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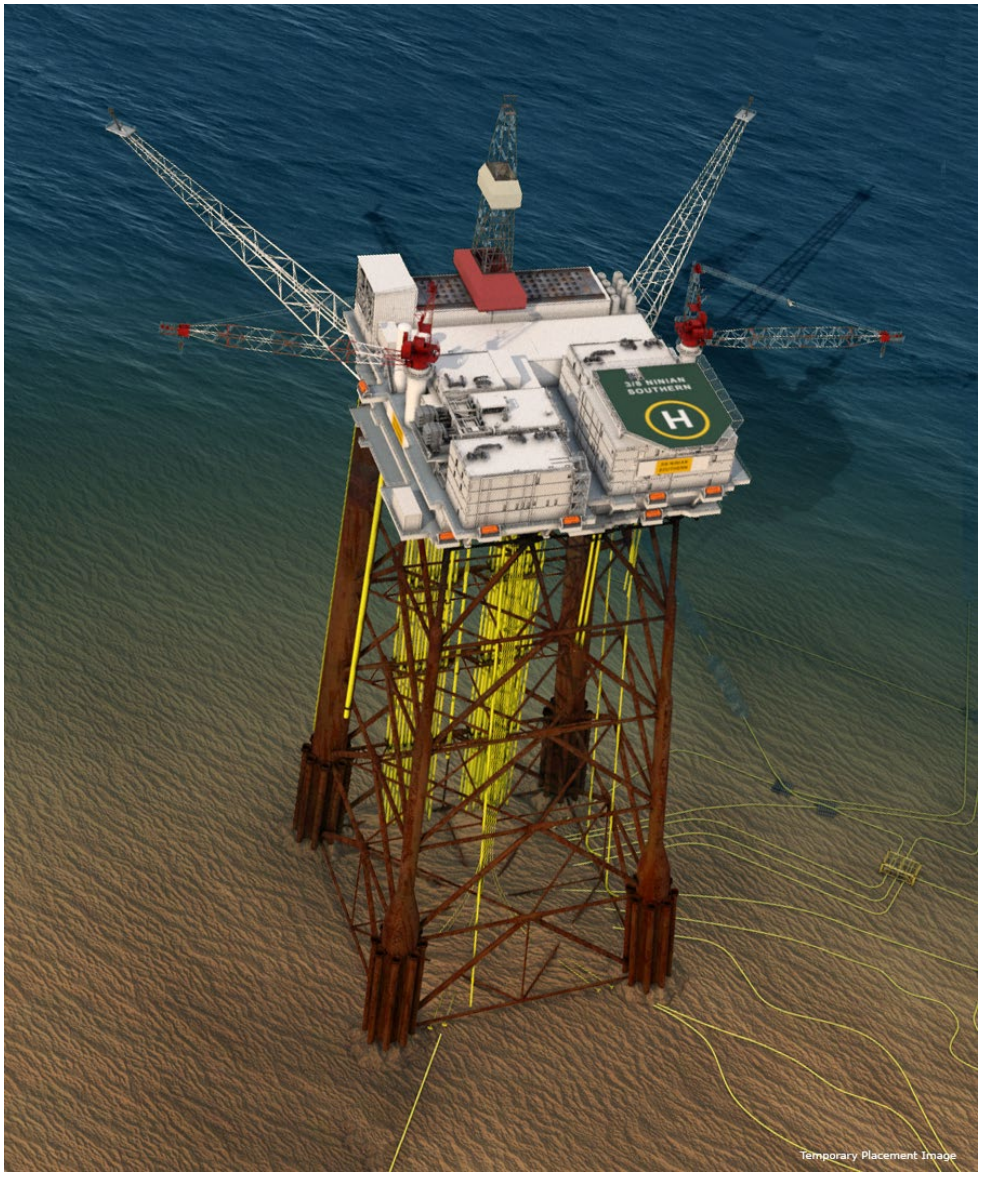

NINIAN SOUTHERN TOPSIDES, UPPER JACKET AND ASSOCIATED RISER SECTIONS DECOMMISSIONING PROGRAMMES

CONSULTATION DRAFT

March 2025

P0041-CNR-PM-REP-00001

Document Control

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ABBREVIATIONS

Abbreviation	Definition
° ’ ”	Degrees, Minutes, Seconds
”	Inch
ALARP	As Low As Reasonably Practical
BAT	Best Available Techniques
BEIS	The Department of Business, Energy and Industrial Strategy (now DESNZ)
BEP	Best Environmental Practices
CCS	Carbon Capture and Storage
CNRI	Canadian Natural Resources International (U.K.) Limited
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
COG	Centre of Gravity
CoP	Cessation of Production
CP	Cuttings Pile
DP	Decommissioning Programme
DSV	Diving Support Vessel
E	East
EDC	Engineering Down and Cleaning
El.	Elevation
ENVID	Environmental Impact Identification
EPDM	Ethylene Propylene Diene Monomer
EPS	European Protected Species
EU	European Union
FRA	Formal Risk Assessment
HLV	Heavy Lift Vessel
HMPA	Historic Marine Protected Area
ICES	International Council for the Exploration of the Sea
IMO	International Maritime Organisation
JNCC	Joint Nature Conservation Committee
km	Kilometre
LAT	Lowest Astronomical Tide
LSA	Low Specific Activity
m	Metre
mm	Millimetre

Abbreviation	Definition
MARPOL	The International Convention for the Prevention of Pollution from Ships
MASTS	Marine Alliance for Science and Technology for Scotland
MAT	Master Application Template
MCA	Maritime and Coastguard Agency
MCAA	Marine and Coastal Access Act (2009)
m/s	Metres per second
N	North
N/A	Not Applicable
NCMPA	Nature Conservation Marine Protected Area
NCP	Ninian Central Platform
NMP	National Marine Plan
NMPi	National Marine Plan Interactive
NNP	Ninian Northern Platform
NNS	Northern North Sea
NORM	Naturally Occurring Radioactive Material
NSP	Ninian Southern Platform
NSTA	North Sea Transition Authority
NSVA	Ninian Southern Valve 'A'
NSVM	Ninian Southern Valve 'M'
MSF	Module Support Frame
NLB	Northern Lighthouse Board
NSTA	North Sea Transition Authority
OEUK	Offshore Energies UK
OPEX	Operating Expenditure
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	Convention for the Protection of the Marine Environment of the North East Atlantic
P&A	Plugging and Abandonment
PCB	Polychlorinated Biphenyls
PETS	Portal Environmental Tracking System
PFP	Passive Fire Protection
PL	Pipeline (as in pipeline PWA number)
PL	Platform (as in well category)
PLU	Umbilical
PMF	Priority Marine Feature
PON	Petroleum Operations Notice
PWA	Pipeline Works Authorisation

Abbreviation	Definition
S	South
SAC	Special Area of Conservation
SAT	Subsidiary Application Template
SCAP	Supply Chain Action Plan
SHE	Safety, Health and Environment
SFF	Scottish Fishermen's Federation
SIMOPs	Simultaneous Operations
SLV	Single Lift Vessel
SMRU	Sea Mammal Research Unit
SOPEP	Shipboard Oil Pollution Emergency Plan
SSIV	Subsea Isolation Valve
Te	Tonne
TFSW	Trans-Frontier Shipment of Waste
THC	Total Hydrocarbon Content
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UK BAP	UK Biodiversity Action Plan
UKHO	United Kingdom Hydrographic Office
W	West
WONS	Well Operation Notification System
WDC	Whale and Dolphin Conservation

HOLD POINTS

HOLD	Section	Description
1	5.3, 5.4	Interested Party Consultation Comments
2	Appendix	Partner's Letters of Support
3	Appendix	Public Notice
4	Appendix	Statutory Consultee Correspondence

1. EXECUTIVE SUMMARY

1.1. Decommissioning Programmes

The Ninian Southern Platform (NSP) is a large steel installation, approximately 52,400 Te. This document contains five decommissioning programmes (DPs) for the NSP Topsides, Upper Jacket and Associated Riser Sections, part of the Ninian Field development, and the associated risers and umbilicals which are connected to the NSP Upper Jacket:

1. Ninian Southern Platform Topsides and Upper Jacket
2. Upper riser section of pipeline PL2473
3. Upper umbilical riser section of umbilical PLU2238
4. Upper riser sections of pipelines PL70, PL72, PL865, PL866, PL867, PL868, PL869, PL870 and PL871. Entire PL1999 flexible riser from topsides hang-off to seabed tie-in.
5. Upper umbilical riser section of umbilical PL900 / PL900.1-6

The lower jacket and footings of the NSP will be covered by a separate DP. The removal of the topsides and upper jacket, however, will not prejudice future decommissioning options, including full removal of the Ninian Southern footings.

Separate DPs will be provided covering the remainder of the Ninian Field development including the Ninian Central Platform (NCP) topsides and NCP sub-structure and all Ninian Hub subsea infrastructure.

This NSP DP is supported by an ENVID (Environmental Impact Identification) Report [1], which is a separate document, summarised in Section 4.

1.2. Requirement for a Decommissioning Programme

In accordance with the Petroleum Act 1998, CNR International (U.K.) Limited (CNRI), on behalf of the Section 29 notice holders of the NSP (see Table 1-3), are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to seek approval for decommissioning the installation detailed in Section 2.1 of these programmes.

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the NSP (see Table 1-4 to Table 1-7) are applying to OPRED to seek approval for decommissioning the pipelines detailed in Section 2.2 of these programmes.

