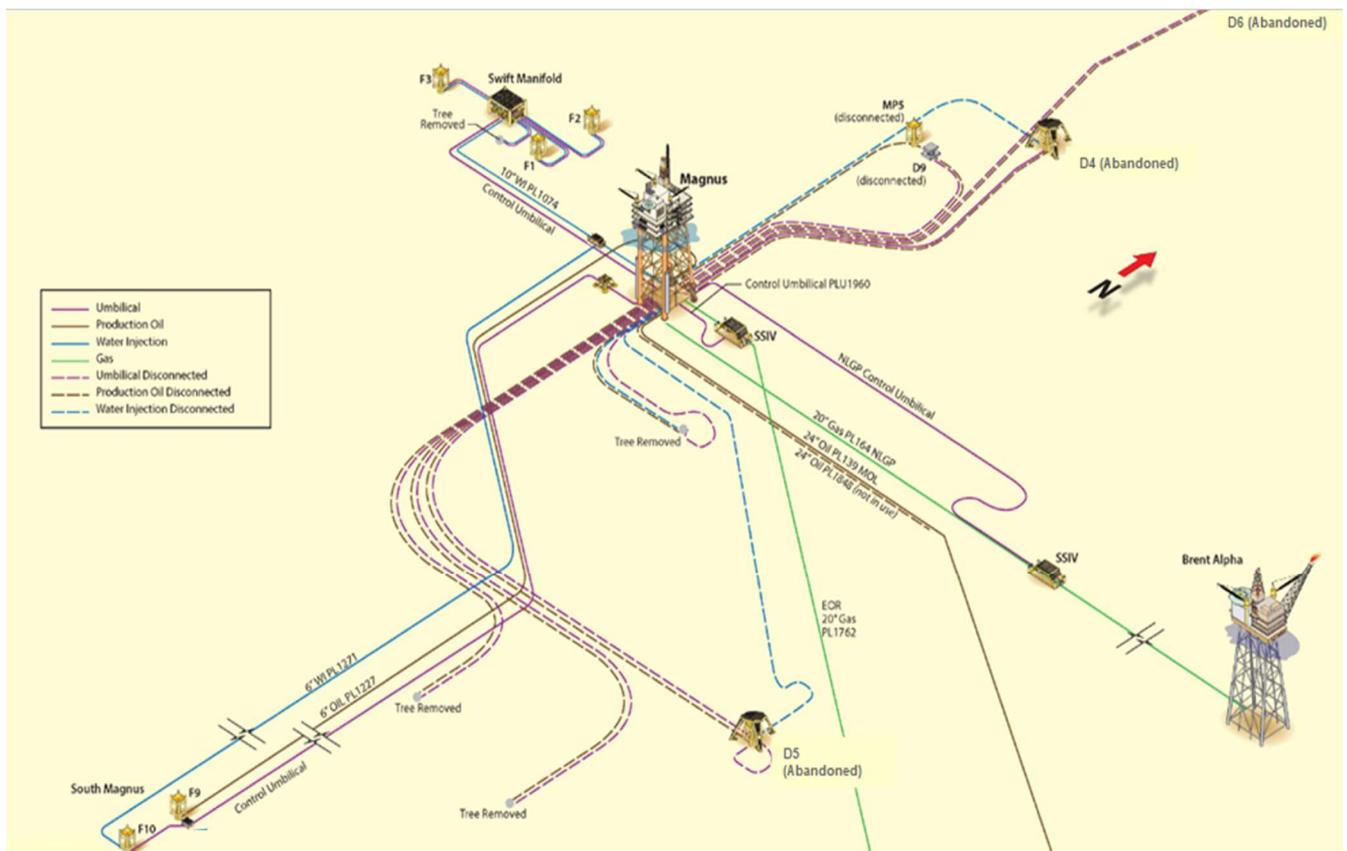


South Magnus and Magnus Swift Wellhead and Xmas Tree Decommissioning Programme



Consultation Draft

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Reviewed by:	K. Stilwell		28/10/25
Approved by:	W. Black		28/10/25

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BP Exploration Operating Company Limited	1 electronic
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ABBREVIATION	EXPLANATION
~, <; >	Approximate; Less than; More than
CNRL	Canadian Natural Resources (UK) Limited
CSV	Construction Support Vessel
DP	Decommissioning Programme
DSV	Dive Support Vessel
EnQuest	EnQuest Heather Limited
EU	European Union
GMG	Global Marine Group
H ₂ S	Hydrogen Sulphide
HSE	Health and Safety Executive
ICES	International Council for the Exploration of the Sea
IWS	International Waste Shipments
in	inch
km	Kilometre
LWIV	Light Well Intervention Vessel
m	Metre(s)
m ²	Square Metre(s)
m ³	Cubic Metre(s)
MAT	Master Application Template
MEI	Major Environmental Incident
MPA	Marine Protected Area
N,S,E,W	North, South, East, West
n/a	Not Applicable
NFFO	National Federation of Fishermen's Organisations
NIFPO	Northern Ireland Fish Producers Organisation
NNS	Northern North Sea
NORM	Naturally Occurring Radioactive Material
NSTA	North Sea Transition Authority
OEUK	Offshore Energies United Kingdom
OPEP	Oil Pollution Emergency Plan
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning, a department of BEIS (Department for Business, Energy and Industrial Strategy)
OSPAR	The Convention for the Protection of the Marine Environment of the North-East Atlantic
PL	Pipeline Identification numbers (UK)
SAT	Subsidiary Application Template
SALB	Single Anchor Leg Base
SFF	Scottish Fishermen's Federation
SOPEP	Shipboard Oil Pollution Emergency Plan
Te	Tonne
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
WGS84	World Geodetic System 1984
WI	Water Injection
WONS	Well Operations Notification System
XT	Xmas trees

1. EXECUTIVE SUMMARY

1.1 Installation Decommissioning Programme

This document contains one Decommissioning Programme ('DP') for the South Magnus and Magnus Swift wellheads and associated production and water injection ('WI') well Xmas trees ('XT').

EnQuest Heather Limited (EnQuest) has identified a potential early opportunity to fully plug and abandon the two South Magnus wells (F9 & F10), which requires removal of the Wellheads and three Magnus Swift wells (F1, F2 & F3). The Magnus Swift and South wells are part of the Magnus subsea facilities. To facilitate this potential early opportunity, the Offshore Petroleum Regulator for Environment and Decommissioning ('OPRED') has agreed that this standalone DP can be submitted to cover this specific decommissioning scope.

This standalone document contains one DP covering the South Magnus and Magnus Swift wellheads and the associated Xmas trees.

Assets to be decommissioned:

South Magnus

- F9 Wellhead and Xmas Tree
- F10 Wellhead and Xmas Tree

Magnus Swift

- F1 Wellhead and Xmas Tree
- F2 Wellhead and Xmas Tree
- F3 Wellhead and Xmas Tree

All other infrastructure associated with the wider Magnus Field will be decommissioned at a later date and will be subject to DPs and a Comparative Assessment and Environmental Appraisal to be submitted at a later date.

Removal of the South Magnus and Magnus Swift Wellheads and Xmas Trees will not preclude available decommissioning options for the remaining Magnus Infrastructure.

Although decommissioning of South Magnus and Magnus Swift is being treated in this document as a standalone project. EnQuest will continue to explore cost saving synergies with other projects.

1.2 Requirement for Installation Decommissioning Programme

In accordance with the Petroleum Act 1998, EnQuest, as operator of the Magnus field, and on behalf of the Section 29 notice holders (Table 1.6), are applying to OPRED to obtain approval for decommissioning the installations detailed in Section 2.1 of this document. (See also Section 7 – Section 29 Notice Holders Letter(s) of Support.

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programme is submitted in compliance with national and international regulations and OPRED guidelines. The schedule outlined in this document (see Figure 6.3.1) is for a 3-year decommissioning project plan which could commence offshore as early as Q2 2026 if DP approval is in place and if the potential early decommissioning opportunities materialise. If not, the schedule may extend to the end of 2029 to allow for campaigning synergies with other projects.

1.3 Introduction

Both South Magnus and Magnus Swift are in block 211/12a, approximately 142 km Northeast of the Shetland Islands in the Northern North Sea ('NNS'). The Magnus field was discovered in 1974 and has

been in production since 1983.

The fields are approximately 16 km from the United Kingdom ('UK')/ Norway boundary line in a water depth of approximately 186 m.

The South Magnus Field incorporates a production well (F9) and a Water Injection ('WI') well (F10) located approximately 7 km South of the Magnus platform and was installed in 1995/6 as part of the Magnus Exploitation Project. The production well (F9) and flowline were shut-in in 2013, following the detection of defects in the topside pipework and riser, as well as increased levels of hydrogen sulphide ('H₂S') from the well leading to an increased potential for subsequent integrity issues within the flexible flowline section. In 2016 the system was flushed with treated seawater and disconnected from well F9 and blind flange fitted to the end of the flexible flowline (PL1227). The WI Flowline (PL1271) has been under long term isolation since 2016 and is currently locked in with line pressure and remains connected to XT at well F10.

The SWIFT field is located 2 km Northwest of the Magnus platform and was installed in 1995 as part of Magnus Exploitation Project. It contains a seven-slot water injection manifold of which three are currently utilised by wells F1, F2 and F3. A fourth slot is utilised for the abandoned well F4 which has had the XT subsequently removed. The Swift manifold supplies and controls flow of treated high pressure seawater into the Magnus Reservoir. Water is supplied to the manifold from the Magnus platform via a 10" flexible flowline.

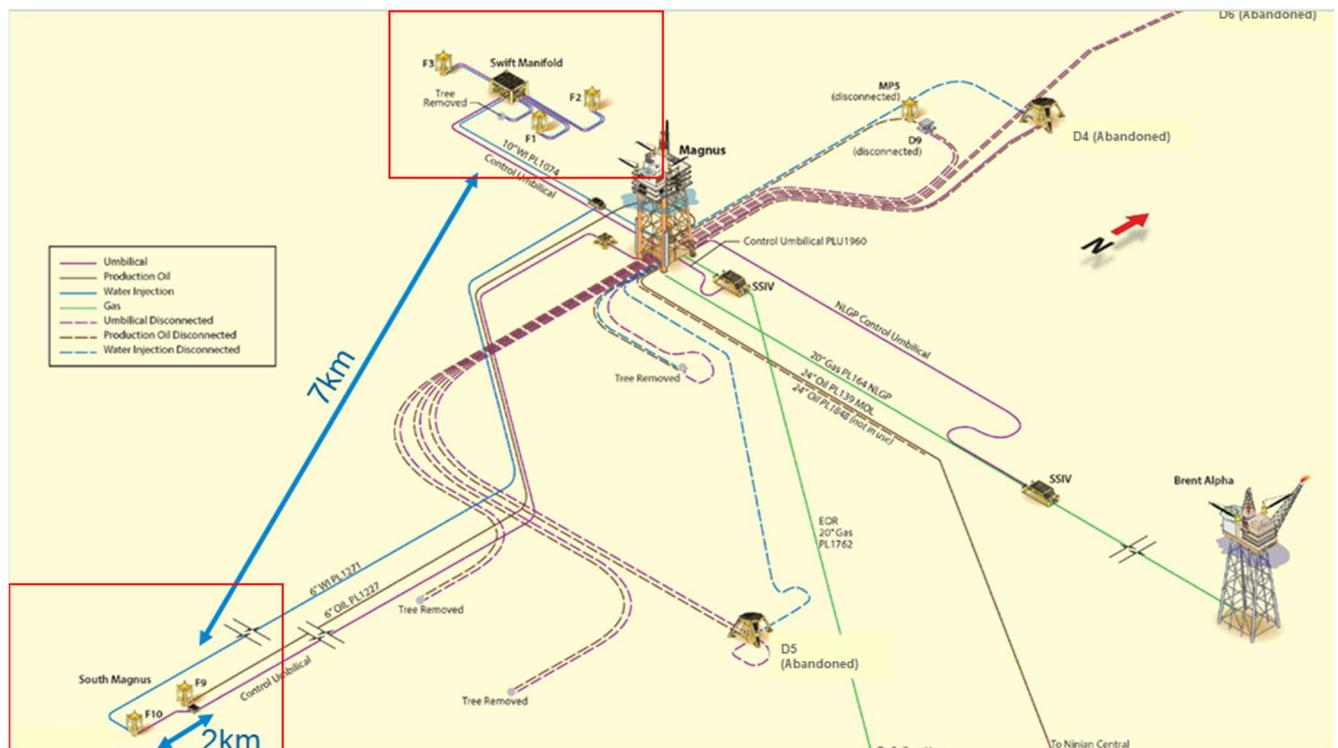


Figure 1.3.1: Location Map

1.4 Overview of Installations Being Decommissioned- South Magnus

1.4.1 Installations

Table 1.4.1: Installations being decommissioned			
Field(s):	Magnus	Production Type	Oil
Water Depth (m)	~182.7m	UKCS Block	211/12a
Licence Number	P193		
Subsea Installation(s)		Number of wells	
Number	Type	Platform	Subsea
2	Wellheads	N/A	2
2	Xmas Tree (XT)		
Drill Cuttings piles		Distance to median with Norway	Distance from nearest UK coastline
n/a		~16km	~142km NE of Shetland
Notes			
There are no piles associated with Wellheads connecting it to seabed. There is no drop down over trawl legs associated with the Wellhead system/ Guide base.			

