



PERENCO UK LIMITED

Davy North & Davy East Subsea Installation Decommissioning Programmes

May 2025 Consultation Version



Document Control

Approvals

	Name	Signature	Date
	Claire Fowler		
Prepared by	Decommissioning Compliance		
	Lead		
Poviowod by	Oliver Felmingham		
Reviewed by	Decommissioning Manager		
A	Jonathan White		
Approved by	Perenco UK General Manager		

Revision Control

Revision No.	Changes/Comments	Issue Date
0	Draft compilation for internal review	10/10/24
V1	Internal review	17/10/24
V2	Inclusion of OPRED Comments	18/12/2024
V3	Inclusion of OPRED Comments	31/03/2025
V4	Consultation version	1/5/2025

Distribution List

Name/ Title	Company	No. of Copies
	Offshore Petroleum Regulator for Environment & Decommissioning (OPRED)	1
	National Federation of Fishermen's Organisations (NFFO)	1
	The Scottish Fishermen's Federation (SFF)	1
	Northern Ireland Fish Producers' Organisation (NIFPO)	1
	Global Marine Systems Limited	1



Contents

1.	EXE	CUTIVE SUMMARY	7
	1.1	Decommissioning Programmes	7
	1.2	Requirement for Decommissioning Programmes	7
	1.3	Introduction	7
	1.4	Overview of Installations Being Decommissioned	9
	1.4	I.1 Installation(s)	9
	1.5	Summary of Proposed Decommissioning Programmes1	0
	1.6	Field Location Including Field Layout and Adjacent Facilities1	2
	1.7	Industrial Implications1	5
2.	DES	CRIPTION OF ITEMS TO BE DECOMMISSIONED1	6
	2.1	Installations: Subsea including Stabilisation Features1	6
	2.2	Wells1	6
	2.3	Inventory Estimates1	7
3.	REM	IOVAL AND DISPOSAL METHODS1	8
	3.1	Subsea Installation(s) and Stabilisation Features1	9
	3.2	Wells2	0
	3.3	Waste Streams	0
4.	ENV	IRONMENTAL APPRAISAL OVERVIEW2	1
	4.1	Environmental Sensitivities (Summary)2	1
	4.2	Potential Environmental Impacts and Their Management2	7
5.	INTI	ERESTED PARTY CONSULTATIONS	0
6.	PRO	GRAMME MANAGEMENT3	1
	6.1	Project Management and Verification	1
	6.2	Post-Decommissioning Debris Clearance and Seabed Clearance Verification	1
	6.3	Schedule	1
	6.4	Costs	3
	6.5	Close Out	3
	6.6	Post-Decommissioning Monitoring and Evaluation3	3
7.	SUP	PORTING DOCUMENTS	4
8.	S29	HOLDER(S) LETTER(S) OF SUPPORT3	5
9.	APP	ENDICES	6



Terms and Abbreviations

Abbreviation	Explanation
0	Degree
u	Inch
>	Greater than
£	British Pound
%	Percentage
AB1	Abandonment Phase 1 (The reservoir has been permanently isolated)
AB3	Permanently Abandoned
AMOSS	Amoco Minimum Offshore Support Structure
BEIS	Department for Business, Energy, and Industrial Strategy
CEFAS	Centre for Environment, Fisheries and Aquaculture Science
DP	Decommissioning Programmes
EA	Environmental Appraisal
EUNIS	European Nature Information System
HAS	Habitat Assessment Survey
HSEx	Health and Safety Executive
ICES	International Council for the Exploration of the Seas
IWS	International Waste Shipment
JNCC	Joint Nature Conservation Committee
JUB	Jack-Up Barge
km	Kilometre
km²	Square Kilometre
LSA	Low Specific Activity
m	Metre
MARPOL	The International Convention for the Prevention of Pollution from Ships
MAT	Master Application Template
MOD	Ministry of Defence
MU	Management Unit
N/A	Not Applicable
NFFO	National Federation of Fishermen's Organisations
NIFPO	Northern Ireland Fish Producers' Organisation
NORM	Naturally Occurring Radioactive Material



Abbreviation	Explanation
NSTA	North Sea Transition Authority (formerly Oil and Gas Authority)
OEUK	Offshore Energies UK (formerly Oil and Gas UK)
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic
P&A	Plug and Abandonment
Perenco	Perenco UK Limited
PETS	Portal Environmental Tracking System
PL	Pipeline
PLU	Umbilical Pipeline
S29	Section 29 Notice Holder
SAC	Special Area of Conservation
SAT	Subsidiary Application Template
SCANS	Small Cetacean Abundance of the North Sea
SFF	The Scottish Fishermen's Federation
SNS	Southern North Sea
SPA	Special Protection Area
Те	Tonne
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
WHPS	Wellhead Protection Structure
X-tree	Xmas Tree Assembly & Valves