In conjunction with public, stakeholder and regulatory consultation, these decommissioning programmes are submitted in compliance with national and international regulations and BEIS Guidance Notes for Decommissioning of Offshore Oil and Gas Installations and Pipelines 2018 [2]. The schedule outlined in this document is for seven years to prepare for and undertake topsides and upper jacket removal, commencing 2024.

In terms of activities in the northern North Sea (NNS), the Scottish National Marine Plan (NMP) has been adopted by the Scottish Government to help ensure sustainable development of the marine area. The NMP is considered throughout this DP. The NMP was developed in line with UK, EU and OSPAR legislation, directives and guidance. With regards to decommissioning, the NMP states that:

'*Where re-use of oil and gas infrastructure is not practicable, either as part of oil and gas activity or by other sectors such as carbon capture and storage, decommissioning must take place in line with standard practice, and as allowed by international obligations. Re-use or removal of decommissioned assets from the seabed will be fully supported where practicable and adhering*

to relevant regulatory process'.

CNRI has given due consideration throughout this DP to the NMP during the decision-making process and the interactions between the decommissioning activities and the NMP. The specific policies adopted are summarized in Table 1-1 below.

Table 1-1: Scottish National Marine Plan policies relevant to NSP operations

Policy	Title	Details
GEN-1	General planning and principle	Development and use of the marine area should be consistent with NMP, ensuring activities are undertaken in a sustainable manner that protects and enhances Scotland's natural and historic marine environment. CNRI will ensure that any potential impacts associated with operations will be kept to a minimum.
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 gasses. CNRI will ensure that any potential impacts associated with operations will be kept to a minimum.
GEN-9	Natural heritage	Development and use of the marine environment must: • 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. CNRI will ensure that any potential impacts to protected species and sites associated with 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. CNRI will ensure that any potential impacts to water quality associated with 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 any statutory air quality limits. Some development and use may result in increased emissions to air, including particulate matter and gasses. 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. CNRI will ensure that any potential impacts to air quality with 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. CNRI will ensure that any potential impacts to air and water quality and biological communities associated with operations will be kept to a minimum.

1.3. Introduction

The NSP is located in the UK sector of theNNS, approximately 120 km East of the Shetland Islands and is approximately 457 km North-North-East of Aberdeen in UKCS Block 3/8a (ref Figure 1-1). The Ninian field development was ultimately comprised of three platforms, NSP, NCP and Ninian Northern Platform (NNP). NNP was decommissioned and removed from the field between 2017 and 2022. NSP was installed in June 1977. The platform was designed to operate as a combined drilling, production and process facility, exporting to NCP. Production commenced from NSP in December 1978.

Cooled and metered oil is exported to NCP via a 10" pipeline (PL1999) and from there is sent on to Sullom Voe Terminal in Shetland. Gas is imported for fuel from NCP via an 8” pipeline (PL72). Production fluids from the Lyell subsea field are routed to NSP via a 12” pipeline (PL2473).

Diesel fuel is stored in a tank within Leg F4, ref. Figure 3-7. The top and bottom of the tank are at El.+16 m LAT and El.-20 m LAT respectively. The equivalent tank in Leg B4 is no longer in use for storage purposes.

The NSP topsides is supported by a four-leg welded steel jacket installed in position with 32 grouted piles, eight piles in a symmetrical pattern around each leg, and standing in a water depth of 140 metres (ref. Figure 1-2).

Extensive jacket inspection and repair works have taken place since installation due to the relatively low fatigue lives as a result of poor fabrication details and quality. During construction, access windows were cut into many members in order to allow back treatment of brace-to-node circumferential welds, and the subsequent welding to close the windows introduced defects susceptible to fatigue.

Cessation of Production (CoP) is currently planned to take place in 2025. Updates to the planned CoP date will be provided to the North Sea Transition Authority (NSTA) through CNRI’s annual stewardship survey and regular stewardship meetings with *ad hoc* meetings scheduled if required. The NSTA will be informed in writing once CoP has occurred.

The decommissioning programmes described in this document are to:

- Plug and abandon platform wells.
- Fully remove the topsides and upper jacket down to a cut height of between 53 m to 63 m above seabed (El. -87 m to -77 m LAT).
- Fully remove those sections of risers and umbilicals attached to and contained within the upper jacket.

The pipelines below the cut point and on the seabed adjacent to the platform will be subsequently decommissioned at a later stage, as part of the wider Ninian Field decommissioning project, and will be covered by their own decommissioning programmes. These pipelines are tied back to NSP and NCP, therefore decommissioning the pipelines within the Ninian Field allows for efficient field-wide decommissioning together with the remaining platforms. As the risers are attached to the jacket structure, these will be internally flushed and cleaned to an acceptable standard before being separated at the cut height. Risers above the cut height will be removed with the topsides and jacket, ref. Table 1-4 to Table 1-7. Umbilical cores will be flushed where possible or, where not possible, such as a lack of flow path, discharge risk assessments and other mitigations will be employed.

The cut depth is based upon the highest point of the jacket piles which secured the installation to the seabed, as described in the BEIS Guidance Notes. The highest point of the piles has been measured at El.-99 m below Lowest Astronomical Tide (LAT). A jacket cut depth range has been

established between El.-77.0 m and El.-87.0 m, ref. Figure 3-5. This range is above the highest point of the piles, which defines the footings, and represents the most practical cutting location in relation to jacket leg dimensions in respect of the transitions between 9.2 m and 4.4 m diameter leg between the El.-106 m and El.-74 m elevations on legs F2 and B2. A range is necessary to address the requirement to relocate a cut in the event of problems, such as a stuck tool.