1.5 Overview of Installations Being Decommissioned- Magnus Swift

1.5.1 Installations

Table 1.5.1: Installations being decommissioned			
Field(s):	Magnus	Production Type	Water Injection
Water Depth (m)	~188m	UKCS Block	211/12
Licence Number	P193		
Subsea Installation(s)		Number of wells	
Number	Type	Platform	Subsea
3	Wellheads	N/A	3
3	Xmas Tree (XT)		
Drill Cuttings piles		Distance to median with Norway	Distance from nearest UK coastline
n/a		~16km	~142km NE of Shetland
Notes			
There are no piles associated with Wellheads connecting it to seabed. There is no drop down over trawl legs associated with the Wellhead system/ Guide base.			

1.6 Section 29 Holders

Table 1.6.1: Installation Section 29 notice holder details- South Magnus and Magnus Swift		
Section 29 Notice Holder	Registration Number	Equity Interest
BP Exploration Operating Company Limited	00305943	100%
EnQuest Heather Limited	02748866	0%
EnQuest NNS Limited	Previously 10573715	Dissolved

1.7 Summary of Proposed Decommissioning Programme

Table 1.7.1: Summary of decommissioning programme		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
1. Installation		
Complete removal to shore for reuse, recycling or disposal.	To comply with OSPAR requirements leaving clear seabed. Removes a potential obstruction to fishing operations and maximises recycling of materials	The XT and separate wellheads will be completely removed from the seabed and recovered to shore for reuse, recycling or disposal. The wellheads are designed for hydraulic retrieval using a dedicated running/retrieval tool; however, alternative methods such as mechanical release or sectional cutting/recovery may be adopted if required.
2. Wells		
Well conductor will be cut to -3m below seabed. Decommissioning to comply with HSE "Offshore Installations and Wells Design and Construction Regulations 1996" and in accordance with the latest edition of OEUK Guidelines for the Abandonment of Wells.	Meets HSE regulatory requirements and is in accordance with OEUK and NSTA guidelines and license conditions.	A Master Application Template ('MAT') and the supporting Subsidiary Application Template ('SAT') will be submitted in support of activities carried out. Additionally, planned work will be reviewed by a well examiner then submitted to HSE for review.
3. Interdependencies		
<p>The Swift water injection flexible flowline jumpers and controls jumpers between wells F1, F2, F3 and the water injection manifold will be disconnected to facilitate XT & wellhead removal. Blind flanges and double block and bleed valves shall be installed on the XT flowlines.</p> <p>PL1271 Water injection flowline and controls umbilical will be disconnected at the South Magnus Injection well; a blind flange and double block and bleed valve will be installed on the XT flowline.</p> <p>Production flowline (PL1227) to well F9 was previously disconnected from the XT with blind flanges and a double block and bleed valves installed on the XT flowline and pipeline end</p> <p>No spools, jumpers, or manifolds will be recovered at this stage and the decommissioning of these will be included within the future Magnus decom plan to be submitted for OPRED review in due course. Any seabed disturbance from disconnection activities will be minimal and limited to the immediate area of the works.</p> <p>The pipeline ends will remain un-remediated at this stage but secured within the subsea safety zone, with final remediation undertaken during the subsequent decommissioning phase. There are concrete mattresses installed around the tie-in spool and control jumper locations at South Magnus and mattresses at Magnus Swift. These items may need to be safely repositioned to facilitate safe and efficient disconnection of spool and umbilical. They will not be recovered at this stage and the decommissioning of these will be included within the</p>		

Table 1.7.1: Summary of decommissioning programme		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
future DP to be submitted for OPRED review in due course.		

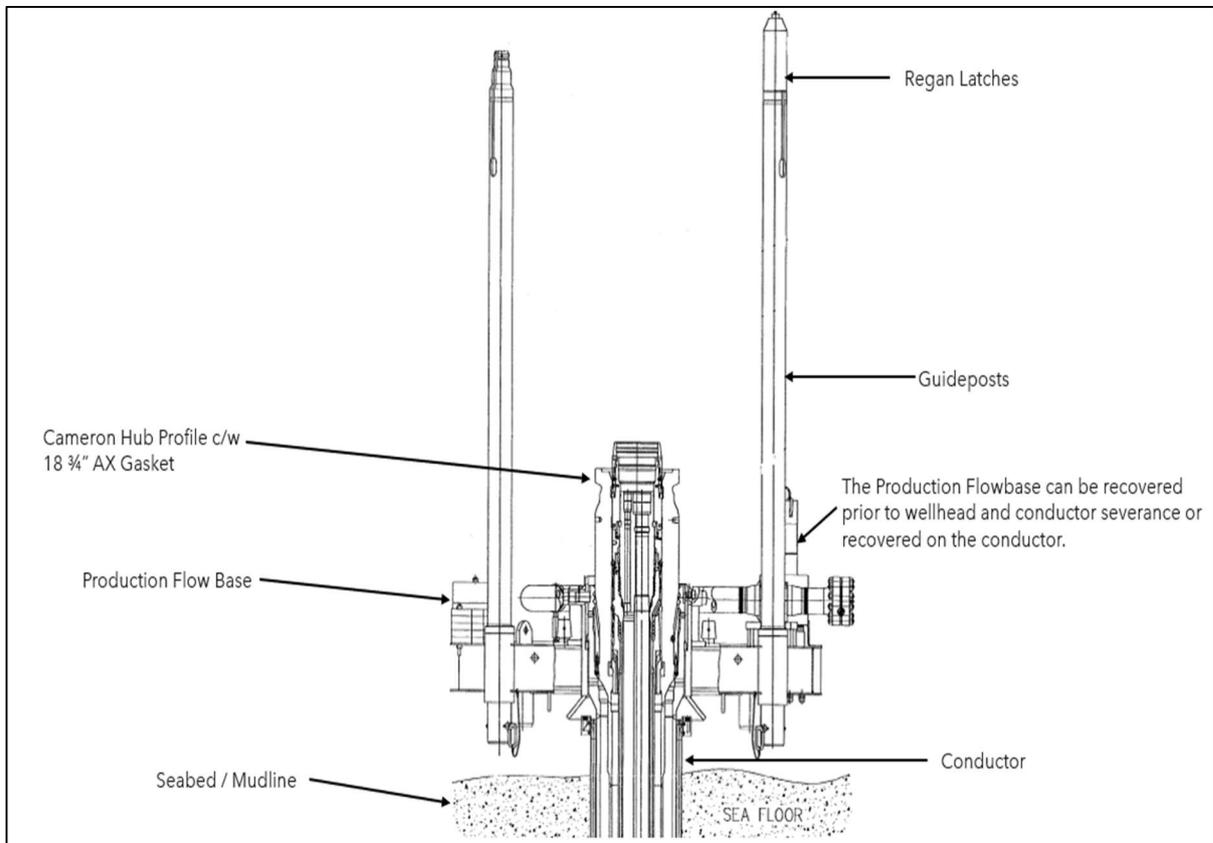


Figure 1.8.1: South Magnus and Magnus Swift Wellhead Design

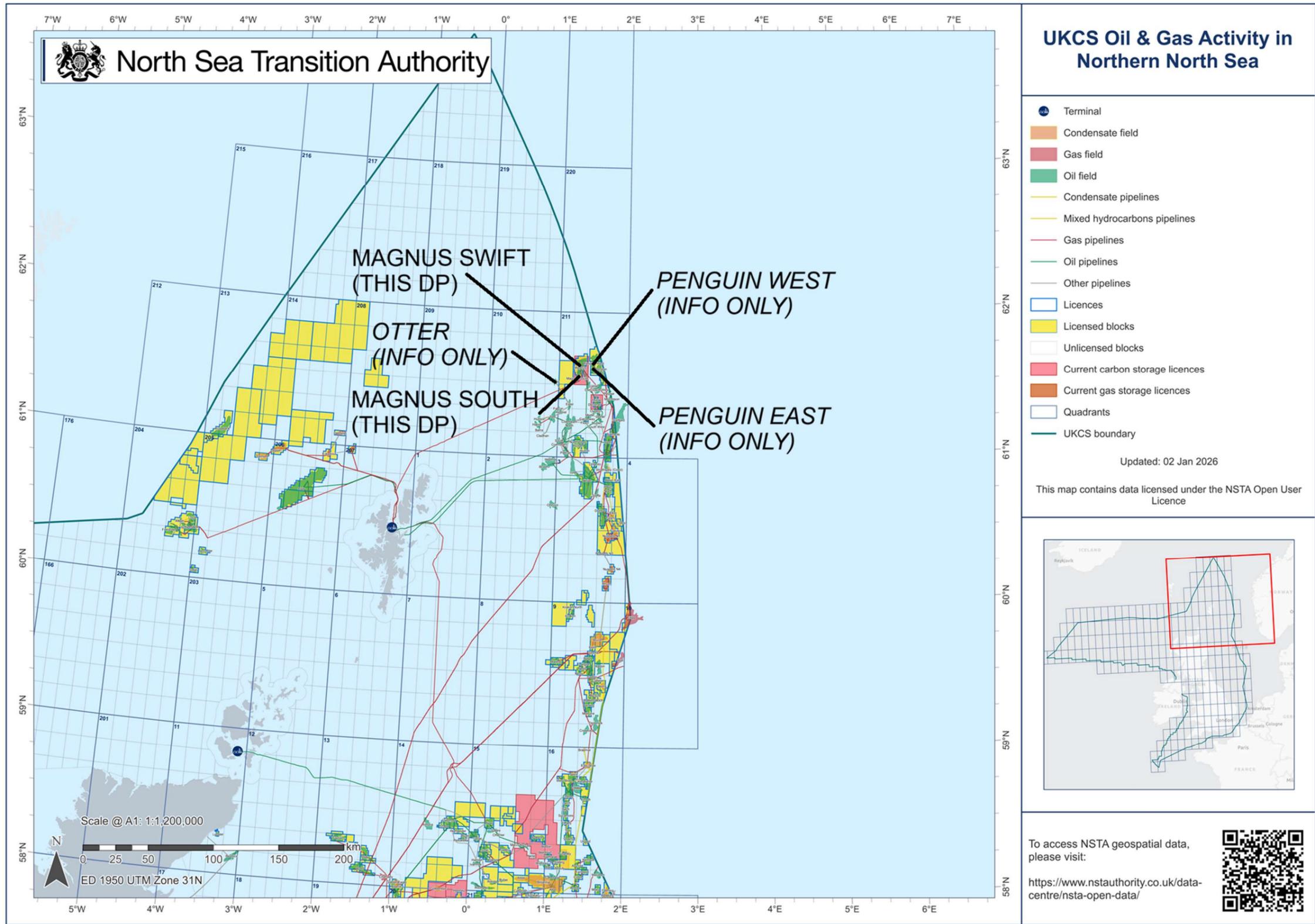


Figure 1.8.2: Field Location in United Kingdom Continental Shelf (UKCS) and Adjacent Facilities



