including disturbance from wet storage. Underwater noise emissions from: <ul style="list-style-type: none"> Use of propellers / DP thrusters on vessels; Use of cutting tools; Use of mass flow excavator (propeller noise); Use of vibratory hammer. Discharges to the marine environment from vessels: 	<p>Mitigation measures proposed:</p> <ul style="list-style-type: none"> Seabed disturbance <ul style="list-style-type: none"> Piles will be cut internally, if possible, to avoid seabed disturbance. Tool use will be minimised where feasible whilst still achieving the desired result. Working areas will be minimised, as far as practicable. Underwater Noise Emissions <ul style="list-style-type: none"> Operations will be planned to reduce vessel movements and minimise the overall duration of the project. Internal cutting techniques will be utilised where possible, which do not produce any significant noise emissions. Where internal cuts are not possible, the preference for external cuts will be mechanical methods because they

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<ul style="list-style-type: none"> ▪ Routine discharges to sea; ▪ Potential for introduction of alien species from ballast water. • Waste Management: <ul style="list-style-type: none"> ▪ Removal and disposal of subsea structures (ferrous metal); ▪ Potential disposal of NORM • Energy use and associated atmospheric emissions: <ul style="list-style-type: none"> ▪ Fuel consumed by offshore vessels, diesel-powered equipment and generators • Physical presence: <ul style="list-style-type: none"> ▪ Presence of DSV / CSV vessels with the potential to cause short-term disruption to other users of the sea. • Accidental events: <ul style="list-style-type: none"> ▪ Vessel collision (loss of diesel inventory); ▪ Dropped objects. ▪ Leak of hydraulic fluid from cutting equipment subsea; ▪ Residual liquids (hydraulic fluid) released during lift or loss of load on-board vessel; ▪ Loss of vessel power and use of mooring anchor. <p>The impacts listed are expected to be localised, short-term and of low significance provided the implementation of the mitigation measures proposed.</p> <p>In addition, once the Hewett subsea installations have been removed, the 500m safety exclusion zones surrounding the installations will be withdrawn allowing other sea users to access these areas again.</p>	<ul style="list-style-type: none"> produce significantly less noise than of abrasive methods. ▪ No use of explosives. • Routine Marine Discharges <ul style="list-style-type: none"> ▪ Any waste water discharged to sea from vessels will be treated to comply with the requirements of the MARPOL Convention. ▪ Vessels will operate in compliance with the International Maritime Organisation Ballast Water Management Convention. • Waste Management <ul style="list-style-type: none"> ▪ A Materials Inventory has been developed for the Project to identify the types of waste generated and the management procedures for each waste stream will be included in a Waste Management Plan. The principles of the Waste Management Hierarchy will be followed. ▪ Good housekeeping standards will be maintained on board all vessels in accordance with the project waste management strategy. ▪ Transfer notes will accompany all non-hazardous waste to shore and consignment notes will be in place for any hazardous waste. ▪ Checks will be carried out on the selected waste yard to ensure all permits and licenses are in place for the handling and disposal of the waste types identified. Eni will ensure that waste is transferred by an appropriately-licensed carrier who should have a Waste Carrier Registration, Waste Management Licence or Exemption, as appropriate for the type of waste. ▪ The amount of NORM Waste is unknown at this time; however, there remains a possibility that it will be present during decommissioning activities, if encountered Eni will ensure appropriate RSR permits are in place and conditions that dictate the management and control of radioactive waste are met. ▪ Marine growth, if found, will be removed onshore at the waste yard will be done with appropriate odour control implemented through an odour management plan and will be disposed of in accordance with the principles of the Waste Management Hierarchy.
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	<ul style="list-style-type: none"> • Energy use and associated atmospheric emissions <ul style="list-style-type: none"> ▪ Vessel time in the field will be reduced, as far as practicable. ▪ 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. • Physical presence <ul style="list-style-type: none"> ▪ 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. • Accidental events: <ul style="list-style-type: none"> ▪ Vessels selected to undertake the decommissioning activities will have effective operational systems and on board control measures. Shipping and fishing bodies will be kept informed of the project and appropriate notifications made in a timely manner. ▪ Dropped object procedures will be employed throughout the proposed operations. All unplanned losses in the marine environment will be attempted to be remediated, and notifications to other mariners will be sent out. Post-decommissioning debris clearance surveys will aid in the identification of any dropped objects should they occur. ▪ Appropriate maintenance and pre-use checks on hydraulic equipment will be undertaken. Where possible equipment with automatic hydraulic shut-off will be used to minimise the volume of fluid released in the event of a hydraulic line failure. ▪ All vessels undertaking decommissioning activities will have an approved SOPEP.
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5.0 INTERESTED PARTY CONSULTATIONS

Consultations Summary


A detailed Stakeholder Engagement Plan has been 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 commenced and this section will be updated as the consultation process progresses regarding the decommissioning of the Hewett Field Subsea Installations.