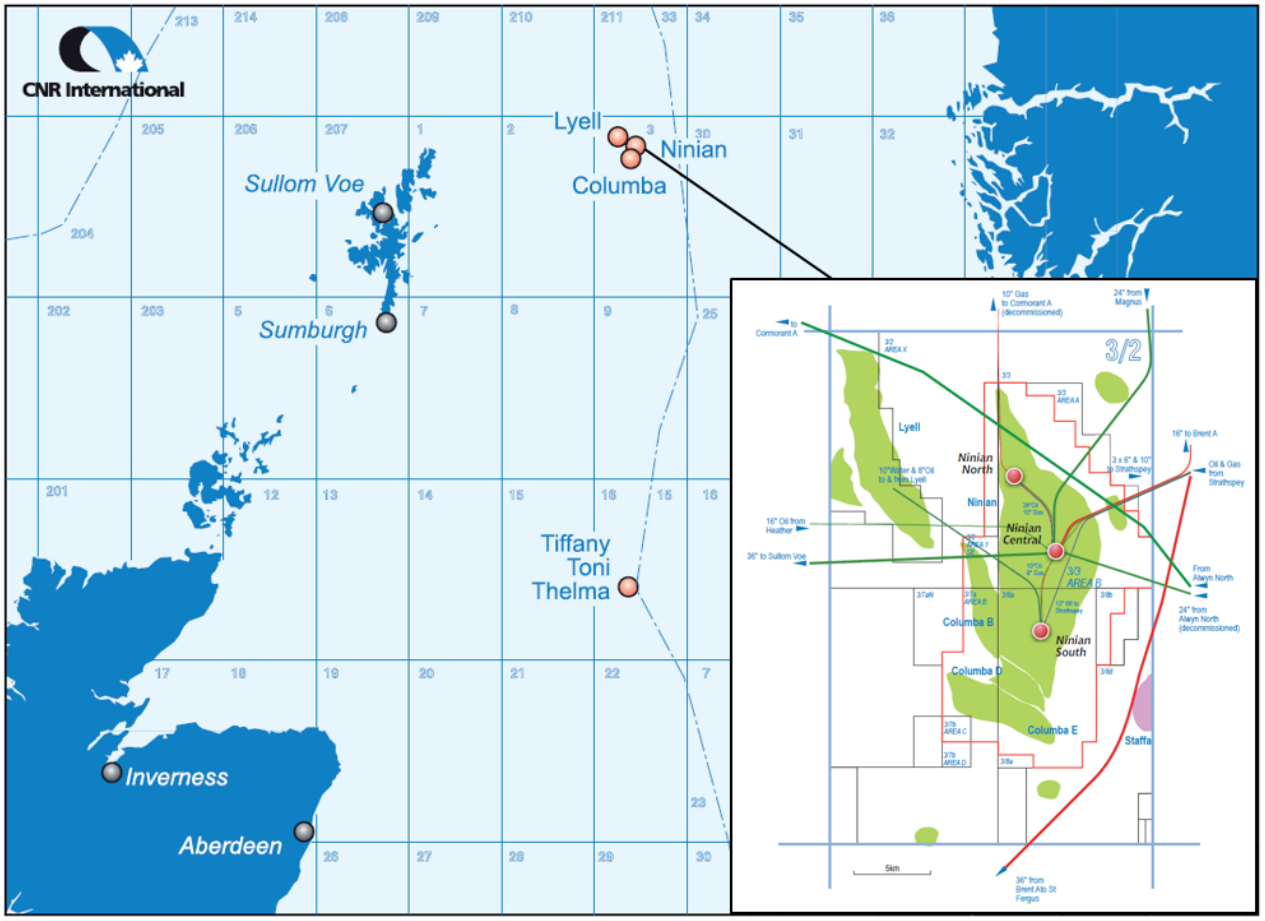


Figure 1-1 Ninian Southern Platform location

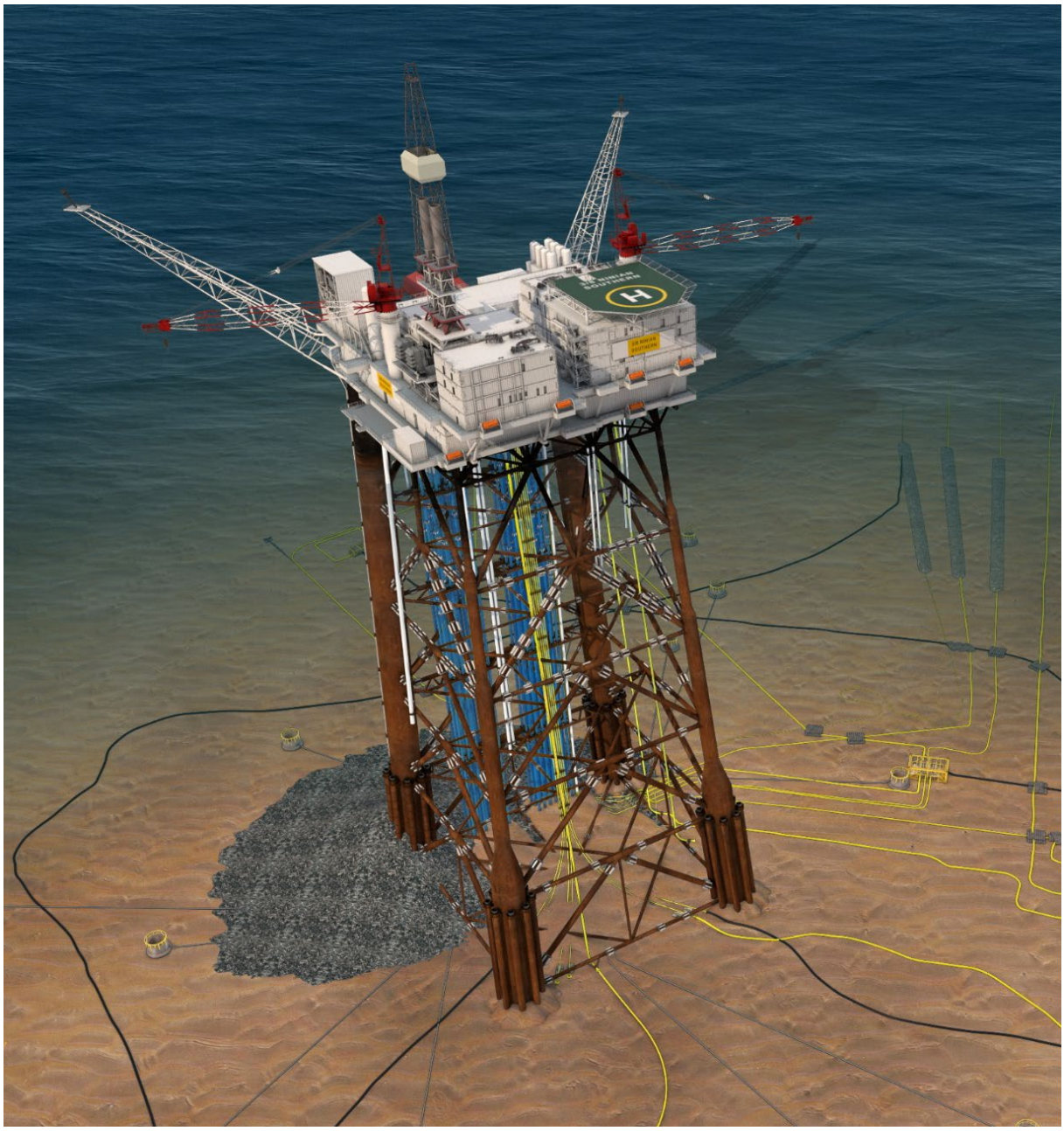


Figure 1-2 Ninian Southern Platform

1.4. Overview of Installation Being Decommissioned

1.4.1. Installation

Table 1-2: Installation Being Decommissioned			
Field:	**Ninian**	**Production Type (Oil/Gas/Condensate)**	**Oil**
Water Depth (m)	**140**	**UKCS block**	**3/8a**
Surface Installation			
Number	**Type**	**Topsides Weight (Te)**	**Jacket Weight (Te)**
1	Topsides	27, 522	-
1	Upper Jacket (to a range 77 m to 87 m below LAT)	-	12,052 Note 1
Subsea Installation		**Number of Wells**	
Number	**Type**	**Platform**	**Subsea**
None	None	42	None
Drill Cuttings pile		**Distance to median**	**Distance from nearest UK coastline**
Number of Piles	**Total Estimated volume (m^3)**	**km**	**km**
None Note 2	None	25	120

Notes:

1. For the purposes of this decommissioning programme, based upon jacket cut depth of El.-84 m LAT and including marine growth.
2. There is a drill cuttings pile beneath NSP. This is covered within the Ninian Southern Jacket Footings Decommissioning Programme. Operations covered under this DP that have the potential to impact the drill cuttings are removal of the catenary riser, PL1999, cutting of the jacket, cutting of the risers / J-tubes and cutting of the conductors. These operations are addressed under Section 4.2.

Table 1-3: Installation Section 29 Notice Holders Details		
Section 29 Notice Holders	**Registration Number**	**Equity Interest (%)**
CNR International (U.K.) Limited	00813187	100
Eni UK Limited	00862823	0
NEO Energy Petroleum Limited	03288689	0

Table 1-4: Riser Section 29 Notice Holders Details – PL2473 Note 1		
Section 29 Notice Holders	**Registration Number**	**Equity Interest (%)**
CNR International (U.K.) Limited	00813187	100

Notes:

1. PL2473 section above cut depth range 77 m to 87 m below LAT.

Table 1-5: Riser Section 29 Notice Holders Details – PLU2238 Note 1		
Section 29 Notice Holders	**Registration Number**	**Equity Interest (%)**
CNR International (U.K.) Limited	00813187	100
Ithaca MA Limited	03947050	0

Notes:

1. PLU2238 section above cut depth range 77 m to 87 m below LAT.

Table 1-6: Riser Section 29 Notice Holders Details – PL70, PL72, PL865, PL866, PL867, PL868, PL869, PL870 & PL871 Note 1 PL1999 Note 2		
Section 29 Notice Holders	**Registration Number**	**Equity Interest (%)**
CNR International (U.K.) Limited	00813187	100
Eni UK Limited	00862823	0
NEO Energy Petroleum Limited	03288689	0

Notes:

1. PL70, PL72, PL865, PL866, PL867, PL868, PL869, PL870 & PL871 sections above cut depth range 77 m to 87 m below LAT.
2. PL1999 entire flexible riser from topsides hang-off to seabed tie-in flange.

Table 1-7: Riser Section 29 Notice Holders Details – PL900, PL900.1 – 6 [Note 1]		
Section 29 Notice Holders	**Registration Number**	**Equity Interest (%)**
CNR International (U.K.) Limited	00813187	100
TotalEnergies E&P North Sea UK Limited	03682299	0
CNR International (U.K.) Developments Limited	01021629	0

Notes:

1. PL900 and PL900.1 - 6 sections above cut depth range 77 m to 87 m below LAT.

1.5. Summary of Proposed Decommissioning Programmes

Table 1-8: Summary of Decommissioning Programmes		
Selected Option	**Reason for Selection**	**Proposed Decommissioning Solution**
1. Topsides		
NSP Topsides: Complete removal of topsides	Meets regulatory requirements and maximises the opportunity for re-use or recycling of material.	Cleaned equipment refurbished for re-use where possible. Equipment which cannot be re-used will be recycled or disposed of at an approved onshore disposal facility.
2. Sub-structure		
NSP Upper Jacket Complete removal	Meets regulatory requirements and maximises the opportunity for re-use or recycling of material. Complies with the requirements of OSPAR Decision 98/3.	The jacket will be removed to between 77 m and 87 m below LAT. The removed section will be returned onshore for dismantling and recycling. The exact height of severance will be subject to commercial agreements that will be defined by technical constraints, bracing design, cutting technology, structural integrity, and lift vessel capacity and will be discussed and agreed with OPRED. Permit applications required for the removal work will be submitted to the regulator as required. OPRED will be notified once the severance height is confirmed.
3. Pipelines, Flowlines & Umbilicals		
Removal of risers and umbilicals within the upper jacket.	Sections of risers integrated into upper jacket have to be removed in parallel.	Sections of risers and umbilicals will be internally flushed and cleaned, removed and returned to shore for appropriate recycling or disposal. Pipeline Works Authorisation (PWA) variation applications will be submitted as appropriate.

Table 1-8: Summary of Decommissioning Programmes		
Selected Option	**Reason for Selection**	**Proposed Decommissioning Solution**
4. Wells		
Abandoned in accordance with OEUK Guidelines for Well Decommissioning.	Meets regulatory requirements.	A PON5 / Portal Environmental Tracking System (PETS) / Marine Licence application under the relevant regulations will be submitted in support of the works planned to be carried out. Above the seabed, the conductors will be cut at or below the jacket cut height, with removed sections transported to shore for recycling. Once the cut heights are determined OPRED will be advised of the elevations.
5. Interdependencies		
The Lyell subsea Field exports via NSP. However, Lyell will reach CoP and be shut-in ahead of Ninian Southern to allow time to flush the Lyell system using the NSP facilities. Lyell pipelines will be flushed by diving support vessel (DSV) back to NSP, while the cores of control umbilicals will be round trip flushed from NSP and back to the platform. The Lyell subsea wells will beabandoned to AB3 status following platform down person. Following disconnection, the Lyell wells are not expected to require continuous monitoring through to AB3 abandonment. Until abandonment is completed, the wells will be managed in accordance with CNRI's well management system. Each well will be assessed to comply with the company's requirements to maintain integrity and, where relevant, will stipulate the need for a Formal Risk Assessment (FRA). The FRAs will be prepared to cover the condition of applicable wells in accordance with CNRI's Risk Assessment Procedure. The level of monitoring will be determined by the FRAs. NSP exports via NCP. NCP will remain operational during the completion of NSP engineering down and cleaning (EDC) and will provide a route for disposal of fluids. The export pipeline to NCP, PL1999, will be flushed to NCP. The earliest removal date for the NSP topsides is 2027.		