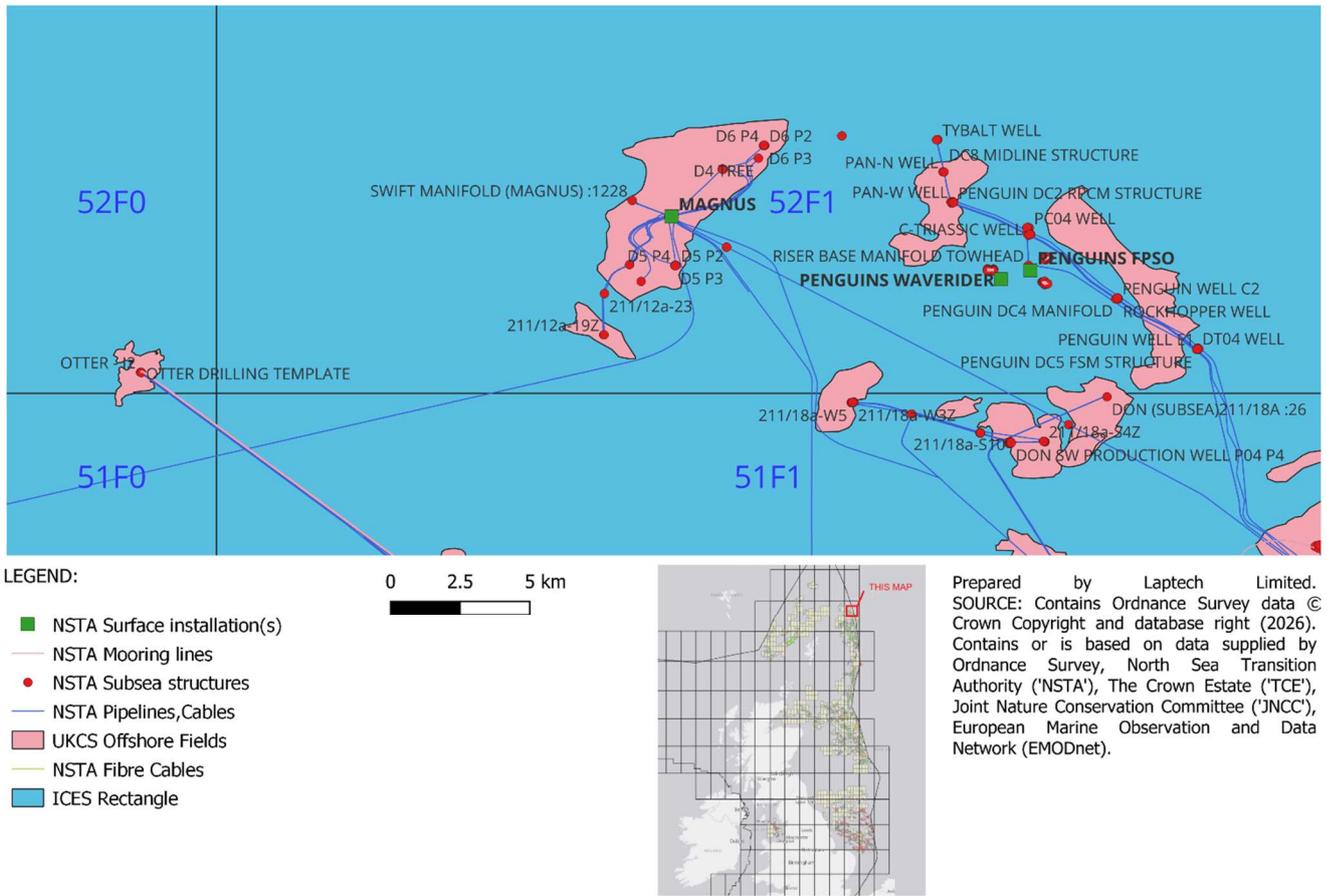


Figure 1.8.3: South Magnus and Magnus Swift - Adjacent Facilities

Table 1.8.2: Adjacent facilities to South Magnus and Magnus Swift

Owner/ Operator	Name	Type	Distance & Direction from South Magnus	Distance & Direction from Magnus Swift	Status
EnQuest Heather Limited	Magnus	Platform, FSJ	N, 9.1km	ESE, 1.8km	Operating
EnQuest Heather Limited	Magnus Swift	Manifold	N, 10.1km	n/a	Out of use
TAQA Europa B.V.	Otter Drilling Template and Manifold	Manifold	WSW, 17.1km	SW, 21.6km	Out of use
TAQA Europa B.V.	Otter 11 Well 210-15a-T4	Wellhead	WSW, 17.3km	SW, 21.8km	Out of use
TAQA Europa B.V.	Otter P1 Well 210-15a-T2	Wellhead	WSW, 17.2km	SW, 21.7km	Out of use
TAQA Europa B.V.	Otter I2 Well 210-15a-5	Wellhead	WSW, 17.2km	SW, 21.7km	Out of use
Shell U.K. Limited	Penguins FPSO	FPSO	NEE, 15.5km	E, 15km	Operating
Shell U.K. Limited	Penguin DC2 RPCM	Drill Centre	NE, 15.6km	E, 11.4km	Operating
Shell U.K. Limited	Pan NW Wellhead (211/13A-21)	Wellhead	NE, 15.6km	E, 11.5km	Operating
Shell U.K. Limited	Penguin Well A1 211/13a-12	Wellhead	NE, 15.6km	E, 11.4km	Operating
Shell U.K. Limited	Penguin Well A2 211/13A-14	Wellhead	NE, 15.6km	E, 11.4km	Operating
Shell U.K. Limited	Pan W Well 211/13A-20	Wellhead	NE, 15.6km	E, 11.4km	Operating
Shell U.K. Limited	Pan N Well 211/13A-16	Wellhead	NNE, 16.9km	NEE, 11.2km	Operating
Shell U.K. Limited	DC9 Manifold Towhead	Towhead	NNE, 18.5km	NE, 11.7km	Operating
Shell U.K. Limited	Tybalt Well 211/08-6	Wellhead	NNE, 18.6km	NE, 11.8km	Operating
Shell U.K. Limited	DC8 Midline Structure Towhead	Towhead	NNE, 16.9km	NEE, 11.3km	Operating
Shell U.K. Limited	DC6 Manifold Towhead	Manifold Towhead	NE, 15.5km	E, 11.3km	Operating
Shell U.K. Limited	C-UPDIP Well 211/13A-19	Wellhead	NE, 16.7km	E, 14.2km	Operating

Table 1.8.2: Adjacent facilities to South Magnus and Magnus Swift

Owner/ Operator	Name	Type	Distance & Direction from South Magnus	Distance & Direction from Magnus Swift	Status
Shell U.K. Limited	PC04 Well 211/13A-18	Wellhead	NE, 16.8km	E, 14.2km	Operating
Shell U.K. Limited	C-UPDIP Re-Spud Well 211/13A-19A	Wellhead	NE, 16.7km	E, 14.2km	Operating
Shell U.K. Limited	C-Trassic Well 211/13A-17	Wellhead	NE, 16.7km	E, 14.2km	Operating
Shell U.K. Limited	DC7 Manifold Towhead	Towhead	NE, 16.7km	E, 14.1km	Operating
Shell U.K. Limited	Penguin Well C3	Wellhead	NE, 16.6km	E, 14.3km	Operating
Shell U.K. Limited	Penguin Well C1	Wellhead	NE, 16.6km	E, 14.3km	Operating
Shell U.K. Limited	Penguin Well C2 211/14-6	Wellhead	NEE, 18km	E, 18.6km	Operating
Shell U.K. Limited	Penguin Well D1 211/14-5	Wellhead	NEE, 18km	E, 18.6km	Operating
Shell U.K. Limited	Penguin Rockhopper WHPS 211/14A-10	WHPS	NEE, 18km	E, 18.7km	Operating
Shell U.K. Limited	DT04 Well 211-14A-11	Wellhead	E, 20.6km	ESE, 22.7km	Operating
Shell U.K. Limited	Penguin Well E1 211/14-7	Wellhead	E, 20.7km	ESE, 22.8km	Operating
Shell U.K. Limited	Penguin Well D2 211/14-8	Wellhead	E, 20.6km	ESE, 22.8km	Operating
Shell U.K. Limited	Penguin Well D3 211/14-9	Wellhead	E, 20.6km	ESE, 22.8km	Operating
Shell U.K. Limited	Penguin D5 FSM Protection Structure	Protection Structure	E, 20.6km	ESE, 22.8km	Operating
Shell U.K. Limited	Penguin Flow Meter Protection Structure	Protection Structure	E, 20.6km	ESE, 22.8km	Operating

There are no direct impacts on adjacent facilities from the decommissioning works associated with the South Magnus and Magnus Swift infrastructure.

1.8 Industrial Implications

Well abandonment activities will be completed using a rig and / or light well intervention vessel ('LWIV'). Decommissioning work will be carried out by a rig, Dive Support Vessel ('DSV') / Construction Support Vessel ('CSV') or a combination of vessels. A survey vessel may be utilised for post-decommissioning surveying.

EnQuest has developed a contract strategy and Supply Chain Action Plan that will result in an efficient and cost-effective execution of the decommissioning works. EnQuest will seek to combine the decommissioning activities with other development or decommissioning activities to reduce mobilisation costs should the opportunity arise. The decommissioning schedule is extended to allow flexibility for when decommissioning operations are carried out and completed.

2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation: Subsea Including Stabilisation Features

Table 2.1.1: Subsea Stabilisation Features- South Magnus and Magnus Swift				
Subsea Installations Including Stabilisation Feature	Mass (Te)	Location		Comments/ Status
	Size (m)	WGS84 Decimal	WGS84 Decimal Minute	
South Magnus				
F9 Wellhead & Xmas Tree	57.27 Te	61.5395° N	61°32'22.20 N	
	5.95 x 3.68 x 3.68	1.2699° E	01°16'11.64 E	
F10 Wellhead & Xmas Tree	55.24 Te	61.5395° N	61°32'22.20 N	
	5.95 x 3.68 x 3.68	1.2699° E	01°16'11.64 E	
Magnus Swift				
F1 Wellhead & Xmas Tree	55.24 Te	61.6305° N	61°37'49.80 N	
	5.95 x 3.68 x 3.68	1.2792° E	01°16'45.12 E	
F2 Wellhead & Xmas Tree	55.24 Te	61.6305° N	61°37'49.80 N	
	5.95 x 3.68 x 3.68	1.2792° E	01°16'45.12 E	
F3 Wellhead & Xmas Tree	57.27 Te	61.6305° N	61°37'49.80 N	
	5.95 x 3.68 x 3.68	1.2792° E	01°16'45.12 E	

2.2 Wells

Table 2.2.1: Well Information			
Well ID	Designation	Status	Category of Well ¹
211/12a - F1 Swift	Water Injection	Shut In	SS-4-4-3
211/12a - F2 Swift	Water Injection	Shut In	SS-4-4-3
211/12a - F3 Swift	Water Injection	Shut In	SS-4-4-3
211/12a South Magnus F9	Water Injection	Shut in & flowline disconnected	SS-4-4-3
211/12a South Magnus F10	Oil production	Shut In	SS-4-4-3

For details of well categorisation see the latest version of the Oil & Gas UK Guidelines for the Decommissioning of Wells.

2.3 Drill Cuttings

There are no drill cutting piles associated with these facilities.