Tables and Figures

Tables

Installations Being Decommissioned - Davy North Subsea Installation	9
Installations Being Decommissioned - Davy East Subsea Installation	9
Installations Section 29 Notice Holders Details - Davy North Subsea	10
Installation	
Installations Section 29 Notice Holders Details - Davy East Subsea	10
Installation	
Summary of Decommissioning Programmes – Davy North & Davy East	10
Adjacent Facilities	14
Surface Facilities Information – Davy North	16
Surface Facilities Information – Davy East	16
Subsea Well Information – Davy North	16
Subsea Well Information – Davy East	16
Estimated Inventory Breakdown – Davy North Subsea Installation	17
Estimated Inventory Breakdown – Davy East Subsea Installation	18
Subsea Installations Decommissioning Options – Davy North	19
Subsea Installations Decommissioning Options – Davy East	20
Well Plug and Abandonment (P&A)	20
Waste Stream Management Methods	20
Inventory Disposition – Davy North SS Installation	21
Inventory Disposition – Davy East SS Installation	21
Environmental Sensitivities	21
Environmental Impact Management	27
Summary of Stakeholder Comments	30
Supporting Documents	34
	Installations Being Decommissioned - Davy North Subsea Installation Installations Being Decommissioned - Davy East Subsea Installation Installations Section 29 Notice Holders Details - Davy North Subsea Installation Installations Section 29 Notice Holders Details - Davy East Subsea Installation Summary of Decommissioning Programmes – Davy North & Davy East Adjacent Facilities Surface Facilities Information – Davy North Surface Facilities Information – Davy North Subsea Well Information – Davy North Subsea Well Information – Davy North Subsea Well Information – Davy East Estimated Inventory Breakdown – Davy North Subsea Installation Estimated Inventory Breakdown – Davy East Subsea Installation Subsea Installations Decommissioning Options – Davy North Subsea Installations Decommissioning Options – Davy East Well Plug and Abandonment (P&A) Waste Stream Management Methods Inventory Disposition – Davy East SS Installation Environmental Sensitivities Environmental Sensitivities Environmental Impact Management Supporting Documents

Figures

Figure 1.1	Field Location in UKCS	12
Figure 1.2	Field Layout	13
Figure 1.3	Adjacent Facilities	15
Figure 2.1a	Pie Chart of Estimated Inventories (Davy North Subsea Installation)	17
Figure 2.1b	Pie Chart of Estimated Inventories (Davy East Subsea Installation)	18
Figure 6.1	Gantt Chart of Project Plan	32

Appendix

Appendix A: Marine Protected Sites Location within 40km of the Davy Installations	36
Appendix B: Habitats in the Vicinity of the Davy Installation	37



1. EXECUTIVE SUMMARY

1.1 Decommissioning Programmes

This document contains two decommissioning programmes (DPs): the Davy North Subsea Installation DP (49/30A-7A) and the Davy East Subsea (53/5B-7) Installation DP. The owner of the subsea installations is Perenco UK Limited, registered number 04653066 (Perenco, the operator). Perenco UK Limited (Perenco) prepared the DPs on behalf of all Section 29 (S29) Notice Holders.

Separate decommissioning programmes for the Davy platform and pipelines (PL1871, PLU1872 (comprised of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & PLU1872.2(J)NDW), PL2344, PLU2345) will be submitted in due course.

1.2 Requirement for Decommissioning Programmes

Installations:

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the Davy North and Davy East subsea installations (see Table 1.2) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the installations detailed in Section 2.1 and 2.2 of these programmes. (See also Section 8 - Section 29 Notice Holders Letter(s) of Support).

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programmes are submitted without derogation and in compliance with national and international regulations and OPRED guidelines. The schedule outlined in this document is for a 5-year decommissioning project plan due to begin in Q3 2025.

1.3 Introduction

The decommissioning programmes explain the principles of the removal activities and are supported by an environmental appraisal (EA).

The Davy Field is located in the Southern Basin of the UKCS approximately 100km offshore from the Bacton Gas Terminal. Davy North is in license block 49/30A (licence number P64) and Davy East is in license block 53/5B (licence number P787).

The Davy field was the first gas field to be discovered in the Davy Area and was discovered in January 1970 by the Amoco well 49/30A-2. Davy, Boyle and Brown were developed through re-completed exploration wells or sidetrack tiebacks to the Davy 49/30A (30A) Amoco Minimum Offshore Support Structure (AMOSS) platform. Davy East and Davy North were developed with subsea installation tiebacks to the Davy platform. Operations on the Davy platform were controlled remotely from the Indefatigable field. The first production from the Davy platform occurred in October 1995.

The Davy Area gas fields are located approximately 90km from the nearest landfall on the Norfolk coast and approximately 40km Southeast of the Indefatigable field. Davy Area production and infrastructure are part of Perenco's Southern Hub operations (Figure 1.1). Davy has a single AMOSS platform, platform 30A, positioned centrally over the main Davy gas field. Gas from the Davy, Davy



East, Davy North, Brown, and Boyle fields is routed via the Davy platform to the Indefatigable AT and Leman BT platforms before it arrives at the Bacton Terminal on the Norfolk coast.

The Davy North subsea well is connected to Davy via a 10.31km 8-inch pipeline (PL1871) and associated umbilical PLU1872 (comprising of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & PLU1872.2(J)NDW), and then tied into a 6-inch manifold flexible riser system. Its first production occurred in November 2001. The Davy East subsea well is connected to the Davy platform via a 5.71km 6-inch pipeline (PL2344) and the associated umbilical (PLU2345), then tied into the 6" riser manifold. The riser occupies the central conductor slot inside the substructure support column.

The flow from the subsea wells is tied into the Davy production manifold and commingled with the production from the platform wells. From Davy, the gas is transported by a 16-inch subsea pipeline (PL1054) to the Inde 49/23A installation and combined with production from other Inde installations. It is then exported from the Inde 49/23A via a 30-inch pipeline (PL22) to Leman 49/27B. At Leman 49/27B, the flow is comingled with production from Leman 27B and adjacent facilities before being sent to Leman 49/27A via a 20-inch pipeline (PL106). From there, the flow travels via a 30-inch pipeline (PL23) to the Bacton Gas Terminal.

The Cessation of Operation for Davy North and Davy East was on 9th December 2024.

Both Davy North and Davy East subsea installations are located within the boundaries of the Southern North Sea Special Area of Conservation (SAC) which features the Annex II species Harbour porpoise. The installations are located 34km to the west of the North Norfolk Sandbanks and Saturn Reef SAC, which features the Annex I Habitat, Sandbanks, Ref. Section 4.1, and Appendix A.