Table 1-9: Adjacent Facilities					
Owner	**Name**	**Type**	**Distance / Direction**	**Information**	**Status**
CNRI	Ninian Central Platform (NCP)	Platform	6 km / N	Export PL1999 tie-in to NCP	Operational
CNRI	Lyell Field	Subsea Field	15 km / NW		Operational
CNRI	Columba E Field	Subsea Field	7 km / S		Shut-in
Total-Energies	Alwyn North Platform	Platform	15.5 km / E		Operational
EnQuest	Magnus Platform	Platform	96 km / N		Operational
CNRI	Strathspey Field	Subsea Field	19.5 km / NE		Operational
Total-Energies	PL335	12” Pipeline	5.9 km / N	Alwyn NAB - NCP	Operational
CNRI	PLU2050	Control Umbilical	N of NSP	From SSIV NSVA To SSIV NSVM	Operational
CNRI	PL72B	8" Gas Spool and Riser	East side of NSP		Disused
CNRI	PL869A	10” Pipeline	0.05 km (NE)	Lyell Water Injection Pipeline, disconnected from NSP riser (PL869)	Disused
CNRI	PL865	4” Gas Lift Riser	0.0 km (NSP riser)	Gas lift to production pipeline PL2473 from Lyell	Operational
CNRI	PL866	8” Pipeline	0.0 km (NSP riser)	Lyell Test / Production Pipeline	Disused
CNRI	PL866A	8” Pipeline	0.1 km (NE)	Lyell Test Pipeline	Disused
CNRI	PL867	3”/4” gas lift Riser	0.0 km (NSP riser)	Gas lift to Lyell Test Pipeline PL866A	Disused
CNRI	PL868	8” Pipeline	0.03 km / N	Staffa Oil Pipeline	Disused
CNRI	PL869	10” Water Injection Riser	0.0 km (NSP riser)	Lyell Water Injection	Disused

Table 1-9: Adjacent Facilities					
Owner	**Name**	**Type**	**Distance / Direction**	**Information**	**Status**
CNRI	PL864A	10”/12” Pipeline	From NSP East face heading North then to NW to Lyell	Lyell Water Injection Pipeline	Disused
CNRI	PL1999	10” Flexible Riser / 10” Rigid Pipeline	0 (NW / N) NSP riser	NSP To NCP Oil Export	Operational
CNRI	PL70	24” Pipeline	0 (NSP riser)	NSP Oil Export Pipeline	Disused
CNRI	PL870B	12” / Pipeline	From NSP East face running North then to NE to Strathspey	Strathspey Water Injection Pipeline	Disused
CNRI	PL72	6”/8” Pipeline	From NSP East face running North to NCP	NSP Gas Import Pipeline	Operational
CNRI	PLU2238	Umbilical	From NSP South face heading South	NSP To Columba	Operational
CNRI	PL871	2” Pipeline	From NSP East face heading NW	Lyell Methanol Injection Pipeline	Operational
CNRI	PL871A	2” Pipeline Piggybacked to PL869A	From NSP East face heading to NW	Lyell Methanol Injection Pipeline	Operational
CNRI	PL900 / PL900.1 - 6	Umbilical	From NSP East face heading North then to NW to Lyell	Lyell Chemical Injection Umbilical	Operational
CNRI	PL2473	12” Pipeline	From NSP East face via SSIV then to NW to Lyell	Lyell B To NSP Production Pipeline	Operational
CNRI	PL870A	12” Pipeline	From NSP East face running NE then North and then NE to Strathspey	NSP To Strathspey	Disused

Impacts of Decommissioning Proposals
The Lyell subsea Field produces through Ninian Southern, Lyell will reach CoP and be shut-in ahead of Ninian Southern. This is to allow time to flush the Lyell system using the NSP facilities. Lyell pipelines will be flushed by DSV back to NSP, while the cores of control umbilicals will be round trip flushed from NSP and back to the platform. The export pipeline, PL1999, will be flushed to NCP. The impact of these decommissioning programmes on the CNRI pipelines PL1999, PL2473, PL865, PL867, PL869, PL871, PL72 and PL870B and umbilicals PLU2050, PLU6684, PLU2238 and PL900/PL900.1-6 will be limited to the EDC and removal of the sections associated with the topsides and upper jacket down to cut height and the disconnection, laydown and recovery of flexible catenary riser PL1999. Remaining sections of those pipelines and umbilicals, below cut height and adjacent to NSP, will be decommissioned with the wider Ninian Hub under separate decommissioning programmes. There is no impact on the Ninian Central platform from Ninian Southern decommissioning.

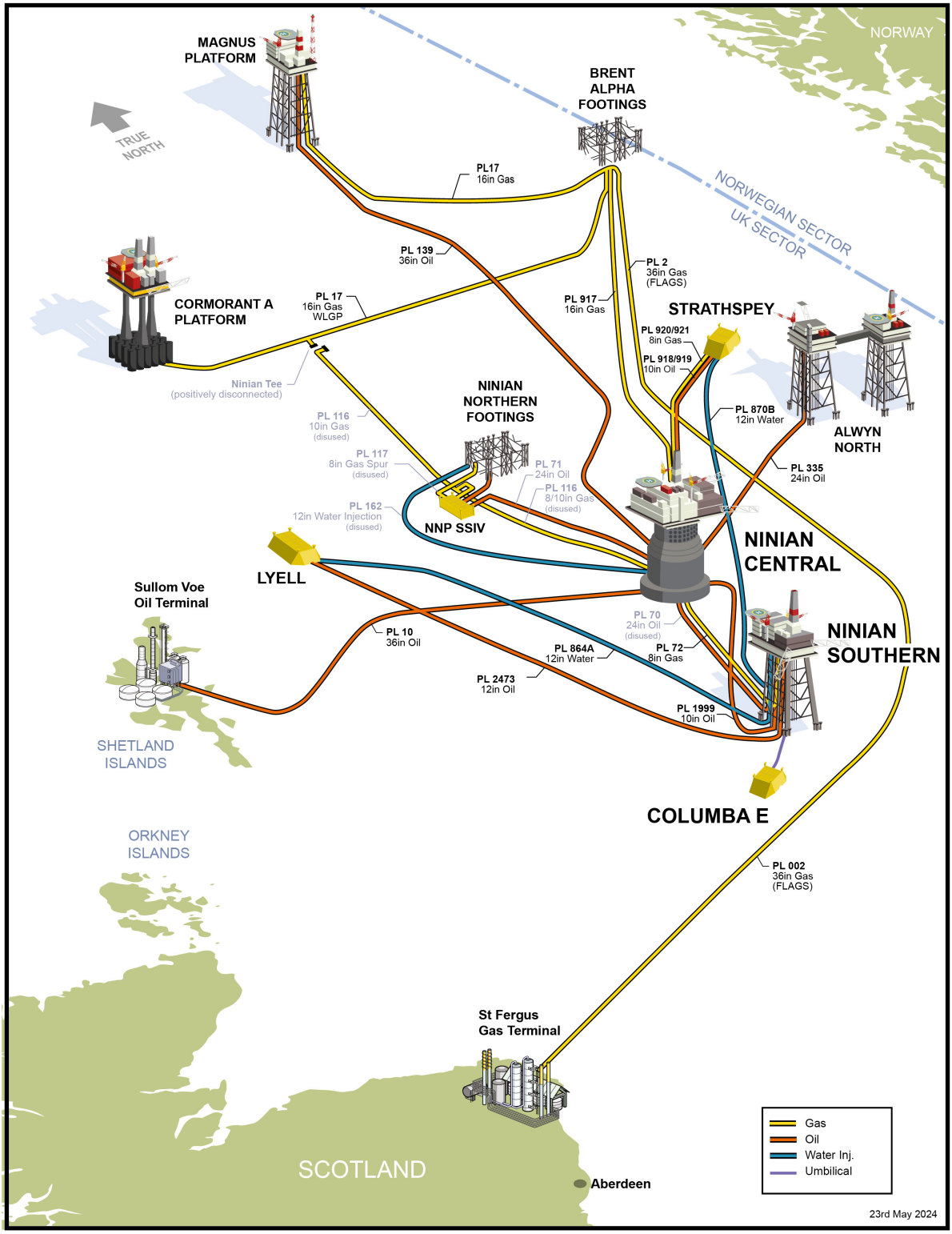


Figure 1-3 Adjacent Facilities

1.6. Industrial Implications

In planning and preparing for executing the NSP decommissioning contract/procurement strategy, CNRI, as operator of the NSP and on behalf of the Section 29 Notice Holders, undertake to:

- Publish information on the NSP decommissioning project and timelines on its decommissioning website: www.cnri-northsea-decom.com.
- Engage with the NSTA and the decommissioning supply chain on any future issues relating to the NSP Topsides, Upper Jacket and Associated Riser Sections Decommissioning Programmes and schedule, including engaging directly with disposal yards that serve the North Sea.
- Continue development of a supply chain action plan (SCAP) to manage engagement with the supply chain.