2.4 Inventory Estimates

The inventory estimates are shown in Figure 2.1 Note that the estimates do not include marine growth.

¹ The category of well is subject to change as detailed engineering progresses.

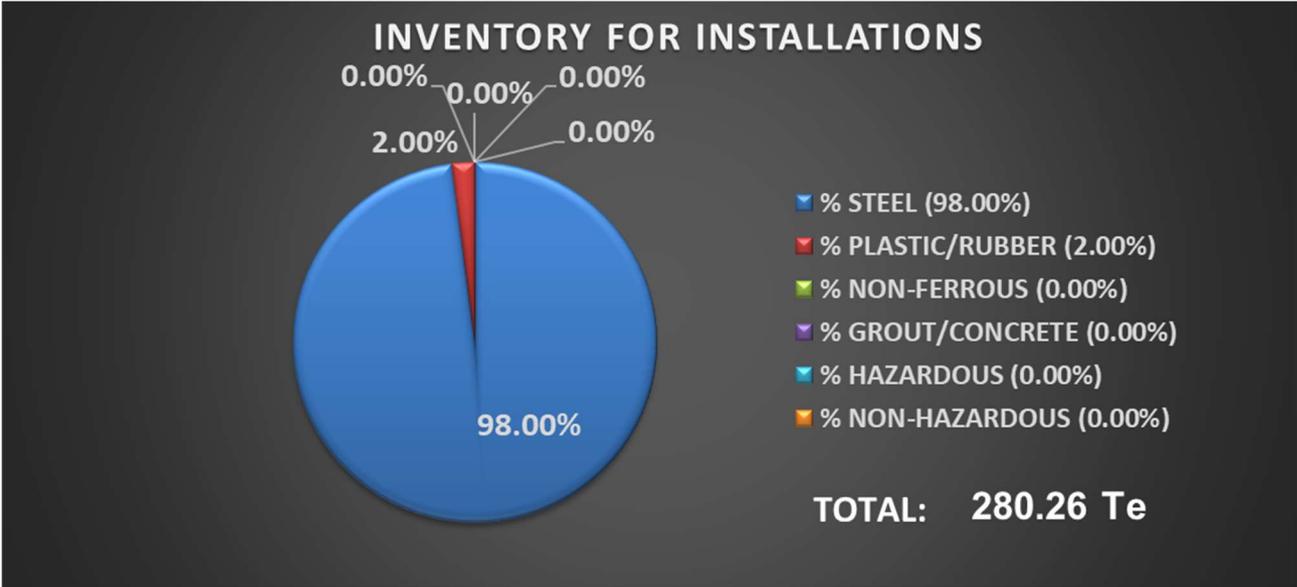


Figure 2.1: Estimated Inventories for South Magnus and Magnus Swift

3. REMOVAL AND DISPOSAL METHODS

Waste management during decommissioning will be carried out in line with the Waste Framework Directive. Priority will be given to the potential re-use of installations, which remains under active consideration as part of the preferred decommissioning options. All waste generated will be sorted by type and transported to shore at regular intervals using licensed waste contractors, ensuring full traceability. Recyclable materials, particularly steel and other metals—are expected to comprise most of the recovered inventory.

Geographic locations of potential disposal yard options may require the consideration of International Waste Shipments ('IWS'), including hazardous materials. Early engagement with the relevant waste regulatory authorities will ensure that any issues with IWS are addressed. OPRED shall be informed once the disposal yard is selected.

Materials for which no re-use or recycling opportunities are available will be tracked through to final disposal.

3.1 Subsea Installations and Stabilisation Features

Table 3.1.1: Subsea Installation and Stabilisation Features Decommissioning Options			
Subsea Installation and Stabilisation Features	Quantity	Option	Disposal Route (if applicable)
Xmas tree, Tree Cap and Flowbase.	5	Full recovery	Return to shore for reuse, recycling or disposal.
18¾" Wellhead	5	Full recovery (conductor will be cut 3m below seabed).	Return to shore for reuse, recycling or disposal.

3.2 Wells

Table 3.2.1: Well Decommissioning
The wells, as listed in Section 2.2 (Table 2.1.1) will be decommissioned in accordance with the latest versions of the Offshore Installations and Wells (Design and Construction, etc.) Regulations and OEUK Well Decommissioning Guidelines. A Master Application Template and the supporting Supplementary Application Template will be submitted in support of works carried out. An application to decommission the well will be made via the online Well Operations Notification System ('WONS') on the NSTA Energy Portal. Well decommissioning will be scheduled in accordance with the outline schedule presented in Section 6.3.

3.3 Waste Streams

Table 3.3.1: Waste Stream Management Methods	
Waste Stream	Removal and Disposal Method
Bulk liquids	Processing of any fluids or chemicals associated with decommissioning of the wells will be managed under well intervention permits. Recovery of the Wellheads may result in a small discharge of chemicals or oil during the spool disconnection which will be covered under appropriate permits. Chemical discharges associated with the umbilical disconnection will be assessed under new permits
Marine growth	Where necessary and practicable to allow access, some marine growth will be removed offshore. Remnant growth will be brought to shore and disposed of under the appropriate permit and managed in accordance with guidelines and company policies. A conservative value of 1Te marine growth (60mm thickness covering all steel surfaces) has been estimated.
NORM	Although NORM is not expected, tests will be performed offshore, and any NORM

Table 3.3.1: Waste Stream Management Methods	
Waste Stream	Removal and Disposal Method
	encountered will be dealt with and disposed of in accordance with guidelines and company policies and under the appropriate permit and managed in accordance with guidelines and company policies.
Asbestos	No asbestos is expected, however any such material found will be dealt with and disposed of in accordance with guidelines and company policies.
Other hazardous wastes	Will be recovered to shore and disposed of according to guidelines and company policies and under appropriate permit.
Onshore Dismantling sites	Appropriate licensed sites will be selected. The dismantling site must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver reuse and recycling options.

Table 3.3.2: Inventory Disposition			
Inventory	Total Inventory (Te)	Planned Tonnage to shore	Planned left in-situ
INSTALLATIONS			
South Magnus	112.51	112.51	0
Magnus Swift	167.75	167.75	0
Sub-total:	280.26	280.26	0
Notes: 1. Material quantities exclude marine growth.			

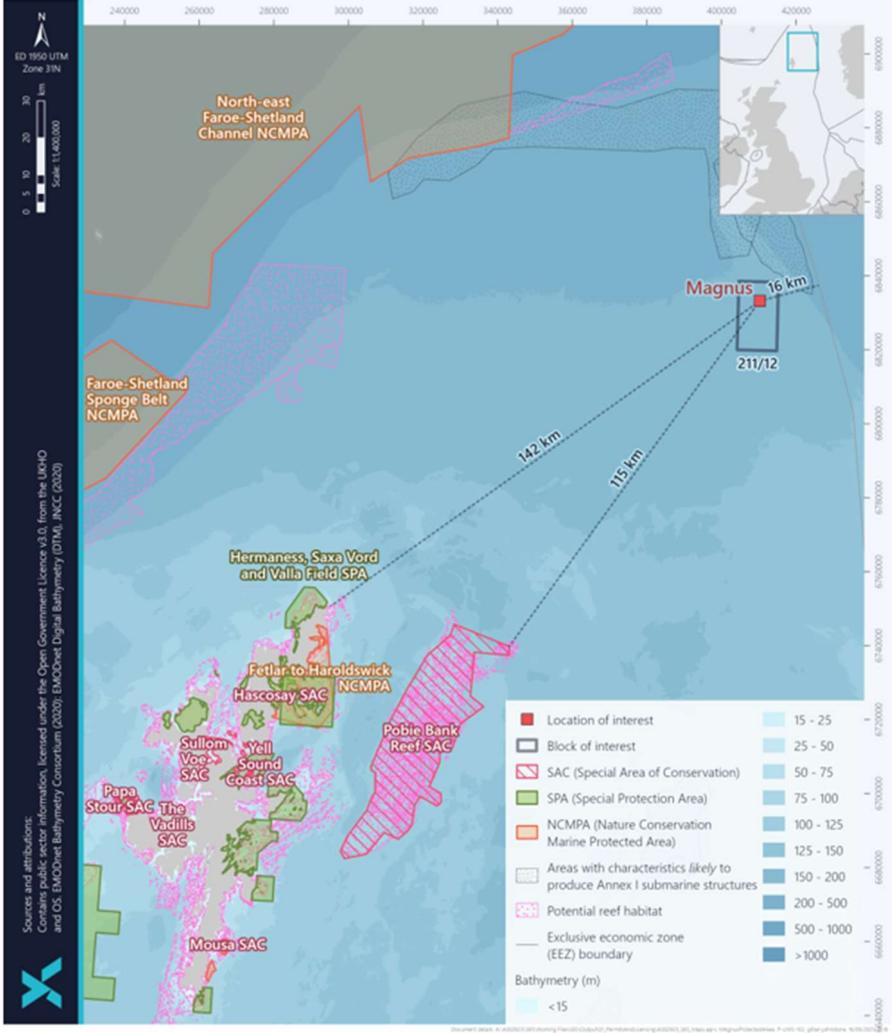
Table 3.3.3: Reuse, Recycle & Disposal Aspirations for Recovered Material			
Inventory	Reuse	Recycle	Disposal (e.g. landfill)
Subsea Installation	<2%	>98%	<2%

All recovered material will be transported onshore for reuse, recycling or disposal. It is not possible to predict the market for reusable materials with any confidence, so the figures presented here are aspirational.

4. ENVIRONMENTAL APPRAISAL

4.1 Environmental Sensitivities (Summary)

The environmental sensitivities in the area in which the decommissioning activities will take place are summarised in Table 4.1.1.

Table 4.1.1: Environmental Sensitivities ²	
Environmental Receptor	Main Features
<p>Location</p>	<p>The South Magnus and Magnus Swift wells are located in Block 211/12a, 142km to the northeast of the UK (Shetland), and 16km from the UK/Norway Median line, in water depths of ~183m.</p> 
<p>Seabed</p>	<p>According to the British Geological Survey (BGS) sediment data available on</p>

² It should be noted that Fugro had tried to conduct a site survey between December 2025 – January 2026. However, after 7 weeks of bad weather the survey was postponed indefinitely. A gap analysis and habitat assessment have been completed and are expected to become available in Q2 2026. Once data has been compiled into a report, the baseline will be used in the relevant permits. Meanwhile, the surveys listed above are deemed suitable references for representing the environment surrounding the field and publicly available information was also used to inform this section.