Meetings to discuss decommissioning of the Hewett Area Subsea installations were held with OPRED Environmental Management Team (EMT) on 21st May 2021 and with the Joint Nature Conservation Committee (JNCC) and Natural England (NE) on 10th June 2021.

Table 5-1: Summary of Stakeholder Comments


Stakeholder	Discussion Topics / Recommendations	Eni's Response / Comments Noted
Statutory Consultees		
National Federation of Fishermen's Organisations (NFFO)	<p>Pre-decommissioning Environmental Baseline Seabed Survey design and FLO arrangements [April 2018]</p> <p>ENI has discussed the proposed Subsea Installations Removal Decom Programme. NFFO has advised that due to the mobile commercial fishing activity an overtrawl survey is carried out over the full 500m zones which subject to no snagging hazards being encountered the NFFO will issue a clean seabed certification. This will give commercial fishing operators reassurance that fishing activity can safely resume in the areas once the 500m zones are removed.[October 2021]</p>	<p>FLO arrangements implemented for the duration of the survey.</p> <p>Decom Programme has been updated to reflect this survey. ENI has engaged with NFFO for scope details and estimated cost.</p>
Scottish Fishermen's Federation (SFF)	<p>SFF indicated that all aspects of the Hewett decommissioning to be further discussed with NFFO [June 2018]</p> <p>ENI has discussed the proposed Subsea Installations Removal Decom Programme. SFF indicated that due to Hewett location SFF are content for the NFFO to provide any appropriate feedback [October 2021].</p>	<p>Eni engaged with NFFO</p> <p>Eni engaged with SFF and thanked them for the immediate reply.</p>
Northern Irish Fish Producers' Organisation Limited	<p>ENI has forwarded on a draft of the Decom Programme. Awaiting feedback/comments [October 2021].</p>	

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: right;">Sheet of Sheets 43 / 48</p>
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Stakeholder	Discussion Topics / Recommendations	Eni's Response / Comments Noted
Global Marine Systems Limited	Global Marine Systems Limited confirmed there are no existing active telecommunication cables in the region and had no further comments. They requested that if the decom program changes, and seabed invasive operations are to occur near existing and active telecom infrastructure, it will be important to notify any nearby cable owners of any upcoming operations.[October 2021]	ENI confirmed if there are any changes to the decom programme they will inform them.
Public	Awaiting feedback from formal consultation process.	
Other Consultees		
OPRED EMT	<p>Pre-decommissioning Environmental Baseline Seabed Survey design for the subsea wells. [October 2017]</p> <p>EA Scope and Template proportionate to the size of the project and assessment of the worst-case scenarios, Conservation Objectives and integrity of the MPAs, specifically for SNS SAC harbour porpoise and the potential impacts on prey availability to be assessed, Sabellaria spinulosa presence summarising various surveys undertaken by Eni to be presented. Engage other Operators for cumulative impacts and assess any potential for synergies. [April 2019]</p> <p>Shared Subsea Infrastructures ENVID results and engaged on EA. No comments received. [May 2021]</p>	<p>Eni has engaged with NE. All advice implemented into the EA.</p>
JNCC	<p>Pre-decommissioning Environmental Baseline Seabed Survey design for the subsea wells: reference stations, Sabellaria spinulosa 'reefiness' assessments guidance and survey to have 100% coverage. Engage Natural England. [October 2017]</p> <p>Southern North Sea SAC: consideration to be given to updated Conservation Objectives, specifically noise effects on supporting habitats, availability of prey and in-combination effects with other projects, minimise the introduction of new hard substrate materials to the seabed and consideration given to materials that can be removed. [April 2019]</p>	<p>Survey design amended and survey completed according to advice provided. Eni engaged Natural England.</p> <p>Addressed in the relevant sections of the EA. Hewett subsea installations are to be removed. No new hard substrate materials will be deposited.</p>

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: right;">Sheet of Sheets 44 / 48</p>
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Stakeholder	Discussion Topics / Recommendations	Eni's Response / Comments Noted
	<p>Shared Subsea Infrastructures ENVID results and engaged on EA. No comments received. [June 2021].</p>	
Natural England	<p>Pre-decommissioning Environmental Baseline Seabed Survey design: reference stations selection in similar sediment type and in the similar water depth. Minimise the introduction of new hard substrate materials to the seabed and consideration given to materials that can be removed.[December 2017]</p> <p>Shared Subsea Infrastructures ENVID results and engaged on EA. No comments received [June 2021].</p>	<p>Survey design amended and survey completed according to advice provided.</p> <p>Hewett subsea installations are to be removed. No new hard substrate materials will be deposited.</p>
Environment Agency (EA)	<p>Marine Growth advice if brought onshore. Transfrontier Shipment of Waste process. [August 2018]</p>	<p>Eni will follow the regulations and requirements.</p>
Perenco	<p>Pre-Draft Decommissioning Programme shared for review and comment Minor comments received. [July 2021]</p>	<p>Minor comments noted and DP updated during revision.</p>
Harbour Energy	<p>Pre-Draft Decommissioning Programme shared for review and comment. No concerns raised. [July 2021]</p>	