Noting that:

- For engineering down and cleaning of the platform, the strategy is to use the incumbent contractors with the existing offshore operations team.
- The strategy for the topsides removal and onshore disposal scope is to competitively tender using the form of contract previously used for Murchison and NNP decommissioning, incorporating lessons learned, both internally and externally.

2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1. Installation: Surface Facilities – Topsides and Upper Jacket

Table 2-1: Surface Facilities Information							
Name	Facility Type	Location		Topsides/Facilities		Jacket (if applicable)	
				Weight (Te)	No. of Modules	Weight (Te)	No. of Legs
Ninian Southern Platform	Large Fixed Steel	WGS84 Decimal	60° 48' 18.155" N 01° 28' 55.150" E	27,522	28	10,422.8 Note 1	4
		WGS84 Decimal Minute	60.8050 N 01.4487 E				

Notes:

1. For the purposes of this decommissioning programme, based upon jacket cut depth of El.-84 m LAT.

2.2. Pipelines

Seabed pipelines do not form part of these decommissioning programmes. However, where pipelines and umbilicals have risers and J-tubes that run to the NSP topsides those sections above the cut height will be removed with the upper jacket.

Table 2-2: Pipeline / Flowline / Umbilical Information

Description	Pipeline Number (per PWA)	Diameter (inches)	Length Note 1 (km)	Description of Component Parts	Product Conveyed	From – To End Points	Burial Status	Pipeline Status	Current Content
Lyell oil production riser	PL2473	12”	0.117	Steel riser with 25mm EDPM coating	Oil	Jacket cut depth to NSP topsides	N/A, riser	In service	As product conveyed
Columba E control umbilical	PLU2238	6”	0.122	Multi-core umbilical	Hydraulic fluid	NSP Topsides to jacket cut depth	N/A, umbilical riser	In service	As product conveyed
Oil export to NCP	PL70	24”	0.117	Steel riser with Monel cladding (+ 17.3m to -5m)	Oil	NSP Topsides to jacket cut depth	N/A, riser	Disused	Inhibited seawater
Fuel gas import from NCP	PL72	8”	0.056	Steel riser	Gas	Jacket cut depth to NSP Topsides	N/A, riser	In service	As product conveyed
Redundant fuel gas import from NCP	PL72B	4”	0.117	Flexible riser	Gas	Jacket cut depth to NSP Topsides	N/A, riser	Disused	Seawater
Water injection to Lyell	PL869	12”	0.117	Steel riser	Water	NSP Topsides to jacket cut depth	N/A, riser	Disused	As product conveyed
Gas lift to PL2473 riser	PL865	4”	0.117	Steel riser	Gas	NSP Topsides to jacket cut depth	N/A, riser	In service	As product conveyed

Table 2-2: Pipeline / Flowline / Umbilical Information									
Description	**Pipeline Number (per PWA)**	**Diameter (inches)**	**Length Note 1 (km)**	**Description of Component Parts**	**Product Conveyed**	**From – To End Points**	**Burial Status**	**Pipeline Status**	**Current Content**
Lyell test/prod pipeline	PL866	8”	0.117	Steel riser	Oil / chemicals	NSP Topsides to jacket cut depth	N/A, riser	Disused	As product conveyed
Lyell test/prod pipeline riser by-pass	PL867	3”	0.117	Steel riser	Oil / chemicals	NSP Topsides to jacket cut depth	N/A, riser	Disused	As product conveyed
Staffa oil import pipeline	PL868	8”	0.117	Steel riser	Oil	jacket cut depth to NSP Topsides	N/A, riser	Disused	As product conveyed
Water injection to Strathspey	PL870	12”	0.117	Steel riser	Water	NSP Topsides to jacket cut depth	N/A, riser	Disused	As product conveyed
Methanol supply to Lyell	PL871	2”	0.117	Steel riser	Methanol	NSP Topsides to jacket cut depth	N/A, riser	In service	As product conveyed
Lyell control umbilical	PL900 / PL900.1-6	4.4”	0.122	Chemical injection umbilical	Chemicals	NSP Topsides to jacket cut depth	N/A, umbilical riser	In service	As product conveyed
SSIV NSVA control umbilical	PLU6684	5.5”	0.125	Electro-hydraulic controls umbilical	Hydraulic fluid	NSP Topsides to jacket cut depth	N/A, umbilical riser	In service	As product conveyed
Oil export to NCP	PL1999	10”	0.320	Flexible catenary riser	Oil	NSP Topsides to seabed tie-in spool flange	N/A, flexible riser	In service	As product conveyed

Notes:
1. Lengths given reflect the length recovered down to the jacket cut depth. For the purposes of this DP, based upon jacket cut depth of El.-84 m LAT.

2.3. Wells

Wells are drilled to the Ninian field and Columba B, Columba D & Columba E terraces from the NSP platform. Well status at time of writing is as per below. However, once plugging and abandonment (P&A) has concluded, all wells will have a status of "AB3 abandoned" with a remaining category of PL 0-0-0.

Table 2-3: Well Information

Platform Wells	Designation	Status	Category of Well
Ninian Field			
3/08-S3	Production	Suspended	PL 0-3-3
3/08-S15	Production / CRI	Shut In	PL 0-3-3
3/08-S16	Injection	AB2 Abandoned	PL 3-3-3
3/08-S21	Production / CRI	AB1 Abandoned	PL 0-3-3
3/08-S27	Production / Injection	AB2 Abandoned	PL 4-3-3
3/08-S29	Production	AB1 Abandoned	PL 1-3-3
3/08-S33z	Production	Shut In	PL 1-3-3
3/08-S50	Production	AB3 Abandoned	PL 0-0-0
3/08-S52	Production	AB1 Abandoned	PL 1-3-3
3/08-S59	Production	Live	PL 3-3-3
3/08-S60z	Production	Live	PL 1-3-3
3/08-S62	Injection	AB2 Abandoned	PL 3-3-3
3/08-S64Z	Production / Injection	AB2 Abandoned	PL 4-3-3
3/08-S65	Production / Injection	AB2 Abandoned	PL 1-3-3
3/08-S67	Production	AB2 Abandoned	PL 3-3-3
3/08-S72	Injection	AB2 Abandoned	PL 3-3-3
3/08-S74	Dry Hole	Suspended	PL 0-3-3
3/08-S78y	Production	AB2 Abandoned	PL 1-3-3
3/08-S81	Production	AB2 Abandoned	PL 1-3-3
3/08-S83	Production	Live	PL 1-3-3
3/08-S85	Injection	AB2 Abandoned	PL 1-3-3

Table 2-3: Well Information			
Platform Wells	**Designation**	**Status**	**Category of Well**
3/08-S86	Injection	Live	PL 3-3-3
3/08-S87Z	Production	AB1 Abandoned	PL 3-3-3
3/08-S88	Injection	Live	PL 3-3-3
3/08-S90	Production	Live	PL 1-3-3
3/08-S92	Injection	Live	PL 1-3-3
3/08-S95	Production	Live	PL 1-3-3
3/08-S98	Production	AB2 Abandoned	PL 1-3-3
3/08-S100	Injection	Live	PL 1-3-3
3/08-S101	Production	AB2 Abandoned	PL 1-3-3
Columba B/D Fields			
3/08-S66	Production	Live	PL 1-3-3
3/08-S70	Production	Live	PL 1-3-3
3/08-S77	Production	Live	PL 1-3-3
3/08-S91z	Production / Injection	Live	PL 1-3-3
3/08-S94	Injection	Live	PL 1-3-3
3/08-S96z	Production	AB2 Abandoned	PL 1-3-3
3/08-S97	Production	Live	PL 1-3-3
3/08-S102	Production	Live	PL 1-3-3
3/08-S103	Production	AB2 Abandoned	PL 1-3-3
Columba E Field			
3/08-S58y	Production	Live	PL 3-3-3
3/08-S61z	Production	AB2 Abandoned	PL 0-3-3
3/08-S99	Injection	Live	PL 1-3-3

Details of well categorisation have been taken from OEUK Well Decommissioning Guidelines Issue 7, November 2022.

2.4. Inventory Estimates

Table 2-4: Inventory of the Material Associated with the Topsides Decommissioning			
Material	**Mass (Tonnes)**	**Material**	**Mass (Tonnes)**
Steel	21,345.5	Wood	10.4
Concrete	0.0	Polychlorinated biphenyls (PCBs)	0.2
Aluminium	3.8	Residual oils	24.3
Stainless steel	1,280.3	Other	0.4
Copper	1,927.0	Paint	176.8
Lead	24.1	Passive fire protection (PFP)	802.7
Zinc	6.4	NORM	TBC
Plastics	1,434.1	Mercury	TBC
Rockwool	127.1	Asbestos	TBC
Rubber	124.6	**Total**	27,522.0