Table 4.1.1: Environmental Sensitivities²

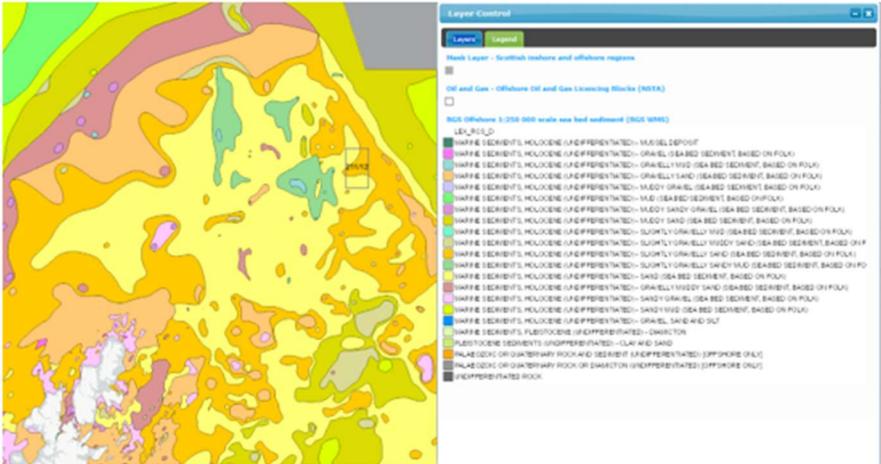
Environmental Receptor	Main Features
	<p>National Marine Plan interactive (NMPi) (2025), sediments within the Magnus platform region comprise sand and slightly gravelly sand with broad habitats within the area classified as European Union Nature Information System (EUNIS) biotope complex MD52 “Atlantic offshore circalittoral sand” (EMODnet, 2025). The available Gardline (2007) survey (as reported in Oil and Gas UK, 2019) data shows fines (silt and clay) accounted for 4 – 19% of materials with an average of 9.5%. Of the 35 stations sampled, 11 stations recorded >10% fines (Oil and Gas UK, 2019). These values were lower in the Gardline (2018a) survey, which recorded an average fines percentage of 2.2%, with values ranging from 0.4 – 3.0% of materials across the six sampling stations.</p> <p>The Magnus platform is located in close proximity to South Magnus (7km) and Magnus Swift (2km) and therefore the Magnus field data is considered indicative of the wider area. Submarine structures are formed from methane derived authigenic carbonate which have been deposited through a process of precipitation during the oxidation of methane gas (JNCC, 2023). These structures provide a habitat for marine fauna that are usually associated with rocky reef and very specific chemosynthetic organisms which feed off both methane and its by-product, hydrogen sulphide. Annex I Reefs are also known to occur in this area of the NNS, as listed under the European Union ('EU') Habitats Directive (92/43/EEC) (JNCC, 2016). Bedrock and stony reefs are both types of rocky reef. These occur where the bedrock or stable boulders and cobbles arise from the surrounding seabed creating a habitat that is colonised by many different marine animals and plants. Rocky reefs can be very variable in terms of both their structure and the communities that they support. They provide a home to many species such as corals, sponges and sea squirts as well as giving shelter to fish and crustaceans such as lobsters and crabs (JNCC, 2016). Given the sand and slightly gravelly sand sediments present within the area, this habitat is unlikely to be present at the Magnus platform, as it is usually associated with coarser, mixed sediments. In addition, no stony reef habitat was found during the Gardline (2018a; 2018b) surveys.</p>  <p>The environmental baseline report for the Dunlin bypass project used six video targets and co-located sampling stations to gather data with MAG10 station being the closest station to the Magnus platform (3.2 km south-east from the Magnus platform). The survey used a Drop-Down Camera (DDC) at all six stations along with day grab samples (Gardline 2018a).</p>

Table 4.1.1: Environmental Sensitivities²

Environmental Receptor	Main Features
	<p>Generally, the seabed gradient deepened towards the north of the proposed site. Seabed sediments, supported by seabed imagery observations, were interpreted to predominantly comprise sand along the proposed route. (Gardline, 2018a). The geophysical interpretation of the seabed in the Gardline (2018b) survey was supported by seabed imagery and visual description grab samples described sediments as comprising sand with occasional gravel and shell fragments, with high reflectivity areas consisting of gravel, cobbles and occasional boulders (Gardline, 2018b). Fine sands were also present within each sample, making up between 12.7% and 25.6% at each station (Gardline, 2018b). Sediments observed in both surveys were also recorded during the 2007 Gardline survey (Oil and Gas UK, 2019).</p> <p>Total Hydrocarbon Concentration (THC) in sediment ranged from 1.9 – 145.6 µg/g with an average of 14.28 µg/g (Oil and Gas UK, 2019). All but one station recorded a THC <50 µg/g, with 31 of the 35 survey stations recording concentrations lower than the mean concentration for the ESB, which is 26.1 µg/g as reported in DECC (2016). Concentrations decrease with distance from the Magnus platform (Oil and Gas UK, 2019); the higher concentrations are likely to be attributable to the cuttings pile located beneath the platform as a large proportion of drilling activities occurred during the 1980s and early 1990s a period during which it was possible to discharge Oil-Based Mud (OBM) contaminated cuttings to sea.</p>
<p>Climate, oceanography and hydrography</p>	<p>The annual mean wave height in the NNS region follows a gradient increasing from the southern point in the Fladen/Witch Ground to the northern area of the ESB. In the south, the mean wave height ranges from 2.11 – 2.40 m whilst in the north it ranges from 2.41 – 3.00 m (NMPi, 2025). McBreen <i>et al.</i> (2011) shows wave energy at the seabed to range between 'low' (less than 0.21 N/m²) and 'moderate' (0.21 – 1.2 N/m²) for most of the NNS region, increasing to 'high' (more than 12 N/m²) close to shore. The wave height within the Magnus field ranges from 2.71 – 3.00 m and the annual mean wave power ranges between 42.1 – 48.0 kW/m (NMPi, 2025).</p>
<p>Fish</p>	<p>Over 330 species of fish have been recorded on the UKCS and the deep-water regions which lie to the North and West of Scotland are home to many more (BEIS, 2022). Fish and shellfish populations may be vulnerable to impacts from offshore installations such as hydrocarbon pollution and exposure to aqueous effluents, especially during the egg and juvenile stages of their lifecycles (Bakke <i>et al.</i>, 2013).</p> <p>South Magnus and Magnus Swift wells are located in International Council for the Exploration of the Sea (ICES) rectangle 52F1, in an area of spawning and nursery grounds for several commercially important species. Information on spawning and nursery periods for these different species, including peak spawning times.</p> <p>ICES rectangle 52F1 is located within nursery grounds for Norway pout <i>Trisopterus esmarkii</i> and blue whiting <i>Micromesistius poutassou</i>. Blue whiting features high intensity nursery grounds as per Ellis <i>et al.</i> (2012). The site also falls within the spawning grounds for haddock <i>Melanogrammus aeglefinus</i> and saithe <i>Pollachius virens</i> (Coull <i>et al.</i>, 1998; Ellis <i>et al.</i>, 2012). Of the species listed above the following are also listed as Scottish PMF: blue whiting, Norway pout and saithe (NatureScot, 2020). Findings from González-Irusta and Wright (2016) as reported on the NMPi tool (2025), shows that the Magnus field is located in an area of “unfavourable” cod spawning. Haddock is listed as vulnerable on the IUCN Red List (IUCN, 2025).</p>

Table 4.1.1: Environmental Sensitivities²

Environmental Receptor	Main Features
<p>Marine Mammals</p>	<p>The NNS and CNS have a moderate to high diversity and density of cetaceans, with a general trend of increasing diversity and abundance with increasing latitude. Harbour porpoise <i>Phocoena phocoena</i> and white-beaked dolphin <i>Lagenorhynchus albirostris</i> are the most widespread and frequently encountered species, occurring regularly throughout most of the year. Minke whales <i>Balaenoptera acutorostrata</i> are regularly recorded as frequent seasonal visitors.</p> <p>Coastal waters of the Moray Firth and the East coast of Scotland support an important population of bottlenose dolphins <i>Tursiops truncatus</i>, while killer whales <i>Orcinus orca</i> are sighted with increasing frequency towards the North of the area. Atlantic white-sided dolphin <i>Lagenorhynchus acutus</i>, Risso's dolphin <i>Grampus griseus</i> and long-finned pilot whale <i>Globicephala melas</i> can be considered occasional visitors, particularly in the North of the area (BEIS, 2022).</p> <p>Atlantic wide-sided dolphin, bottlenose dolphin, harbour porpoise, killer whale, long-finned pilot whale and minke whale have been recorded in the vicinity of the Magnus platform (Reid <i>et al.</i>, 2003; NMPi, 2025). All of the sightings occur between March to July. All cetacean species recorded in the area are listed as European Protected Species ('EPS') under Annex IV of the Habitats Directive and are listed as PMFs (NatureScot, 2020). Harbour porpoise and bottlenose dolphin are also currently listed under Annex II of the Habitats Directive.</p> <p>The Small Cetaceans in European Atlantic waters and the North Sea (SCANS) IV report identified the density of cetaceans per km² as part of a survey in summer 2016. The SCANS-IV survey aimed to provide a large-scale estimate of cetacean abundance in European waters. The Magnus field is located in SCANS-IV Block NS-E.</p> <p>Within Block NS-E, minke whale, harbour porpoise and white sided dolphin were recorded respectively at densities of 0.0121 animals / km², 0.5156 animals / km² and 0.0146 animals / km². Additionally, during surveys conducted by Gilles <i>et al.</i> (2023), risso's dolphin and white-beaked dolphin were recorded at 0.0702 animals / km² and 0.1775 animals / km², however, these were not observed during the Reid <i>et al.</i> (2003) surveys. Furthermore, killer whale and long-finned pilot whale were not recorded during the SCAN-IV survey (Gilles <i>et al.</i>, 2023).</p>
<p>Seabirds</p>	<p>According to the density maps provided in Kober <i>et al.</i> (2010), the following species have been recorded within the Magnus platform area: Northern fulmar, sooty shearwater <i>Puffinus griseus</i>, European storm-petrel <i>Hydrobates pelagicus</i>, Northern gannet, Arctic skua <i>Stercorarius parasiticus</i>, long-tailed skua <i>Stercorarius longicaudus</i>, great skua <i>Stercorarius skua</i>, black-legged kittiwake, 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>, glaucous gull <i>Larus hyperboreus</i>, common guillemot, razorbill, little auk <i>Alle alle</i> and Atlantic puffin.</p> <p>The Magnus platform is located in close proximity to South Magnus (7km) and Magnus Swift (2km) and therefore the Magnus field data is considered indicative of the wider area.</p> <p>Seabird sensitivity in the region of the South Magnus and Magnus Swift is predominantly low, with periods of medium sensitivity in March and high sensitivity in January, November, and December. There is no data available for October. In addition, the proposed decommissioning works is located approximately 142 km from the nearest UK coast and are therefore remote</p>

Table 4.1.1: Environmental Sensitivities²

Environmental Receptor	Main Features
	from sensitive seabird breeding areas on the coast.
<p>Conservation</p>	<p>There are no offshore conservation sites within 40 km of South Magnus and Magnus Swift. The closest Special Area of Conservation ('SAC'), as designated under the Habitats Directive, is the Pobie Bank Reef SAC, located 106 km to the South Magnus (F9 well) and 115km south-west of Magnus Swift (F2 well). The site is designated due to the present of the Annex I Habitats bedrock and stony reefs (JNCC, 2024b). The Magnus platform is located in the vicinity of an area that potentially supports Annex I stony reef; however, given the sand and slightly gravelly sand sediments present, such reefs are not expected to occur within the vicinity of the platform.</p> <p>The closest Nature Conservation Marine Protected Areas ('NCMPA') is the North-East Faroe-Shetland Channel located 79 km north-west of Magnus Swift (F2 well) and 82km north-west of South Magnus (F10 well). This site is designated for deep-sea sponge aggregations, offshore deep-sea muds, offshore subtidal sands and gravels to name a few (JNCC, 2025).</p> <p>The PMF habitat 'offshore subtidal sands and gravels' has been recorded within the area. This is the preferred habitat for ocean quahog, a PMF and OSPAR (2008) 'threatened and/or declining' habitat. The species was recorded in very low numbers during the 2007 Magnus sites survey (Gardline, 2007 – as cited in Oil and Gas UK, 2019). Additionally, hard and soft substrate sponge communities were observed across majority of the Magnus area, however, were not present in sufficient densities to constitute a 'Sponge Dominated Habitat' as defined by OSPAR (2010b) and JNCC (Gardline, 2018b).</p> <p>No other habitats of specific conservation significance (e.g., as highlighted in the OSPAR list of threatened/declining species (2008) or on the Scottish list of PMFs) have been identified by survey work in the area (Gardline, 2007 (as reported in Oil and Gas UK, 2019); 2018a; 2018b).</p>
<p>Fisheries</p>	<p>According to the Marine Directorate (2024), ICES Rectangle 52F1 is primarily targeted for demersal species, contributing 99.9% of the live-weight and 99.9% of value. Shellfish contributed <1% of the live weight and total value in 2023. To put landings into context, a total of 545,648 tonnes with a value of £800,550,253 was landed in the UK in 2023 (Marine Directorate, 2024). The average tonnes and value landed per ICES rectangle in 2023, was 3,118 tonnes and £4,574,573 respectively, the ICES rectangle 52F1 catch was below average for landings and below average for value when compared to overall UKCS. The ICES rectangle 52F1 presents a relatively low contribution comprising approximately 0.04% of the live weight and 0.04% of the value (Marine Directorate, 2024).</p> <p>Fishing intensity data from 2010 – 2020 for bottom trawls indicates that fishing intensity within the area is an average of 2 hours to 1 day per month for ICES rectangle 52F1 (NMPi, 2025). No data on fishing intensity for Norway lobster and crustaceans with bottom trawls or with dredges is available for Block 211/12 (NMPi, 2025).</p>
<p>Other users of the sea</p>	<p>The Magnus field is in an area that experiences low shipping intensity (NSTA, 2022a). Additionally, the vessel density based on the Automatic Identification System (AIS) in the region of the Magnus field is approximately 21.8 hours per km² between 2017 – 2023 (EMODnet, 2025).</p> <p>The nearest submarine cable to the proposed area of operations is the CANTAT Faroese telecommunications cable and this is located 55 km from</p>