The Perenco Section 29 Notice Holders assessed options for extending the producing life of the subsea installations, but none proved commercially viable. The Perenco Section 29 Notice Holders then considered options for the relocation of the subsea infrastructure but concluded that there was no feasible use.

The Davy North Subsea Installation comprises of the following:

- One subsea production well and Christmas Tree Valve (X-tree) and associated Wellhead Protection Structure (WHPS).
- Two rigid tie-in spool pieces at the well location.

The Davy East Subsea Installation comprises of the following:

- One subsea production well and X-tree and associated WHPS.
- Two rigid tie-in spool pieces at the well location.



1.4 Overview of Installations Being Decommissioned

1.4.1 Installation(s)

Table 1.1a: Installations Being Decommissioned - Davy North Subsea Installation				
Fields	Davy	Production Type Gas Gas		
Water Depth (m)	36.27	UKCS Block 49/30A		
Distance to median (km)	19	Distance from nearest UK coastline (km)		
Surface Installation(s)				
Number	Туре	Topsides Weight (Te)	Jacket Weight (Te)	
N/A	N/A	N/A	N/A	
Subse	Subsea Installations Number of Wells			
Number	Туре	Platform	Subsea	
1	WHPS	N/A	1	
Drill Cuttings Piles				
No. of Piles	N/A	Total Est. Volume (m ³)	N/A	

Table 1.1b: Installations Being Decommissioned - Davy East Subsea Installation				
Fields	Davy	Production Type (Oil/Gas/Condensate)	Gas	
Water Depth (m)	41.15	UKCS Block 53/5B		
Distance to median (km)	11	Distance from nearest UK coastline (km)		
Surface Installation(s)				
Number	Туре	Topsides Weight (Te)	Jacket Weight (Te)	
N/A	N/A	N/A	N/A	
Subsea Installations		Number of Wells		
Number	Туре	Platform	Subsea	
1	WHPS	N/A	1	
Drill Cuttings Piles				
Number of Piles	N/A	Total Estimated Volume (m ³)	N/A	



Table 1.2a: Installations Section 29 Notice Holders Details - Davy North Subsea Installation				
Section 29 Notice Holders	Registration Number	Equity Interest (%)		
Perenco UK Limited	04653066	72.2		
Rockrose UKCS 10 Limited	04105025	27.8		
Hess Limited	00807346	0		
Rockrose UKCS15 Limited	SC375371	0		
SSE PLC	SC117119	0		

Table 1.2b: Installations Section 29 Notice Holders Details - Davy East Subsea Installation				
Section 29 Notice Holders	Registration Number	Equity Interest (%)		
Perenco UK Limited	04653066	60		
Spirit Energy Resources Limited	02855151	40		
GB Gas Holdings Limited	03186121	0		

1.5 Summary of Proposed Decommissioning Programmes

Table 1.3: Summary of Decommissioning Programmes – Davy North & Davy East					
Proposed Decommissioning Solution	Reason for Selection				
Subsea Installation(s) (Template/manifold/WH	PS etc.)				
The subsea x-trees, wellheads and associated WHPS frames will be removed.	Remove all seabed structures and leave a clear seabed. To comply with The Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR) requirements. Wellheads, Xmas Trees, and protection structures will be removed to shore for reuse, recycling or disposal.				
Pipelines, Flowlines, Umbilicals & Riser Section	S				
Not covered in these DPs.					
Wells					
Permanent abandonment of the Davy North and Davy East subsea wells. The conductors will be cut at -3m below the seabed and retrieved to achieve AB3 well abandonment status.	Meets Health and Safety Executive (HSEx) regulatory requirements and is in accordance with Offshore Energies United Kingdom (OEUK) and North Sea Transition Authority (NSTA) guidelines.				
Drill Cuttings	Drill Cuttings				



Table 1.3: Summary of Decommissioning Programmes – Davy North & Davy East			
Proposed Decommissioning Solution	Reason for Selection		
Left undisturbed on the seabed.	Cuttings were widely dispersed and fall below OSPAR 2006/5 thresholds.		
Interdependencies			

The Davy East and North subsea installations are connected to the Davy Platform via PL2344 and PL1871 respectively. The Davy Platform will remain operational and is not covered under these DPs. However, prior to the decommissioning of the Davy East and North subsea installations, the pipelines (PL2344 & PL1871) shall be flushed clean and air-gapped at the Davy topsides.

The Davy East and North subsea wells will be plugged and abandoned to AB3 and the WHPS removed. The pipelines (PL2344 & PL1871) and the associated umbilical (PLU2345 & PLU1872, comprising of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & and PLU1872.2(J)NDW) will be cut subsea at the subsea installation location and will be left in situ. No pipelines will be removed during the decommissioning of the subsea installations. All the Davy pipelines within the field will be covered in a future DP.



1.6 Field Location Including Field Layout and Adjacent Facilities



Figure 1.1: Field Location in UKCS



Figure 1.2: Field Layout





Table 1.4: Adjacent Facilities						
Operator	Name	Туре	Distance/ Direction – Davy North	Distance/ Direction – Davy East	Information	Status
Perenco	Davy	Platform	16km Northwest	5.8km Southeast	Adjacent Platform	Operational
ONE- Dyas UK Limited	Sean	Platform	12km Northeast	24.5km Northwest	Adjacent Platforms	Out of Use
Perenco	Bessemer	Platform	25.7km Northwest	40.6km Northwest	Adjacent Platform	Operational
Shell U.K. Limited	Corvette	Platform	21.1km Northwest	40km Northwest	Adjacent Platform	Operational
Perenco	Inde 23C	Platform	30km Northwest	45.3km Northwest	Adjacent Platform	Operational
Perenco	Leman 23G	Platform	29.7km West	40.2km West	Adjacent Platform	Operational
Impacts of Decommissioning Proposals						
Decommissioning of the Davy North and Davy East subsea installations will have no impact on the Davy platform or any adjacent facilities.						