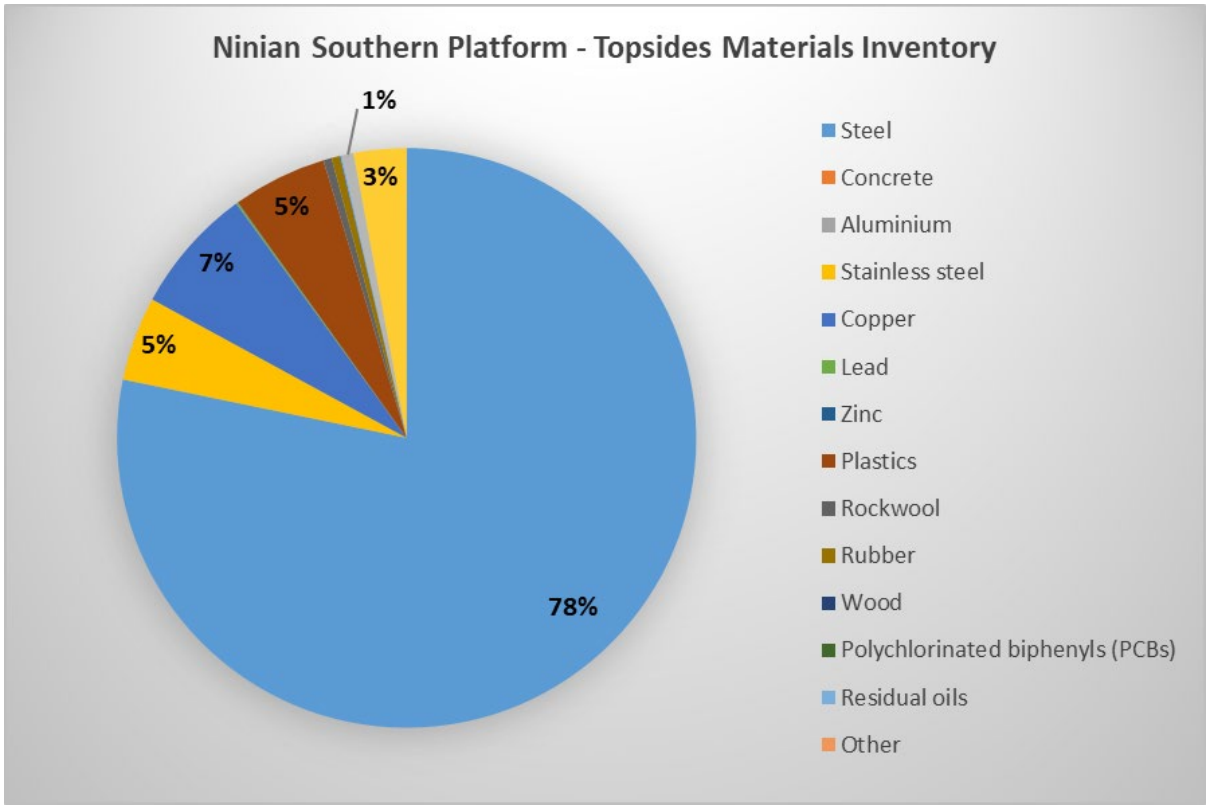


Figure 2-1 Topsides Materials Inventory

Table 2-5: Inventory of the Material Associated with the Upper Jacket Decommissioning	
Material	**Mass (Tonnes)**
Steel	10,422.8
Marine Growth	1,629.4
Total	12,052.2

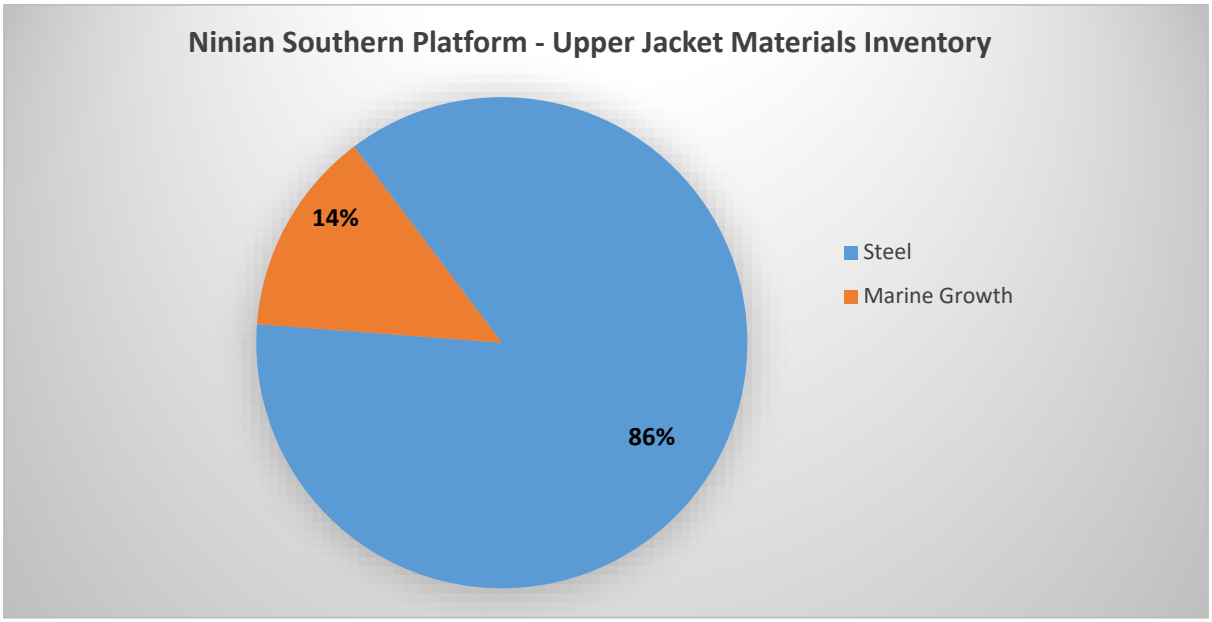


Figure 2-2 Upper Jacket Materials Inventory[1]

[1] Inventory of upper jacket is based upon a cut depth of El. -84.0 m (LAT)

Table 2-6: Inventory of the Material Associated with the Upper Jacket Riser Sections	
Material	**Mass (Tonnes)**
Steel	154.0
Plastic	14.9
Copper	1.4
Total	170.3

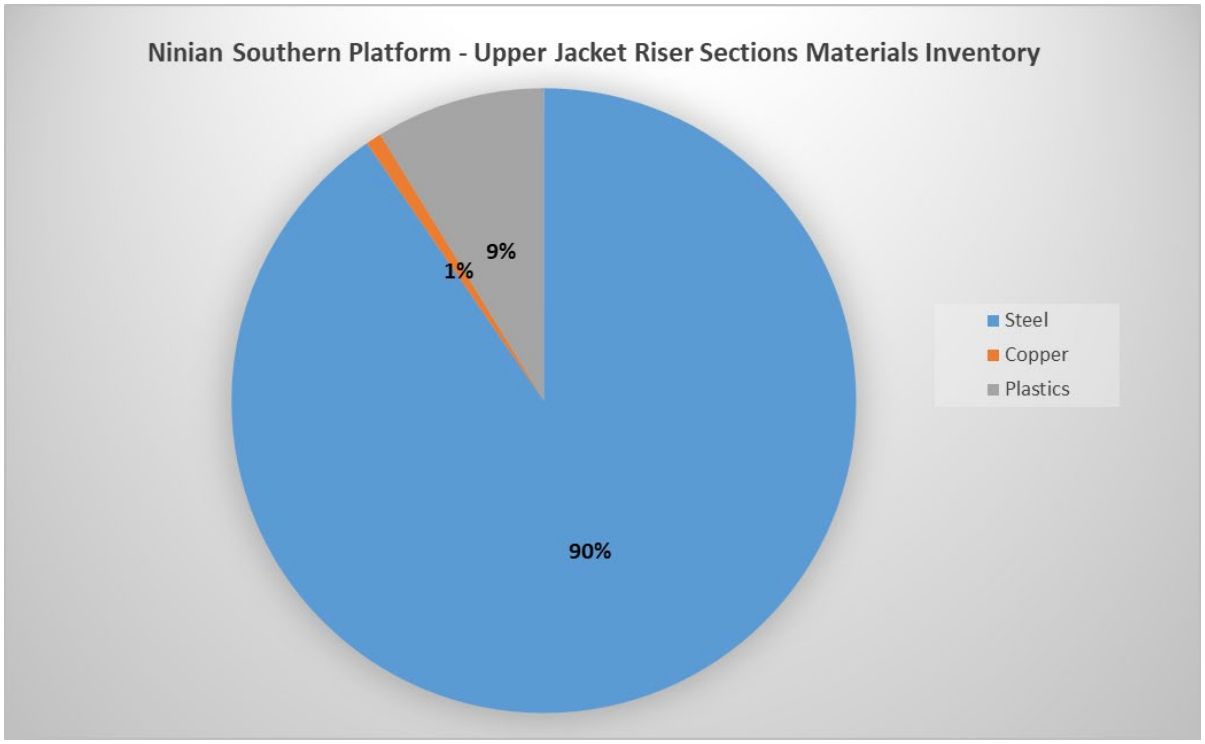


Figure 2-3 Upper Jacket Riser Sections Materials Inventory[2]

[2] Inventory of upper jacket riser sections is based upon a cut depth of El. -84.0 m (LAT)

3. REMOVAL AND DISPOSAL METHODS

The re-use of an offshore installation or parts thereof is first in the order of preferred decommissioning options. Options for re-use and repurposing were considered as part of planning for decommissioning of the NSP. The platform was installed in 1977 and by the time of removal it will have been on location for at least 50 years. It was concluded that re-use of the Ninian Southern Platform would not be a realistic option.

Article 4 of the EU Waste Framework Directive (Directive 2008/98/EC) sets out the five steps to manage waste ranked according to environmental impact (also known as the waste hierarchy). CNRI will follow the principles of the waste hierarchy, Figure 3-1 below, in order to minimise waste production resulting from the NSP decommissioning activities.