Table 4.1.1: Environmental Sensitivities ²	
Environmental Receptor	Main Features
	<p>the Magnus field (KIS-ORCA, 2025).</p> <p>There are no renewable activities in the vicinity of the South Magnus and Magnus Swift wells. The nearest tidal area is the Bluemull Sound which is located approximately 160 km from the Magnus Platform (NSTA, 2025).</p> <p>The Magnus platform is located within the Sectoral Marine Plan for Offshore Wind for Innovation and Targeted Oil and Gas (INTOG) lease area NE-b (NMPi, 2025). The closest ScotWind lease area is the ESB Asset Development site, located over 130 km south-east of Magnus (NSTA, 2025).</p> <p>There are several wrecks within 20 km of the Magnus Platform – one located 9.38 km North Northeast, and there are 10 further unidentified wrecks – one located 0.2 km East Southeast and the next closest 1.6 km west south-west. There are no known Historic Marine Protected Areas (HMPAs) within Block 211/12 (NMPi, 2025).</p> <p>There are no active aquaculture or shellfish protected waters in the vicinity of the South Magnus and Magnus Swift wells. The closest active aquaculture site is located along the East coast of Shetland, approximately 149 km from the Magnus platform (NMPi, 2025).</p> <p>The Magnus platform is in the Carbon Dioxide Appraisal and Carbon Storage Licences (CS Licences) area CS013. This license is held by EnQuest Carbon Capture and Storage ('CCS') Ltd (NSTA, 2025b).</p>

4.2 Potential Environmental Impacts and Their Management

The proposed activities were considered together with their potential interactions with the environment and legislative and policy requirements. The activity/environmental interactions were identified using a range of sources, including regional and site-specific environmental data, engineering descriptions and drawings, and typical rig and vessel specifications. The potential impacts identified are based upon the removal of the Wellheads/XT, and potential impacts associated with the wider decommissioning of the Magnus field will be addressed in an Environmental Assessment supporting a separate Decommissioning Programme. The potential impacts of these operations will be assessed in the MAT EAJ that will be submitted prior to the work commencing. A summary of the actual and related potential impacts, and control measures, is detailed in Table 4.2.1. These impacts are expected to be short-term, localised and of low significance

Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management																
<p>Seabed disturbance and deposits</p>	<p>Subject to the final decommissioning approach of the Wellheads and associated infrastructure, the plan is to disconnect the remaining flow lines and remove the Xmas trees either with the light well intervention vessel (LWIV) or the rig. Then after abandoning the wells the Wellhead and conductor complete with flow base will be removed by the rig or if this is not feasible, it would be removed following well plug and abandonment using a CSV or DSV. The disconnection of the spool and umbilical jumper may initially require the repositioning of up to 24 concrete grout bags (dimensions 1mx1m). These grout bags would not be recovered at this time but left on the seabed to be recovered as part of the wider Magnus field decommissioning. It is estimated that this would generate up to 0.000024km² of seabed disturbance immediately above and adjacent to the spools/jumpers.</p> <p>There are mattresses that would need to be relocated to support the disconnection scope. There are approximately 2 x mattresses (6m x 3m x 0.15m) at each location (only 4 out of 5 wells require disconnection work). It is estimated that this would generate up to 0.000144km² of seabed disturbance immediately above and adjacent to the spools/jumpers.</p> <p>The Wellhead is conductor mounted such there are no piles connecting to the seafloor that would need to be cut, and no excavation will take place. The Wellhead does not have any drop-down leg extensions deployed therefore there is no penetration into the seabed.</p> <p>A rig will be used to remove the Wellhead, its anchors would generate a further 0.000193km² of disturbance, which would in any case occur during well plug and abandonment. Any disturbance from final well abandonment, i.e. the removal of the conductor to 3m below seabed, would be within the footprint of disturbance calculated for the Wellhead removal.</p> <p>The indirect area of impact was calculated as twice the direct area to account for a worst-case scenario.</p> <table border="1" data-bbox="450 951 1662 1184"> <thead> <tr> <th data-bbox="450 951 752 1050">Activity</th> <th data-bbox="752 951 1055 1050">Area of temporary disturbance (km²)</th> <th data-bbox="1055 951 1357 1050">Area of permanent seabed disturbance (km²)</th> <th data-bbox="1357 951 1662 1050">Area of Indirect Disturbance (km²)</th> </tr> </thead> <tbody> <tr> <td colspan="4" data-bbox="450 1050 1662 1098" style="text-align: center;">Wellhead³ Removal</td> </tr> <tr> <td data-bbox="450 1098 752 1139">Grout Bags relocation</td> <td data-bbox="752 1098 1055 1139">0.000024</td> <td data-bbox="1055 1098 1357 1139">-</td> <td data-bbox="1357 1098 1662 1139">0.000048</td> </tr> <tr> <td data-bbox="450 1139 752 1184">Wellhead removal</td> <td data-bbox="752 1139 1055 1184">0.00010948</td> <td data-bbox="1055 1139 1357 1184">-</td> <td data-bbox="1357 1139 1662 1184">0.00021896</td> </tr> </tbody> </table>	Activity	Area of temporary disturbance (km ²)	Area of permanent seabed disturbance (km ²)	Area of Indirect Disturbance (km ²)	Wellhead³ Removal				Grout Bags relocation	0.000024	-	0.000048	Wellhead removal	0.00010948	-	0.00021896	<p>Seabed disturbance will be assessed further in the environmental permits submitted to OPRED in advance of any works taking place. No explosives will be used and seabed disturbance will be minimized as far as possible. Vessels will be positioned using dynamic positioning wherever possible; however, the rig will use anchors for positioning. An as-left survey will be undertaken following completion of the Wellhead removal and well decommissioning. A pre-decommissioning survey, and a post-decommissioning debris survey and seabed verification, will be undertaken as part of the full Magnus area decommissioning.</p>
Activity	Area of temporary disturbance (km ²)	Area of permanent seabed disturbance (km ²)	Area of Indirect Disturbance (km ²)															
Wellhead³ Removal																		
Grout Bags relocation	0.000024	-	0.000048															
Wellhead removal	0.00010948	-	0.00021896															

³ This is based on all 5 wellheads structures, across South Magnus and Magnus Swift



Table 4.2.1: Environmental Impact Assessment					
Main Impacts	Impact Assessment				Management
	Mattress relocation	0.000144	-	0.000288	
	Rig Placement				
	Anchoring for Rig	0.000193	-	0.000386	
	Total				
	Total for all activities	0.00141144			
	<p>Notes: The area of disturbance from the grout bags and mattresses has been included to account for their lifting and replacement adjacent to the spool and umbilical jumper. Any disturbance related to the disconnection activities would be within the area covered by the grout bag relocation, or the removal of the Wellheads, and the buffers relating to these.</p> <p>While some marine growth may be removed offshore to allow access, the majority of the material will not be removed or deposited on the seabed. The amount of marine growth on the structure has been conservatively estimated to be 1Te, and it is anticipated that a maximum of 0.5Te could be removed to allow access. The marine growth is mainly plumose anemones and hydroids – all soft growth which will be dispersed across 4 locations.</p> <p>The majority of the seabed disturbance associated with the recovery of the Wellheads, and well decommissioning is temporary in nature and recovery would be expected to be rapid in view of the prevailing high energy seabed environment. Previous surveys have not indicated the presence of habitats of conservation concern, and the wells are some distance from the nearest conservation sites designated for seabed habitats (Pobie bank Reef SAC, located 15km south east of Magnus field; North-East Faroe-Shetland Chanel is the closest Nature Conservation Marine Protected Area (NC MPA) which is 80km north east of Magnus field).</p> <p>The potential worst-case area of seabed affected by the proposed operations amounts to approximately 0.00141144 km². The area is relatively small, representing a minute fraction of the sediments available in this regio of the North Sea. South Magnus and Magnus Swift is typical of the wider area; characterised by sand and slightly gravelly sand. It is expected that seabed deposits will cause mortality of some individuals, impacts to the benthic communities on a large scale are not expected.</p>				
Physical presence -	The rig, DSV/CSV vessel will create temporary and short-term increment to other vessels in the area. Fisheries activity in the area is moderate to low, and shipping density across Block 211/2 is low. The				The rig and vessels used as part of the subsea

Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management																																																																
<p>Other users of the sea</p>	<p>operations will be carried out within the existing 500m subsea safety zone at South Magnus and Magnus Swift drill centres, and the operations are within an area of existing oil and gas associated shipping movements and decommissioning will represent a small increment to existing traffic. Effects on the activity of other users of the sea is not likely.</p>	<p>decommissioning works will be located within the existing 500m subsea safety zone. A consent to locate application will be submitted for the rig, and all appropriate notifications to mariners will be made for the rig and CSV/DSV (if required).</p>																																																																
<p>Energy use and atmospheric emissions</p>	<p>Atmospheric emissions will be generated by a rig, anticipated to be the Well-Safe Defender, and a CSV or DSV. These have the potential to impact local air quality or contribute to global atmospheric greenhouse gas loading (e.g. see BEIS 2022). The following emissions have been estimated based on the metrics in DECC (2008) and Forster et al. (2021), and a range of assumptions on rig and other vessel timing. Should a rig be used to complete the subsea operations and well abandonment, the total fuel use associated with the decommissioning is estimated to be ~1,580 tonnes of diesel (includes rig, supply and support vessels) and 25.2 tonnes of diesel for helicopter transfers. Estimated atmospheric emissions are as follows:</p> <table border="1" data-bbox="450 804 1599 1185"> <thead> <tr> <th></th> <th>CO₂</th> <th>N₂O</th> <th>CH₄</th> <th>SO₂</th> <th>CO</th> <th>NO_x</th> <th>VOC</th> </tr> </thead> <tbody> <tr> <td>Emissions Factor (diesel)</td> <td>3.22</td> <td>0.00022</td> <td>0.00015</td> <td>0.004</td> <td>0.0157</td> <td>0.0594</td> <td>0.002</td> </tr> <tr> <td>Total Mass ((tonnes)</td> <td>5,087.6</td> <td>0.3476</td> <td>0.237</td> <td>6.32</td> <td>24.806</td> <td>93.852</td> <td>3.16</td> </tr> <tr> <td>Emissions Factor (Heli fuel)</td> <td>3.15</td> <td>0.0001</td> <td>0.0004</td> <td>0.0009</td> <td>0.0095</td> <td>0.012</td> <td>0.0031</td> </tr> <tr> <td>Total Mass (tonnes)</td> <td>80.325</td> <td>0.00252</td> <td>0.1008</td> <td>0.02268</td> <td>0.2394</td> <td>0.3024</td> <td>0.07812</td> </tr> <tr> <td>GWP</td> <td>1</td> <td>273</td> <td>29.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>CO₂eq. Emissions (tonnes)</td> <td>5,167.93</td> <td>95.583</td> <td>10.066</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Total CO₂eq. Emissions (tonnes)</td> <td colspan="7">5,167.93</td> </tr> </tbody> </table> <p>Notes: fuel use assumptions: rig, 100 days at 12t/d; Supply Vessel, two trips per week totalling ~28 days of time at 10t/d; ERRV. 100 days at 1t/d; helicopter three trips per week at 0.6t/trip of Heli fuel (roughly 42 flights).</p>		CO ₂	N ₂ O	CH ₄	SO ₂	CO	NO _x	VOC	Emissions Factor (diesel)	3.22	0.00022	0.00015	0.004	0.0157	0.0594	0.002	Total Mass ((tonnes)	5,087.6	0.3476	0.237	6.32	24.806	93.852	3.16	Emissions Factor (Heli fuel)	3.15	0.0001	0.0004	0.0009	0.0095	0.012	0.0031	Total Mass (tonnes)	80.325	0.00252	0.1008	0.02268	0.2394	0.3024	0.07812	GWP	1	273	29.8	-	-	-	-	CO ₂ eq. Emissions (tonnes)	5,167.93	95.583	10.066	-	-	-	-	Total CO ₂ eq. Emissions (tonnes)	5,167.93							<p>The scheduling of works will, as far as possible, seek to minimise time and emissions through synergies with wider programmes of work. Vessels will be managed in accordance with EnQuest’s Marine Assurance Standard and will be managed such that durations are minimised, and onboard operational practices address fuel efficiency. It is anticipated that emissions will be negligible, however the impacts will be further assessed in the environmental permits submitted to OPRED.</p>
	CO ₂	N ₂ O	CH ₄	SO ₂	CO	NO _x	VOC																																																											
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Total Mass (tonnes)	80.325	0.00252	0.1008	0.02268	0.2394	0.3024	0.07812																																																											
GWP	1	273	29.8	-	-	-	-																																																											
CO ₂ eq. Emissions (tonnes)	5,167.93	95.583	10.066	-	-	-	-																																																											
Total CO ₂ eq. Emissions (tonnes)	5,167.93																																																																	



Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management																																																
	<p>For the disconnection of the spool/umbilical and in the event that a CSV or DSV is used to complete the XT removal (taking a total of 60 days and 17t/d), this would result in the use of an estimated to be 1,020 tonnes of diesel.</p> <table border="1"> <thead> <tr> <th></th> <th>CO₂</th> <th>N₂O</th> <th>CH₄</th> <th>SO₂</th> <th>CO</th> <th>NO_x</th> <th>VOC</th> </tr> </thead> <tbody> <tr> <td>Emissions Factor (diesel)</td> <td>3.22</td> <td>0.00022</td> <td>0.00015</td> <td>0.004</td> <td>0.0157</td> <td>0.0594</td> <td>0.002</td> </tr> <tr> <td>Total Mass (tonnes)</td> <td>3,284.4</td> <td>0.2244</td> <td>0.153</td> <td>4.08</td> <td>16.014</td> <td>60.588</td> <td>2.04</td> </tr> <tr> <td>GWP</td> <td>1</td> <td>273</td> <td>29.8</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>CO₂eq. Emissions (tonnes)</td> <td>3,284.4</td> <td>61.2612</td> <td>4.5594</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> </tr> <tr> <td>Total CO₂eq. Emissions (tonnes)</td> <td colspan="7" style="text-align: center;">3,284.4</td> </tr> </tbody> </table> <p>The total emissions from the proposed operations are considered negligible (up to 0.063%) in comparison to total OEUK Exploration and Production (E&P) figure for 2023 which was 13.5 million tonnes CO₂eq., and negligible (up to 0.0004%) in comparison to provision UK emissions in 2024, which were 371 million tonnes CO₂eq. EnQuest recognises the UK Government commitment to reach net zero emissions by 2050, the revised OGA Strategy which came into force in 2021 that included net zero has part of the Central Obligation, and NSTA's Stewardship Expectation 11 (SE11) on Net Zero. EnQuest is therefore committed to aligning with SE11 and the NSTA's Decommissioning Strategy when undertaking decommissioning. The scope of work is of short duration, minimising as far as possible atmospheric emissions, and the scheduling of works will, as far as possible, seek to minimise time and emissions through synergies with wider programmes of work. There is no alternative re-use potential for the Wellheads and XT's, such that it will be returned to shore for recycling.</p>		CO ₂	N ₂ O	CH ₄	SO ₂	CO	NO _x	VOC	Emissions Factor (diesel)	3.22	0.00022	0.00015	0.004	0.0157	0.0594	0.002	Total Mass (tonnes)	3,284.4	0.2244	0.153	4.08	16.014	60.588	2.04	GWP	1	273	29.8	-	-	-	-	CO ₂ eq. Emissions (tonnes)	3,284.4	61.2612	4.5594	-	-	-	-	Total CO ₂ eq. Emissions (tonnes)	3,284.4							
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Discharges	<p>The umbilical jumper and pipeline spool will be disconnected prior to the Wellheads being removed. The chemical lines of the jumper contain a small quantity of chemicals. In the event that recovery of the chemicals is not possible, their contents may be discharged. Due to hydrostatic pressure, an initial, small discharge would be expected, with the full contents being discharged over time. The chemicals are expected to dissipate from the area (overall quantities will be relatively small and these will be one off and final discharges from the line). Should any discharges occur, they will contribute to local water quality changes and have associated interactions with water column and benthic biota. The Magnus area has a low (less than 0.21N/m²) to moderate (more than 12N/m²) range for wave energy at the seabed, with a wave height ranging from 2.71 – 3.00m therefore any discharges are expected to disperse quickly and</p>	<p>Discharges will be minor and options for chemical recovery will be considered further in the permitting and consenting process for the activities.</p>																																																

Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management
	significant effects not likely.	
Underwater noise	<p>The main contributor to underwater noise from the activities will be vessel activity; explosives will not be used, however, the conductors will be mechanically cut 3m below the seabed using a mechanical cutter run on drill pipe from the rig. The primary receptor of noise impacts are marine mammals, however, the South Magnus and Magnus Swift wells are not located in an area of particular importance for marine mammals and is some distance from the nearest conservation sites designated for marine mammal features. Density of grey and harbour seals in the area is expected to be very low given the distance to the nearest colonies and associated conservation sites in UK waters (at least 142km). The increased vessel activity associated with decommissioning will add to the overall ambient noise in the wider area, however, noise characteristics are such that injury will not occur to marine mammals, fish or birds, and will be temporary. Sound from the rig or vessels may result in some temporary influence on the behaviour of individual marine mammals within the vicinity of the operations (Wisniewska et al. 2018, Erbe et al. 2019), however, such effects will be short-term, localised to within a few hundred metres of the vessel, and in the context of existing levels of shipping activity in the region. Available sound measurements around the tooling for the operation in the North Sea (Pangerc et al. 2016) indicated that the sound radiated at the time of cutting was not easily discernible above that of background noise, i.e. the vessels associated with the operation. Consequently, effects on noise sensitive receptors are not likely.</p>	<p>The scheduling of works will, as far as possible, seek to minimise time in the field through synergies with wider programmes of work. Vessels will be managed in accordance with EnQuest's Marine Assurance Standard and will be managed such that durations are minimised. Underwater noise will be minor and incremental to wider shipping in the area and no mitigation is considered necessary.</p>
Generation of waste materials	<p>The waste generated as part of the removal will be primarily steel (280.26 Te) that will be recycled, along with small amount of marine growth (a maximum of 1 tonnes). Limited amounts of hazardous waste are anticipated as part of the project, and these will be managed by an appropriately licenced facility. The overall significance of the impact of waste as a result of the project is considered to be low. The Wellheads and Xmas trees will be taken ashore and recycled at a licenced facility and incremental effects onshore are not considered to be likely</p>	<p>The waste hierarchy will be followed and only if other options are not possible will waste material be sent to landfill. EnQuest will comply with relevant UK or EU waste legislation and the requirements of duty of care. The selected receiving port and waste handling facility will be able to demonstrate a proven disposal track record and waste stream management throughout the process.</p>

Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management
<p>Accidental events – release of hydrocarbons</p>	<p>A spill of hydrocarbons is highly unlikely during the proposed operations as the well is isolated and 4 out of 5 wells are water injection wells. There is a minor potential for incremental unplanned release of diesel from vessels or the rig, however, preventative measures and response (OPEP, SOPEP) will be in place. South Magnus and Magnus Swift are included in the Northern North Sea Area OPEP which is informed by a consideration of major accident hazards.</p> <p>A Major Environmental Incident ('MEI') is defined in the Safety Case Regulations 2015 as an incident "which results or is likely to result in significant adverse effects on the environment in accordance with the Environmental Liability Directive (ELD) 2004/35/EC of the European Parliament and of the Council on environmental liability with regard to the prevention and remedying of environmental damage". "Significant adverse effects" may include severe regional impact, leading to long term/irreversible damage (including poor potential for recovery) to a very large area of internationally or nationally protected populations, habitats and/or sites.</p> <p>After assessment no major accident hazards have been identified that could lead to a well blow out for either well or any release from the wells that could release hydrocarbons in sufficient quantity or type to cause significant adverse change to a protected species or habitat. All subsea systems will be isolated before the commencement of operations therefore there is no opportunity of a hydrocarbon release.</p> <p>Additionally, there is a small incremental risk of spills from the rig of chemicals, however these are not considered to be significant and/or likely to occur.</p> <p>In addition to the rig, a vessel will be used for the initial subsea scope of work, and potentially for the recovery of the Wellheads. There is an existing 500m subsea exclusion zone at the well location, and the vessel will be on location under Dynamic Positioning and will be able to move off station quickly.</p>	<p>Any vessel used will have a Shipboard Oil Pollution Emergency Plan ('SOPEP') in place, and the risk of accidents will be minimised by appropriate ship lighting and marking, and notices to mariners. A Vessel Traffic Survey and Collision Risk Assessment will be undertaken. The work will take place within a long established 500m subsea safety zone, limiting potential interactions with other users, and in particular fisheries. As part of the OPEP, specialist oil spill management and response services will be in place, to minimise impacts from potential</p>
<p>Cumulative effects</p>	<p>The South Magnus and Magnus Swift wells will be permanently decommissioned once the Wellheads have been removed. While well activities involving the LWIV does not form part of this DP, cumulative effects from this activity are considered below. A semi-submersible rig, anticipated to be the Well-Safe Defender, will be used to plug and abandon the wells. The South Magnus and Magnus Swift wells are within an established area of oil and gas field activity and the presence of the rig will not add significantly to vessel traffic in the area.</p> <p>Similarly, while the rig will result in underwater noise, sound pressure levels from such rigs (Todd & White 2012) are not expected to be greater than that from support and supply vessels (OSPAR 2009), or wider vessel traffic, and any cutting is unlikely to be generate noise significantly discernible above that of the rig/vessels. While some wider activity in the region is likely to produce significant impulsive underwater</p>	<p>The rig and any vessel will be located within the existing 500m subsea safety zone, and the location and timing of the activities will be subject to notices to mariners. Cumulative effects of disturbance will also be considered as part of the permitting and consenting process for the</p>