Figure 1.3: Adjacent Facilities

PERENCO

1.7 Industrial Implications

Perenco's contract strategy and Supply Chain Action Plan will result in an efficient and cost-effective execution of the decommissioning works.

The Davy North and Davy East Subsea Installations DPs are managed by Perenco to ensure safe, efficient, and legally compliant delivery of the various elements of the decommissioning scope. The intention is to make efficient use of the supply chain to generate value through the application of knowledge, innovation, and technology, explore collaboration opportunities and employ best practices in the management of the supply chain to deliver a cost-effective and reliable service. Where appropriate existing framework agreements may be used for decommissioning activities.



2. <u>DESCRIPTION OF ITEMS TO BE DECOMMISSIONED</u>

2.1 Installations: Subsea including Stabilisation Features

Table 2.1a: Surface Facilities Information – Davy North					
Platform Installation	Number	Size/ Weight Tonnes (Te)	Location (WGS84)	Comments/Status	
X-tree	1	17.56		The well has been	
Wellhead	1	14.6	53° 05' 01.9960" N 02° 49' 04.5857" E	suspended and will undergo plug and abandonment, and wellhead, x-tree and	
WHPS	1	24.11	[5881828.600N		
Conductor	1	4.2	407007.400LJ	conductor removal.	

Table 2.1b: Surface Facilities Information – Davy East				
Platform Installation	Number	Size/ Weight Tonnes (Te)	Location (WGS84)	Comments/Status
X-tree	1	16	52° 58' 57 4051"N	Well has been
Wellhead	1	14.6	02° 58' 21.168" E and will under	permanently shut-in and will undergo plug &
WHPS	1	24.11	[5870547.300N 498248.700F]	abandonment, and wellhead, x-tree and
Conductor	1	4.2		conductor removal.

2.2 Wells

Table 2.2a: Subsea Well Information – Davy North				
Subsea Wells Designation Status Category of W				
49/30a-7A	Gas Production	Abandoned Phase 1	SS-3-0-3	

Table 2.2b: Subsea Well Information – Davy East				
Subsea Wells Designation Status Category of Well				
53/5b-7	Gas Production	Completed (Shut-in)	SS-3-0-3	

Note: The 53/05b-5 Davy East Discovery well is outside the scope of these DPs.



2.3 Inventory Estimates



Figure 2.1a: Pie Chart of Estimated Inventories (Davy North Subsea Installation)

Table 2.3a: Estimated Inventory Breakdown – Davy North Subsea Installation			
Estimated Inventory	Percentage - %	Tonnes (Te)	
Steel	91.8	55.5	
Concrete	0	0	
Rubber/Plastic	0	0	
Non-Ferrous	4.12	2.49	
NORM/Haz	0.26	0.16	
Other	3.84	2.32	







Table 2.3b: Estimated Inventory Breakdown – Davy East Subsea Installation			
Estimated Inventory	Percentage - %	Tonnes (Te)	
Steel	91.8	54.09	
Concrete	0	0	
Rubber/Plastic	0	0	
Non-Ferrous	4.11	2.42	
NORM/Haz	0.27	0.16	
Other	3.8	2.24	

3. <u>REMOVAL AND DISPOSAL METHODS</u>

The Perenco Section 29 Notice Holders assessed options for extending the producing life of the subsea installations, but none proved commercially viable.

The Perenco Section 29 Notice Holders then considered options for the relocation of the subsea infrastructure but concluded that there was no feasible use. However, the Perenco Section 29 Notice Holders have reviewed and will continue to review, the subsea installations' equipment inventories to assess the potential for adding to their existing asset portfolio spares inventory or for resale to the open market.

Recovered material will be landed ashore for disposal by a contractor. It is not possible to forecast the wider reuse market with any accuracy or confidence this far forward. The Perenco Section 29 Notice



Holders will continue to track reuse market trends to seize reuse opportunities at the appropriate time.

If the installation will be disposed of outside of the United Kingdom, Perenco will apply to the Environment Agency for International Waste Shipment (IWS) consent, in accordance with the International Waste Shipments (Amendment of Regulation (EC) No 1013/2006 and 1418/2007) Regulations 2021.

3.1 Subsea Installation(s) and Stabilisation Features

Davy North Subsea Installation

The subsea X-tree, wellhead and associated WHPS frame will be removed from its current location.

This will be achieved by cutting PL1871 using a diamond wire saw or super grinder to disconnect from the X-tree and to remove potential snagging associated with the pipeline end. The umbilical PLU1872 (comprising of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & and PLU1872.2(J)NDW) will be cut to separate it from the subsea x-tree.

Once free from PL1871 and PLU1872 (comprising of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & PLU1872.2(J)NDW), the subsea X-tree, wellhead and associated WHPS frame will be lifted from the seabed and recovered to the deck for transport onshore. If any practical difficulties are encountered Perenco will consult OPRED.

The Davy North pipeline (PL1871), umbilical PLU1872 (comprising of PLU1872.1, PLU1872.2, PLU1872.1(J)NDW & PLU1872.2(J)NDW) and the associated stabilisation features will remain on the seabed for future decommissioning and be addressed in a separate Pipeline DP. A request to the HSEx will be made to keep the 500m zone in place until NFFO overtrawl has deemed it a clear seabed.

Table 3.1a: Subsea Installations Decommissioning Options – Davy North				
Subsea Installations	Number	Option	Disposal Route (if applicable)	
X-tree	1	Remove	Transport ashore for reuse, recycling, or disposal	
Wellhead	1	Remove	Transport ashore for reuse, recycling, or disposal	
WHPS	1	Remove	Transport ashore for reuse, recycling, or disposal	

Davy East Subsea Installation

The subsea X-tree, wellhead and associated WHPS frame will be removed from its current location.