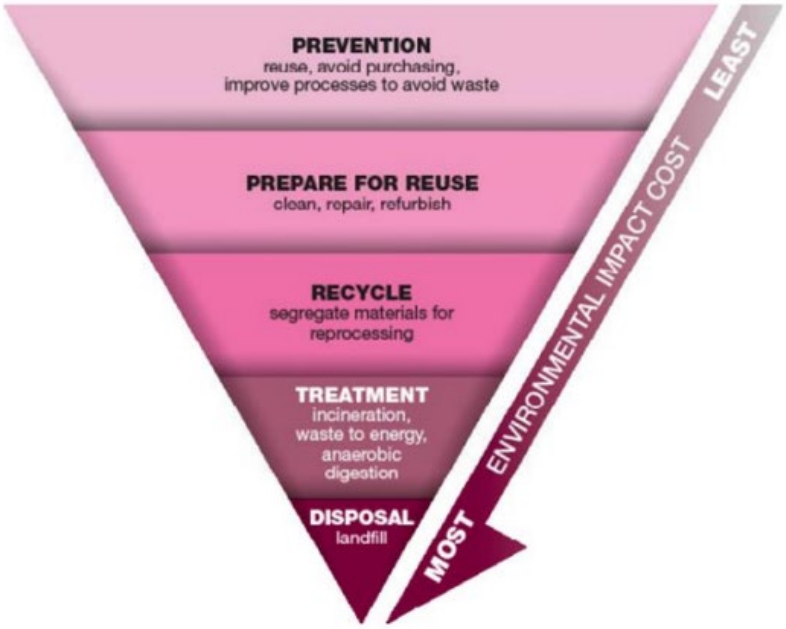


Figure 3-1 Waste Hierarchy

As part of the removals contractor selection, disposal yards will be evaluated by CNRI. OPRED will be advised once a disposal yard has been selected. Where there is the potential for trans-frontier shipment of waste (TFSW) the appropriate regulatory authorities will be engaged.

Recovered material will be landed onshore between 2027 and 2030. It is not currently possible to fully define the available recycling and waste disposal sites and treatment options, which will be determined through a competitive tendering process. Therefore, the following is a summary of the general waste disposal strategy. Percentages shown relate to the weight of material which is expected to be recovered to shore.

On removal and where practical, CNRI will ensure the principles of the waste hierarchy will be met in the handling of materials from the NSP Topsides, Upper Jacket and Associated Riser Sections decommissioning to maximise the quantities of reused and recycled material.

Preventing waste is the most preferred option. This will be achieved through reducing consumption and using resources efficiently. CNRI will comply with the Duty of Care requirements under the UK Waste Regulations and The Environmental Protection (Duty of Care) (Scotland) Regulations 2014. The project will follow industry good practice at all stages of reuse, recycling, and disposal.

The project will target options at the top of the waste hierarchy. CNRI aims to reuse or recycle a

minimum of 95 % of the waste generated from these programmes. The possibility for the recovered material to be contaminated by marine growth, hydrocarbons, paints, etc. may limit the recovered material that can be successfully recycled.

Waste management activities will be conducted in full compliance with all relevant legislation and regulatory controls. Disposal to landfill will be the option of last resort when there are no other options and the environmental disadvantages of alternatives to landfill outweigh any benefits.

CNRI recognises that there will be large quantities of material returned to shore for recycling or disposal. Regardless of the ultimate destination there will be sufficient notice provided to ensure that there is suitable capacity for processing landed material, taking due consideration of destination handling capacity and availability, and to allow all applicable regulatory bodies, stakeholders, and contractors to be engaged appropriately.

3.1. Topsides

3.1.1. Topsides Decommissioning Overview

The NSP topsides comprise 28 modules arranged over two levels which provide facilities and equipment for drilling, production, processing, power generation, oil export and accommodation. The weight of the topsides is 27,522 Te.

Modules are supported by an integral tubular deck truss mounted on the jacket, also referred to as the module support frame (MSF).

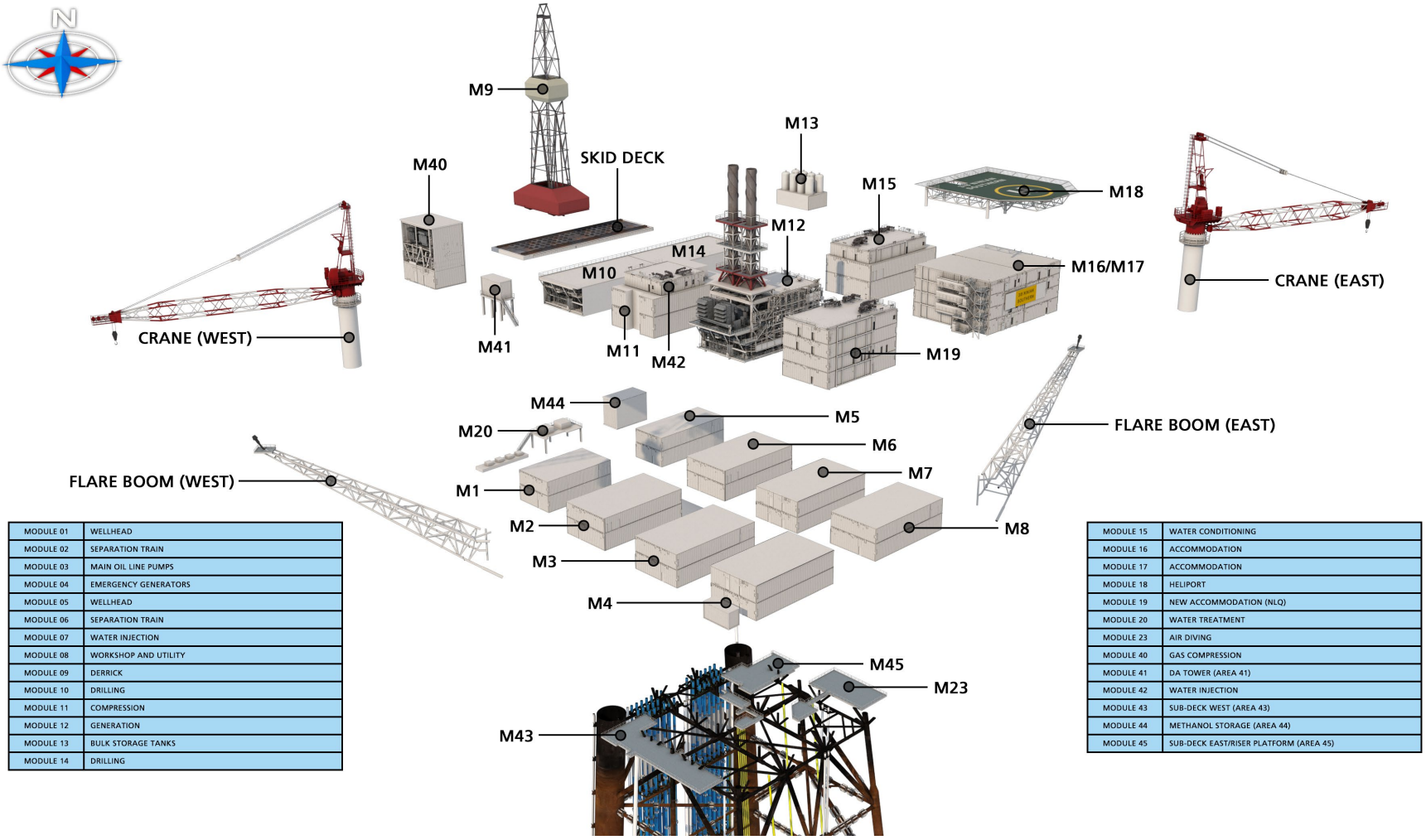
The topsides will be completely removed and returned to shore for re-use, recycling and disposal. Potential methods for removal of the topsides are outlined in Table 3-2; however, the final decision on the decommissioning of the topsides will be made following a commercial tendering process.

A view of the North West corner of the topsides is provided in Figure 3-2 and the South face in Figure 3-3.

Figure 3-4 shows an exploded view of the topsides modules.

Figure 3-2 Ninian Southern Topsides (North West corner)

Figure 3-3 Ninian Southern Topsides (South face)



MODULE 01	WELLHEAD
MODULE 02	SEPARATION TRAIN
MODULE 03	MAIN OIL LINE PUMPS
MODULE 04	EMERGENCY GENERATORS
MODULE 05	WELLHEAD
MODULE 06	SEPARATION TRAIN
MODULE 07	WATER INJECTION
MODULE 08	WORKSHOP AND UTILITY
MODULE 09	DERRICK
MODULE 10	DRILLING
MODULE 11	COMPRESSION
MODULE 12	GENERATION
MODULE 13	BULK STORAGE TANKS
MODULE 14	DRILLING

MODULE 15	WATER CONDITIONING
MODULE 16	ACCOMMODATION
MODULE 17	ACCOMMODATION
MODULE 18	HELIPORT
MODULE 19	NEW ACCOMMODATION (NLQ)
MODULE 20	WATER TREATMENT
MODULE 23	AIR DIVING
MODULE 40	GAS COMPRESSION
MODULE 41	DA TOWER (AREA 41)
MODULE 42	WATER INJECTION
MODULE 43	SUB-DECK WEST (AREA 43)
MODULE 44	METHANOL STORAGE (AREA 44)
MODULE 45	SUB-DECK EAST/RISER PLATFORM (AREA 45)

Figure 3-4 Diagram of topsides showing modules

The methods that will be used to flush, purge or clean the topsides piping, vessels and other such facilities offshore prior to removal to shore are summarised in Table 3-1.