Table 4.2.1: Environmental Impact Assessment

Main Impacts	Impact Assessment	Management
	<p>noise, cumulative effects are not considered to be likely as well and subsea decommissioning activities at South Magnus and Magnus Swift do not involve such high amplitude sounds, are temporary, and negligible in the context of wider vessel traffic in the area.</p> <p>The seabed disturbance from rig placement has been calculated as part of the disturbance associated with the Wellhead removal, as the rig may be used to remove it. Other sources of physical disturbance in the area include fisheries, however, effort appears to be moderate to low. Significant cumulative effects are not considered to be likely as the disturbance associated with the decommissioning of the Wellheads, and the South Magnus and Magnus Swift wells, is small and mostly temporary, and does not take place within a conservation site with habitats or species sensitive to disturbance.</p> <p>Atmospheric emissions are from the rig and vessels and are small in a national context and also within wider UKCS oil and gas activities, and those from domestic shipping and the UK's share of international shipping (~0.014% of emissions in 2023, after DfT 2025). They will be minimised, as far as possible, through synergies in rig and vessel use with other programmes of work.</p> <p>The only discharges from the Wellheads removal are related to the disconnection of the umbilical jumpers, which relate to a small amount of chemicals.</p> <p>Other discharges may be associated with well decommissioning including chemicals or an aborted cement discharge; however, the nature of these potential discharges is not known at this time, and they will be subject to a chemical permit.</p>	<p>decommissioning activities.</p>
Transboundary effects	<p>While the South Magnus and Magnus Swift wells are relatively close to the UK/Norway median line (16km), however, activities associated with decommissioning considered to offer a remote risk of transboundary effects.</p>	<p>As part of the permitting and consenting process for the decommissioning activities, accidental events and a major environmental incident assessment will be carried out, which will take into consideration the potential for transboundary impact.</p>
Indirect Impacts		

The National Marine Plan (NMP) covers the management of both Scottish inshore waters (out to 12 nautical miles (nm)) and offshore waters (q12 to 200nm). The aim of the NMP is to help ensure the sustainable development of the marine area through informing and guiding regulation, management, use and protection of the Marine Plan areas (Scottish Government, 2015). The decommissioning of the South Magnus and Magnus Swift wells as described in this DP have been assessed against the NMP objectives and policies, specifically GEN 1, 4, 5, 9, 12, 13, 14 and 21 (Table 4.2.2). The proposed activities have also been assessed against the Oil and Gas Sector policies and objectives 1, 3 and 6. EnQuest confirms compliance with the relevant policies and objectives.

Table 4.2.2: NMP Policies Relevant to the South Magnus and Magnus Swift decommissioning		
Policy and Topic	Title	Assessment
GEN-1	General planning and principle	Development and use of the marine area should be consistent with the Marine Plan, ensuring activities are undertaken in a sustainable manner that protects and enhances Scotland's natural and historic marine environment. EnQuest will ensure that any potential impacts associated with proposed operations will be kept to a minimum.
GEN-4	Co-existence	Where conflict over space or resource exists or arises, marine planning should encourage initiatives between sectors to resolve conflict and take account of agreements where this is applicable. All operations are due to take place within a 500 m exclusion zone, therefore no conflicts with other sea users are expected.
GEN-5	Climate change	Marine planners and decision makers should seek to facilitate a transition to a low carbon economy. They should consider ways to reduce emissions of carbon and other greenhouse gases. EnQuest will ensure that any potential impacts associated with proposed operations will be kept to a minimum.
GEN-9	Natural heritage	Development and use of the marine environment must: <ul style="list-style-type: none"> • Comply with legal requirements for protected areas and protected species. • Not result in significant impact on the national status of Priority Marine Features. • Protect and, where appropriate, enhance the health of the marine area. EnQuest will ensure that any potential impacts to protected species and sites associated proposed operations will be kept to a minimum.
GEN-12	Water quality and resource	Developments and activities should not result in a deterioration of the quality of waters to which the Water Framework Directive, Marine Strategy Framework Directive or other related Directives apply. EnQuest will ensure that any potential impacts to water quality associated with proposed operations will be kept to a minimum.
GEN-13	Noise	Development and use in the marine environment should avoid significant adverse effects of man-made noise and vibration, especially on species sensitive to such effects. EnQuest will ensure that any potential impacts via underwater noise associated with proposed operations will be kept to a minimum.
GEN-14	Air quality	Development and use of the marine environment should not result in the deterioration of air quality and should not breach

Table 4.2.2: NMP Policies Relevant to the South Magnus and Magnus Swift decommissioning		
Policy and Topic	Title	Assessment
		any statutory air quality limits. Some development and use may result in increased emissions to air, including particulate matter and gases. Impacts on relevant statutory air quality limits must be taken into account and mitigation measures adopted, if necessary, to allow an activity to proceed within these limits. EnQuest will ensure that any potential impact to air quality with proposed operations will be kept to a minimum.
GEN-21	Cumulative impacts	Cumulative impacts affecting the ecosystem of the marine plan area should be addressed in decision making and plan implementation. EnQuest will ensure that any potential impacts to air and water quality and biological communities with proposed operations will be kept to a minimum.

Table 4.2.3: Oil and Gas Sector Policies and Objectives		
Policy and Topic	Title	Assessment
OIL & GAS: 1		The Scottish Government will work with OPRED, NSTA and the industry to maximise and prolong oil and gas exploration and production whilst ensuring that the level of environmental risks associated with these activities are regulated. Activity should be carried out using the principles of Best Available Technology ('BAT') and Best Environmental Practice ('BEP'). Consideration will be given to key environmental risks including the impacts of noise, oil and chemical contamination and habitat change. EnQuest will conduct operations in line with the BAT and BEP principles.
OIL & GAS: 3		Supporting marine and coastal infrastructure for oil and gas developments, including for storage, should utilise the minimum space needed for activity and should take into account environmental and socio-economic constraints.
OIL & GAS: 6		Consenting and licensing authorities should be satisfied that adequate risk reduction measures are in place, and that operators should have sufficient emergency response and contingency strategies in place that are compatible with the National Contingency Plan and the Offshore Safety Directive. EnQuest will ensure that adequate risk reduction and emergency response measures are in place.
Note: There are 6 Oil and Gas policies (listed under Chapter 9 of the NMP), all of which are taken into account when conducting activities. The three policies relating to the environment are listed here.		

5. INTERESTED PARTY CONSULTATION

5.1 General

Table 5.1.1: Summary of Stakeholder Comments		
Who	Comment	Response
Statutory Consultation		
NSTA	EnQuest Heather Limited has consulted with NSTA under S29 (2A) of the Petroleum Act.	
NFFO	[HOLD]	
NIFPO	[HOLD]	
SFF	[HOLD]	
GMG	[HOLD]	
Public	[HOLD]	

6. PROJECT MANAGEMENT

6.1 Project Management and Verification

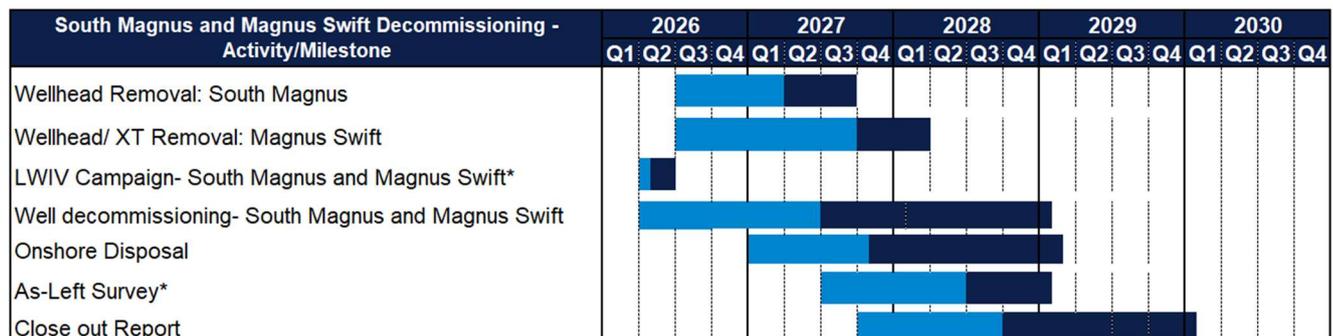
EnQuest’s project management team will manage the operations of competent contractors selected for all decommissioning activities. The team will ensure the decommissioning is executed safely, in accordance with legislation and EnQuest’s Health and Safety principles. Required changes to the DP will be discussed with OPRED, with any necessary approvals sought.

6.2 Post Decommissioning Debris Clearance and Verification

This DP covers removal of the Wellhead/Xmas tree as part of the South Magnus and Magnus Swift decommissioning campaign. Upon completion, an as-left survey will be carried out to ensure that no snag hazards or risks to other users of the sea remain. Any items left in-situ until the wider Magnus field decommissioning is complete will be monitored and appropriate mitigation put in place. Post-decommissioning debris surveys and seabed verification will be carried out after full decommissioning of the wider Magnus Field area.

6.3 Schedule

The proposed schedule for the decommissioning of the South Magnus and Magnus Swift Wellhead/Xmas tree is provided in Figure 6.3.1.



Notes / Key

Earliest potential activity ■

Activity window to allow commercial flexibility associated with well decommissioning activity ■

*LWIV Campaign includes Intervention work in the wells: logging work, tubing condition inspection, pressure testing and content status. This also include XT removal at South Magnus (F9 and F10)

** An as-left survey will be performed after the wellheads and XT's have been removed. Post-decommissioning debris surveys and subsea verification will be carried out after the full decommissioning at Magnus Field

Figure 6.3.1: Schedule for Decommissioning of South Magnus and Magnus Swift

Prior to the rig commencing work, there will be a LWIV campaign to support preparing the wells for decommissioning. This includes cleaning, inspection, valve function, tree cap removal and the disconnection of 4 flowlines and installing blind flanges to the flow base. The LWIV intervention work also includes gather data to support the rig and depending on the well status the scope could also include installing deep plugs, cutting tubing, circulating and installation of shallow plugs in both tubing hanger production and annulus bores. The LWIV will also remove the XT at South Magnus (F9 and F10 wells).

The activities are subject to the acceptance of the DP presented in this document and any unavoidable constraints (e.g. vessel availability) that may be encountered whilst executing the decommissioning activities. Therefore, activity schedule windows have been included to account for this uncertainty. The Wellhead and XT removal activities will not be performed unless there is a rig contract and agreed execution schedule window in place for the well decommissioning.

The commencement of wider offshore decommissioning activities will depend on commercial agreements, commitments and timelines. EnQuest will also examine the possibility of including the offshore work in a wider campaign of subsea works to reduce costs.

6.4 Cost

Decommissioning costs will be provided separately to OPRED and NSTA in confidence.

6.5 Close-Out

In accordance with the OPRED Guidelines, a close out report will be submitted to OPRED within 12 months of the completion of the scope within this Decommissioning Programme.

Any variance to the approved DP will be detailed and accounted for in this report.

6.6 Post-Decommissioning Liability, Monitoring and Evaluation

This Decommissioning Programme concerns the removal of the South Magnus and Magnus Swift Wellhead and the associated Xmas tree. Following completion of the wider Magnus field decommissioning scopes (to be covered by a separate future Decommissioning Programme document to be submitted to OPRED) the various survey findings specific to this South Magnus and Magnus Swift Wellheads and Associated Structures DP (i.e. as-left status, environmental and clear seabed surveys) will be sent to OPRED in a standalone close out report. The frequency of future surveys will be agreed with OPRED and supported with a risk assessment.

Residual liability for the facilities will remain with the Section 29 holders. Unless agreed otherwise in advance with OPRED, EnQuest will remain the focal point for this matter including any change in ownership, for example.

6.7 Post-Decommissioning Monitoring and Evaluation

Following removal of the South Magnus and Magnus Swift there may be a period of time before the wider Magnus field is decommissioned. After the infrastructure is removed, there will still be a 500 m subsea safety zone in place around the drill centres at each location.

Residual liability for the structures will remain with the Section 29 holders identified in section 1.4. Unless agreed otherwise in advance with OPRED, EnQuest will remain the focal point for such matters, such as any change in ownership, for example.

Once the wider Magnus Area has been decommissioned the requirement for legacy and liability management will be described in more detail in the final close out report.

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APPENDIX A PUBLIC NOTICE & CONSULTEE CORRESPONDENCE

Appendix A.1 Public Notices (HOLD)

Appendix A.2 Correspondence with Statutory Consultees (HOLD)

APPENDIX B LETTERS OF SUPPORT