This will be achieved by cutting PL2344 using a diamond wire saw or super grinder to disconnect from the X-tree and to remove potential snagging associated with the pipeline end. PLU2345 will be cut to separate it from the subsea X-tree.



Once free from PL2344 and PLU2345, the subsea X-tree, wellhead and associated WHPS frame will be lifted from the seabed and recovered to the deck for transport onshore. If any practical difficulties are encountered Perenco will consult OPRED.

The Davy North pipeline (PL2344), umbilical (PLU2345) and the associated stabilisation features will remain on the seabed for future decommissioning and be addressed in a separate Pipeline DP. A request to the HSEx will be made to keep the 500m zone in place until NFFO overtrawl has deemed it a clear seabed.

Table 3.1b: Subsea Installations Decommissioning Options – Davy East				
Subsea Installations	Number	Option	Disposal Route (if applicable)	
X-tree	1	Remove	Transport ashore for reuse, recycling, or disposal	
Wellhead	1	Remove	Transport ashore for reuse, recycling, or disposal	
WHPS	1	Remove	Transport ashore for reuse, recycling, or disposal	

3.2 Wells

Table 3.2: Well Plug and Abandonment (P&A)

The subsea wells will be shut in and abandoned to AB3. The well casings/conductor will be cut at c.3m below the seabed. All wells, as listed in Section 2.2 (Table 2.2), will be P&A in accordance with OEUK Guidelines for the suspension and abandonment of wells.

A Master Application Template (MAT) and the supporting Subsidiary Application Template (SAT) application within the Portal Environmental Tracking System (PETS) will be submitted in support of any activities that will be conducted.

3.3 Waste Streams

Table 3.3: Waste Stream Management Methods		
Waste Stream	Removal and Disposal Method	
Bulk Liquids	N/A.	
Marine Growth	Removal offshore /onshore and disposal according to guidelines.	
Naturally Occurring Radioactive Materials (NORM)/ Low Specific Activity (LSA) Scale	Tests for NORM/LSA will occur offshore and will be dealt with/ disposed of according to guidelines and company policies.	
Asbestos	N/A	



Other Hazardous Wastes	None Identified
Onshore Dismantling Sites	An appropriate licensed site will be selected. The chosen facility will demonstrate a proven disposal track record and waste stream management throughout the deconstruction process and demonstrate its ability to deliver innovative recycling options. OPRED will be advised when a decision is made on the licensed site.

Table 3.4a: Inventory Disposition – Davy North SS Installation			
	Total Inventory (Te)	Planned (Te) to Shore	Planned Left in Situ
Installations	60.47	60.47	0

Table 3.4b: Inventory Disposition – Davy East SS Installation			
Total Inventory (Te) Planned (Te) to Shore Planned Left in S			
Installations	58.91	58.91	0

It is anticipated that >99% of materials brought to shore will either be recovered or reused.

4. ENVIRONMENTAL APPRAISAL OVERVIEW

4.1 Environmental Sensitivities (Summary)

Table 4.1 summarises the environmental receptors assessed within the Davy North and Davy East fields; further details are provided in the supporting Environmental Appraisal (EA) [Ref: 200605-S-REP-0062 Rev 0].

Table 4.1: Environmental Sensitivities		
	Southern North Sea SAC: Features: Annex II species; Harbour porpoise (<i>Phocoena phocoena</i>) (1351). The installations are located within the boundaries of this SAC.	
Conservation Interests	Description: The site has been identified as an area of importance for harbour porpoises and supports 17.5% of the UK North Sea Management Unit (MU) population. This site covers an area of 36,951km ² . Most of this site lies offshore, though it does extend into coastal areas of Norfolk and Suffolk. The northern two-thirds of the site is recognised as important for porpoises during the summer season (April – September), whilst the southern part supports persistently higher densities during the winter (October – March).	
	North Norfolk Sandbanks and Saturn Reef SAC: Features: Annex I Habitat: Sandbanks which are slightly covered by sea water all the time and reefs. The installations are located 26km to the west of this SAC.	



	Table 4.1: Environmental Sensitivities
	Description: Located in the SNS, the North Norfolk Sandbanks are the most extensive example of the offshore linear ridge sandbank type in UK waters. The banks support communities of invertebrates which are typical of sandy sediments in the southern North Sea such as polychaete worms, isopods, crabs, and starfish. Areas of <i>Sabellaria spinulosa</i> biogenic reef are present within the site, consisting of thousands of fragile sand-tubes made by ross worms (polychaetes) which have consolidated to create solid structures rising above the seabed.
Seabed	 Water depth at the Davy subsea installation locations is approximately 36.27m at 49/30A and 41.15m at 53/5B. The following European Nature Information System (EUNIS) seabed classifications have been identified in the vicinity of the Davy subsea installations. A5.27 Deep circalittoral sand at 49/30A, and A5.37: Deep circalittoral mud at 53/5B; both habitats are classified as Endangered by the European Red List of Habitats. Other nearby sediment types include A5.45: Mixed sediments and A5.26: Muddy sand. A5.27: Deep circalittoral sand - Offshore (deep) circalittoral habitats with fine sands or non-cohesive muddy sands. Very little data is available on these habitats however they are likely to be more stable than their shallower counterparts and characterised by a diverse range
	of polychaetes, amphipods, bivalves and echinoderms. A5.37: Deep circalittoral mud - In mud and cohesive sandy mud in the offshore circalittoral zone, typically below 50-70 m, a variety of faunal communities may develop, depending upon the level of silt/clay and organic matter in the sediment. Communities are typically dominated by polychaetes but often with high numbers of bivalves such as <i>Thyasira</i> spp., echinoderms and foraminifera.
	A5.45: Mixed sediments - This type of offshore (deep) circalittoral habitat consists of slightly muddy mixed gravelly sand and stones, or shells. It is known to cover large areas of the offshore continental shelf in depths ranging from 20-150m. This and similar habitats are known to often be highly diverse supporting large numbers of infaunal polychaete and bivalve species.
	A5.26: Muddy sand - This habitat comprises circalittoral non-cohesive muddy sands (silt content from 5% to 20%), generally found in water depths of over 15-20m in the Northeast Atlantic region, where they support rich infaunal communities.
	Annex I (European Council (EC) Habitats Directive) habitats
	Conservation objectives detail the desired state of a European protected site concerning interest features for which the site has been designated. In respect to The North Norfolk sandbanks and Saturn reef SAC which covers an area of 3,603km ² , these protected features