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: center;">Sheet of Sheets 45 / 48</p>
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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 installation. 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. The environmental baseline seabed survey covered a two by two-kilometre area around each of the installations and will provide detailed information on the existence of debris.

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 installations, further post decommissioning survey work will be undertaken to determine if any debris remains within a 500m radius of installation sites. Seabed clearance verification will be obtained, using a suitably qualified independent body, following the decommissioning activities.

If subsea installations or other potential hazards to users of the sea remain in place for a period of time post-decommissioning activity, and prior to completion of the subsea installations removal scope, the Operator shall submit for OPRED approval a risk-based surveillance & management programme that will be implemented until the final removal sequence has been completed and ensures appropriate risk management activity is in place.

6.3 Schedule

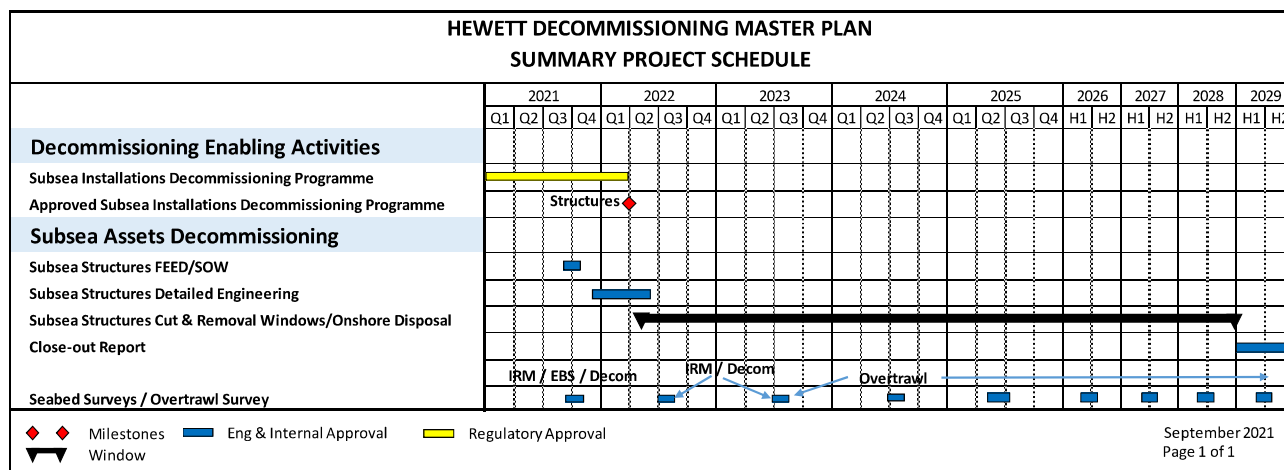



Figure 6-1: Hewett Subsea Installation Decommissioning Plan

	<p style="text-align: center;">ENIUK-#918327 – v2 Hewett Area Combined Decommissioning Programmes – Subsea Installations</p>	<p style="text-align: center;">Sheet of Sheets 47 / 48</p>
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6.4 Costs

To be provided separately to OPRED and OGA.

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. Due to mobile commercial fishing activity carried out around the area, an over trawl sweep service will be undertaken over the full 500m zones and subject to no snagging hazards being encountered requiring further investigation a clean sea bed certificate will be issued for submission with the Close-out Report.


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 Installations which as stated above will be completely removed and returned to shore for reuse, recycling, or disposal.

Once the Installations have been removed, 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.

As it is the intention to remove all of the infrastructure associated with the subsea installations, it would not be envisaged that any further post-decommissioning activities would be required after the post-decommissioning seabed survey. Nevertheless, this will be the subject of further consultations with the Regulatory Authorities and the statutory consultees. Maintenance activities are also not envisaged, as all the subsea installations are to be removed.

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7.0 SUPPORTING DOCUMENTS

Table 7-1: Table of 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	102800PFFA09620
6	Environmental Appraisal	TBC
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-v3B

8.0 PARTNER LETTER(S) OF SUPPORT

Table 8-1: Table of Attachments

ID	Title	Document Number
1	HOLD 1	
2		
3		

9.0 ANNEXURE A

Table 9-1: Consultation Public Notices and Consultee Correspondence

Ref.	Document Number	Title
2	HOLD 2	