Table 4.1: Environmental Sensitivities		
	include sandbanks and reefs. The entirety of the SAC is considered a representative functioning example of Annex I feature Sandbanks which are slightly covered by seawater all the time. The whole SAC is designated and viewed as one integrated sandbank system. The other protected feature (Reefs) may be located in discrete areas around the SAC however, currently available survey data indicates these to be located mostly in the South and the Western extent of the SAC.	
	There are no known reefs (stony or biogenic)/sandbanks identified in the vicinity of Davy subsea installations which at its closest point is 34km East of the North Norfolk sandbanks and Saturn reef SAC.	
	Recent Habitat Assessment Surveys (HAS) (2024) of both subsea installations confirmed a lack of Reefs and other Annex 1 habitats as well as sediment types. Observations of epifauna were limited to faunal burrows across the survey area and the presence of Hermit crabs (Paguridae), tube worms (Sedentaria) and Brittle star of the genus <i>Ophiura</i> sp. In some areas, many images showed no visible fauna.	
Fish & Shellfish	Species that spawn or nurse within ICES rectangles 34F2 and 35F2 include Mackerel (<i>Scomber scombrus</i>), Sandeel (<i>Ammodytes</i> spp.), Whiting (<i>Merlangius merlangus</i>), Cod (<i>Gadus morhua</i>), Plaice (<i>Pleuronectes platessa</i>), <i>Nephrops</i> , Sprat (<i>Sprattus sprattus</i>), Lemon sole (<i>Microstomus kitt</i>) and Sole (<i>Solea solea</i>).	
Marine Mammals	The relative abundance and density of cetaceans in the vicinity of the Davy field location can be derived from data obtained during the Small Cetacean Abundance of the North Sea (SCANS-IV) aerial and ship- based surveys. This project identified the abundance and density of cetacean species within predefined sectors of the North Sea and North-East Atlantic. The location of the Davy subsea installations is within SCANS-IV Block 'NS-C', for the Davy North subsea installation, and Block 'NS-B' for the Davy East subsea installation, in which harbour porpoise, bottlenose dolphin, minke whale, white-beaked dolphin and common dolphin have been recorded. The density of the harbour porpoise within the SCANS-IV Block 'NS-C' is higher than the total surveyed area, suggesting that the area may be important for these species. Densities for minke whales were similar to the total surveyed area, whereas densities for white-beaked dolphins were a magnitude lower. The number of cetaceans in Block 'NS-B' is noticeably lower compared to Block 'NS-C'. Harbour porpoises were found with only half the density in this surveyed area, and the other types of cetaceans were not identified.	
	In addition to the cetaceans, other species have been observed or have been modelled to have a presence in the North Sea. These include the Atlantic white-sided dolphin (<i>Lagenorhynchus acutus</i>), Risso's dolphin (<i>Grampus griseus</i>), and short-beaked common dolphin (<i>Delphinus</i> <i>delphis</i>).	



Table 4.1: Environmental Sensitivities		
	Seabird distribution and abundance in the southern North Sea Regional Sea 2 varies throughout the year, with offshore areas in general, containing peak numbers of birds in and around the shallow sandbanks following the breeding season and through winter. Regional Sea 2 also includes several areas suitable for cliff-nesting seabirds and some of the most important sites for wintering and passage waterbirds in a national and international context, including the Wash and Thames Estuary. Individuals found offshore in the vicinity of the Davy subsea installations may originate from onshore colonies or be passing migrants. The numbers of seabirds are generally lower in Regional Sea 2 compared to areas further north.	
Birds	The most common species of seabird found in this area of the SNS include: Northern fulmar (<i>Fulmarus glacialis</i>), Great Skua (<i>Stercorarius skua</i>), Black legged kittiwake (<i>Rissa tridactyla</i>), Great black backed gull (<i>Larus marinus</i>), Common gull (<i>Larus canus</i>), Lesser black backed gull (<i>Larus fuscus</i>), Herring gull (<i>Larus argentatus</i>), Common guillemot (<i>Uria aalge</i>), Razorbill (<i>Alca torda</i>), Little auk (<i>Alle alle</i>) and Atlantic puffin (<i>Fratercula arctica</i>). In general, species can be found breeding at low densities from March to November, predominantly during the summer months (June, July, and August).	
	Fulmars are present in the highest numbers during the early and late breeding seasons, leading to peak densities in September. Kittiwakes are widely distributed throughout the year. Lesser black-backed gulls are mainly summer visitors, while in contrast, guillemot numbers are greatest during winter months. In addition, substantial numbers of terns migrate northwards through the offshore North Sea area in April and May, with return passage from July to September.	
	The Davy subsea installations are located approximately 53km from the Outer Thames Estuary Special Protected Area (SPA), designated for the largest aggregation of wintering red-throated diver (<i>Gavia stellata</i>) in the UK; an estimated 38% of the wintering population of Great Britain. It also protects foraging areas for common tern (<i>Sterna</i> <i>hirundo</i>) 2.66% and little tern (<i>Sternula albifrons</i>) 19.64% during the breeding season. The conservation objectives for these three species are to maintain or enhance to favourable conditions.	
Fisheries	The North Sea is one of the world's most important fishing grounds, and major UK and international fishing fleets operate in the SNS, targeting a mix of demersal, shellfish and pelagic fish stocks. There is currently no data available on total fishing effort and landings for ICES blocks 34F2 and 35F2.	
Onshore Communities	Generated waste will include removed infrastructure, as detailed in section 2, and low levels of vessel-derived waste. All waste produced from the Davy Subsea decommissioning activities will be transported to a licenced onshore waste handling facility. Perenco will ensure the chosen site(s) comply with all relevant permitting and legislative requirements.	



Table 4.1: Environmental Sensitivities		
	No other impacts on onshore communities have been identified. As a result, no onshore communities are expected to be affected by the DPs.	
	Shipping The density of shipping traffic in the SNS is relatively high due to the presence of fishing vessels, ferries between the UK and the rest of Europe as well as cargo and offshore support vessels.	
	The waters surrounding Davy subsea installations are described as having 'moderate' shipping activity, with any positioning of temporary fixed installations requiring a Vessel Traffic Survey and a Collision Risk Assessment under the Consent to Location application process.	
	Recreational use Due to the distance between the Davy subsea installations and the nearest landfall (Davy North 95km and Davy East 97km), no recreational vessel use is known to occur in the area.	
	Military activity There are no known military practice and exercise areas in UKCS Blocks 49/30 or 53/5.	
Other Users of the Sea	Wrecks There are 3 wrecks identified within the UKCS blocks of interest, however none are listed as protected.	
	Telecommunications The closest telecommunication cable is the BT UK-GERMANY 5 located 3.3km east of Davy East subsea installation, followed by the UK- NETHERLANDS 14 cable owned by Vodafone and KPN and sited 14.25km south.	
	Offshore windfarms There are four proposed windfarm sites within 40km of Davy Field. The North subsea installation falls within the Norfolk Boreas windfarm currently under government support on offer. The East Subsea installation is located within the Norfolk Vanguard East windfarm area which has been granted consent. The North Vanguard West development is located 27km west. Additionally, the East Anglia 3 windfarm is under construction 24km south of the Davy East subsea installation.	
	Oil and Gas Oil and gas activity within the SNS is generally high and targets a number of existing gas fields. There is significant surface and subsurface oil and gas infrastructure in UKCS Blocks 49/30 and 53/5.	



Table 4.1: Environmental Sensitivities		
	The Davy field infrastructure lies towards the south edge of a collection of gas fields in the SNS, and therefore, oil and gas activity surrounding are considered to be moderate to high. To the north of Davy North Subsea installation is the Sean gas development (19km) operated by One-Dyas UK Limited. Towards the southwest of Davy East subsea installation, is located Wissey field (17km), with the status of abandoned. A total of 20 and 9 wells have been drilled in the UKCS blocks 49/30 and 53/5 respectively. Among them, 21 are in the abandoned phase 1.	
	while the remaining are distributed between Phase 2 and 3. Atmospheric emissions will occur as a result of operating the Jack up Barge (JUB) and support vessels at the Davy subsea installation	
Atmosphere	locations.	
Atmosphere	A total of 7624.4te of CO_2e are expected to be released for the decommissioning of both subsea installations. This represents 0.01% of the total UKCS offshore CO_2 emissions and <0.001 of the total UK Net CO_2 emissions (based on 2021 data from OEUK and BEIS).	





4.2 Potential Environmental Impacts and Their Management

Environmental Impact Assessment Summary:

A detailed review of the potential environmental impacts related to the recovery of the wellheads, x-tree and associated WHPS within the Davy North and Davy East fields is provided in the supporting EA. Following this review, it has been determined that the proposed decommissioning option of the Davy North and Davy East subsea installations will not present any significant impacts.

A summary of the impacts and environmental control measures identified is provided in Table 4.2. The potential environmental impacts of these operations will be further assessed in the MAT environmental assessment justification that will be submitted before the works commence.

Table 4.2: Environmental Impact Management		
Activity	Main Impacts	Management
Potentially significant impacts		pacts
		The following measures will be taken to minimise impacts on the seabed:
Subsea Installation(s), Xmas tree(s) and Wellhead(s) Removal	Seabed disturbance from the positioning of the JUB and cutting and removal of subsea infrastructure.	A detailed JUB positioning assessment will be made to avoid excessive disturbance from the positioning of the JUB.
		Proposed cut locations for infrastructure to be removed will be carefully planned to avoid excessive disturbance from excavation. The cutting of subsea infrastructure will be carried out using a diamond wire saw to prevent deposition or garnet.
		The lifting of infrastructure will be carefully planned to avoid unnecessary seabed disturbance.
		Options for post-decommissioning surveys will be discussed with OPRED. Where possible to do so preference will be given to non-intrusive survey methods such as Side Scan Sonar and Remotely Operated Vehicle surveys to determine a clear seabed.



Table 4.2: Environmental Impact Management			
Activity	Main Impacts	Management	
	Potentially insignificant in	mpacts	
	Waste generation.	Waste generated from decommissioning activities will be limited to the infrastructure detailed in section 2 and vessel-generated waste. All waste will be handled and recovered or disposed of in line with existing waste management legislation following the principles of the waste hierarchy. Raw materials will be returned to shore with the expectation to recycle the majority of the returned non-hazardous material. Other non-hazardous waste which cannot be reused or recycled will be disposed of at a landfill site.	
		Only licensed contractors will be used for waste handling and treatment/disposal.	
	Energy and Atmospheric emissions.	Although the project will produce atmospheric emissions and consume energy to undertake (both onshore and offshore), these activities are required to be undertaken to meet decommissioning obligations for the infrastructure. Decommissioning activity for both subsea installations is anticipated to be completed within 70 days using a JUB, and therefore, any associated emissions during the decommissioning campaign will be minimal. Best practices will be employed to minimise this environmental footprint. This includes optimal operational planning and procurement of vessels which operate effective environmental management systems minimising their emissions.	
Physical pro impacts on users.	Physical presence and impacts on other sea users.	Shipping traffic at the Davy subsea installation locations within UKCS Block 49/30 and 53/5 is recorded as 'moderate' shipping activity. The requirement to deploy vessels to the area will be limited to a single decommissioning JUB. Existing 500m subsea exclusion zones will remain in place during decommissioning activities. A temporary surface 500m exclusion zone will be applied around the JUB. Vessel traffic will be managed by issuing of kingfisher notice to mariners and vessel-operated Automated Identification Systems (AIS). There will be an overall positive benefit of opening up of 500m subsea exclusion zone following seabed clearance.	



		Table 4.2: Environmental Impact Management
Activity	Main Impacts	Management
		Prior to Davy decommissioning activities, both wells will be P&A, all pipework and subsea flowlines shall be flushed clean to an agreed standard with OPRED and disconnected at the Davy subsea locations.
	Operational discharges to sea.	Any potential residual hydrocarbon volumes that may escape to sea during the Davy decommissioning operations are expected to be minimal and will be considered under the individual permit consent applications for the decommissioning activities through the PETS.
		Vessel-based discharges to sea will be managed in line with MARPOL requirements. Approved contractor procedures will assess and minimise vessel-based discharges.
		Noise emissions associated with the preferred decommissioning option are those from underwater cutting activities, positioning and operation of the JUB and post-decommissioning surveys.
		Previous decommissioning activities using similar cutting methods have indicated that associated noise levels from these operations fall far below those which may be considered significant in their potential to impact fish or marine mammals.
	Noise generation.	Effective operational planning will minimise vessel time in the area. Cutting activities will be planned and carried out efficiently to prevent excessive noise generation.
		Any required surveys will be scheduled and planned efficiently to minimise vessel operation time. If required, geotechnical survey equipment will be selected based on the lowest sound volume capable of achieving required survey results. Standard mitigations for minimising impacts on marine mammals will be employed where required.



5. INTERESTED PARTY CONSULTATIONS

Consultations Summary:

Table 5.1: Summary of Stakeholder Comments										
Who	Comment	Response								
1. Informal Stakeholder Consultations										
JNCC										
HSEx										
Environment Agency										
MOD										
CEFAS										
2. Public										
3. Statutory Consultat	ions									
National Federation of Fishermen's Organisations										
Scottish Fishermen's Federation										
Northern Ireland Fish Producers Organisation										
Global Marine Group										
North Sea Transition Authority		Perenco has consulted with NSTA under S29(2A) of the Petroleum Act.								



6. **PROGRAMME MANAGEMENT**

6.1 **Project Management and Verification**

A Perenco Project Management team will manage the operations of competent contractors selected for all decommissioning activities. The team will ensure the decommissioning is executed safely, in accordance with legislation and Perenco Policies and Principles.

Perenco standard procedures for operational control and hazard identification and management will be used. Where possible the work will be coordinated with other decommissioning operations in the southern North Sea. Perenco will monitor and track the process of consent and the consultations required as part of this process.

6.2 Post-Decommissioning Debris Clearance and Seabed Clearance Verification

A post-decommissioning site survey will be conducted around the 500m safety zones of the subsea installation sites. Oil and gas activity-related seabed debris will be recovered for onshore disposal or recycling in line with existing disposal methods. Independent verification of the seabed state will be obtained by trawling or other methods for the subsea installation area. This will be followed by a statement of clearance to all relevant governmental departments and non-governmental organisations.

Any objects dropped during the removal will be notified to OPRED via the PON2 process and their subsequent recovery reported via the PON2 and DP Progress Reporting processes.

6.3 Schedule

Figure 6.1, below, provides the timeline of all decommissioning activities concerning the DPs.



Figure 6.1: Gantt Chart of Project Plan

Year		2024			2025				2026					20	27		2028				2029				2030			
Quarter	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 Decommissioning Programe																												
Submission of DP																												
Consultation	onsultation																											
Approval of DP																												
P&A and Removal Campaign																												
Davy East & Davy North P&A & WHPS Removal																												
Post Decommissioning Activities and Surveys																												
Post Decommissioning Surveys																												
Remediation (if required)																												
Clear Seabed Verification																												
Close Out report																												

LEGEND
Earliest date task could be completed
Period in which the task expected to be completed
Latest date task could be completed



6.4 Costs

The decommissioning costs associated with the Davy North and Davy East Subsea Installations DPs have been provided to OPRED. The costs provided cover the scope of work associated with the removal of the subsea structures, the dismantlement onshore and the closeout of the Davy North and Davy East subsea installations.

6.5 Close Out

In accordance with the OPRED Guidelines, a Close Out Report will be submitted to OPRED explaining any variations from the DPs. The Close Out Report will be submitted within 12 months of the completion of the decommissioning activities.

6.6 Post-Decommissioning Monitoring and Evaluation

A post-decommissioning environmental seabed survey centred around sites of the Davy North and Davy East subsea installations, will be conducted. The survey will focus on chemical and physical disturbances of the decommissioning and compared with the pre-decommissioning survey. Results of this survey will be available once the work is complete, with a copy forwarded to OPRED.



7. <u>SUPPORTING DOCUMENTS</u>

Table 7.1: Supporting Documents							
Document Number	Title						
1	Environmental Appraisal (EA) [Ref: 200605-S-REP-0062 Rev 0].						



8. <u>S29 HOLDER(S) LETTER(S) OF SUPPORT</u>



9. <u>APPENDICES</u>



Appendix A: Marine Protected Sites Location within 40km of the Davy Installations





Appendix B: Habitats in the Vicinity of the Davy Installation