Table 3-1: Cleaning of Topsides for Removal

Waste Type	Composition of Waste	Disposal Route
Onboard hydrocarbons	Process fluids, fuels and lubricants	Flushing of bulk process hydrocarbons will be conducted offshore and residual fluids disposed of under appropriate permits. Fuels and lubricants will be drained and transported onshore for disposal.
Other hazardous materials	Chemicals for cleaning topsides. Hazardous waste such as NORM, instruments containing heavy metals and batteries.	Discharge of cleaning chemical offshore will be managed under relevant permits. Waste chemicals, bulk NORM solids and other hazardous materials will be transported ashore for disposal using appropriately licensed carriers and onshore processing facilities.
Original paint coating	Paint containing lead. Further survey work will be undertaken to identify other components that may be present.	May give off toxic fumes / dust if flame-cutting or grinding / blasting is used therefore appropriate safety measures will be taken. Painted items will be disposed of onshore appropriately.
Asbestos	Asbestos has been identified and quantified in surveys.	Appropriate control and management of asbestos will be applied. Asbestos will be contained and shipped ashore for disposal in appropriately certified facilities.

Table 3-2: Topsides Removal Methods	
1) HLV (semi-submersible crane vessel) ☑ 2) SLV ☑ 3) Piece small ☑ 4) Other (describe briefly) ☐	
Method	**Description**
Modular removal by HLV	Removal of platform modules individually or in groups using a Heavy Lift Vessel (HLV)
Single lift removal by SLV	Removal of topsides as a complete unit and transportation to shore by Single Lift Vessel (SLV)
Offshore removal 'piece small'	Removal of topsides by breaking up offshore and returning to shore using transportation barges and / or supply vessels
Proposed removal method and disposal route	Tenderers for the topsides removal have been asked to propose removal methodologies for consideration; however, it should be noted that the upper jacket dimensions are too wide to accommodate single lift removal by the only SLV available, Pioneering Spirit. Only removal vessels operating on dynamic positioning are being considered, there is no intention to use anchored vessels for any stage of the removal operations. Removal vessel(s) will operate under a consent to locate permit. Tenders for the topsides removal will be asked to nominate an onshore reception facility that is compatible with their removal method. This may be in or out with the UK. The tenderer will raise any potential TFSW issues. An appropriately licensed site will be selected. The selected dismantling site must demonstrate a proven disposal track record of waste stream management throughout the deconstruction process and demonstrate its ability to deliver re-use and recycling options. If a non-UK yard is selected, appropriate TFSW licences will be applied for. OPRED will be informed once a disposal yard has been selected.

3.2. Jacket/Sub-structure Decommissioning Overview

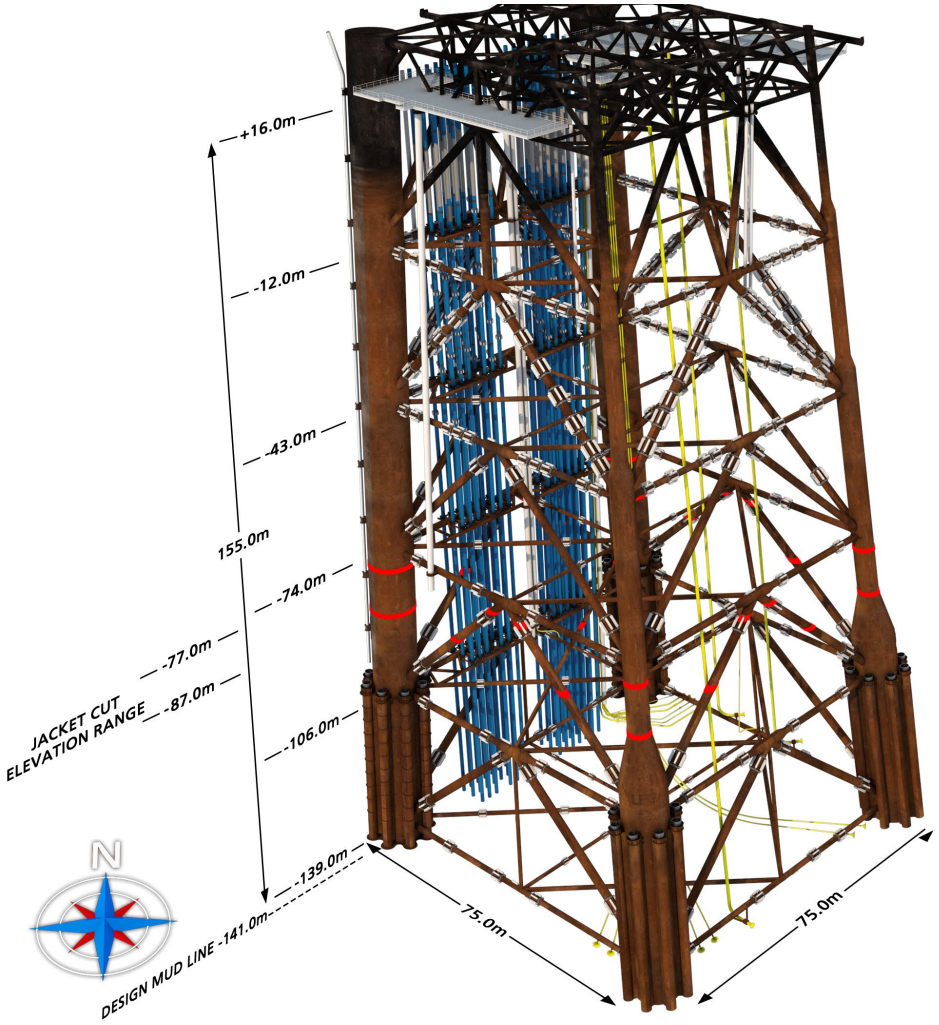


Figure 3-5 Ninian Southern Platform Jacket (indicated elevations to LAT)

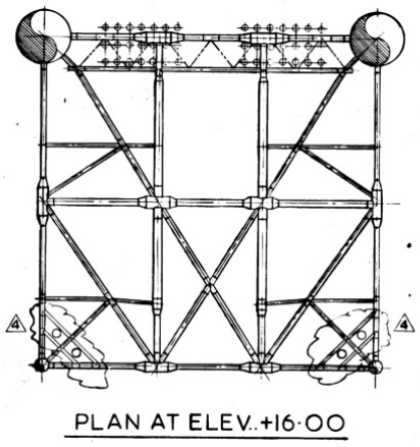


Figure 3-6 Jacket layout at top

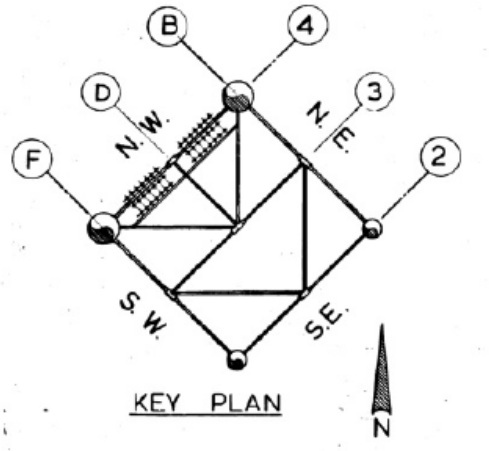


Figure 3-7 Jacket Leg Key Plan

Table 3-3: Jacket			
Name of Jacket	**Sub-structure weight (Te)**	**Date Installed**	**Seeking Derogation from OSPAR Decision 98/3 (Yes/No)**
Ninian Southern Upper Jacket	12,052.2	June 1977	No Note 1

Notes:

1. Upper jacket to be fully removed. The jacket footings will be subject to a separate decommissioning programme. The removal of the upper jacket will not prejudice the decommissioning options for the footings.

3.2.1. Jacket/Sub-structure Removal Methods

Table 3-4: Jacket(s)/Sub-structure(s) Decommissioning Methods	
1) HLV (semi-submersible crane vessel) ☑ 2) SLV ☑ 3) Piece small ☐ 4) Other (describe briefly) ☐	
Method	**Description**
Remove upper jacket section (above footings) using an HLV	Removal of upper jacket in one or more sections for transportation to onshore site for recycling and disposal.
Remove upper jacket section (above footings) using an SLV	Removal of upper jacket in a single section for transportation to onshore for recycling and disposal.
Proposed removal method and disposal route	Both removal methods, identified above will be carried forward into the tender process. Tenders for the upper jacket removal will be asked to nominate an onshore reception facility that is compatible with their removal method. This may be in or outside the UK. The tenderer will raise any potential TFSW issues. An appropriately licensed site will be selected. The selected dismantling site must demonstrate a proven disposal track record of waste stream management throughout the deconstruction process and demonstrate their ability to deliver recycling options. If a non-UK yard is selected, appropriate TFSW licences will be applied for. OPRED to be informed once a disposal yard has been selected.

3.3. Pipelines

Table 3-5: Pipeline or Pipeline Groups Decommissioning Options

Pipeline or Group (per PWA)	Condition of line/group (Surface laid/ Trenched/ Buried/ Spanning)	Whole or part of pipeline/group	Decommissioning Options considered
PL70	Rigid riser fixed to jacket	Part, section above cut depth EL -77 m to -87 m LAT	Fully removed with jacket above cut depth EL -77 m to -87m LAT
PL72	Rigid riser fixed to jacket		
PL2473	Rigid riser within Lyell caisson K42		
PL869			
PL865			
PL866			
PL867			
PL871			
PL868			
PL870	Rigid riser fixed to jacket		
PLU6684	Umbilical within J-tube J31		
PL72B	Flexible riser within J-tube J32		
PLU2238	Flexible riser within J-tube J34		
PL900 / PL900.1-6	Umbilical within J-tube J36		
PL1999	Flexible catenary riser	Whole, flexible riser from topsides hang-off to seabed tie-in, ref. Figure 3-8	Disconnected and laid temporarily on seabed. Recovered as part of subsea decommissioning campaign

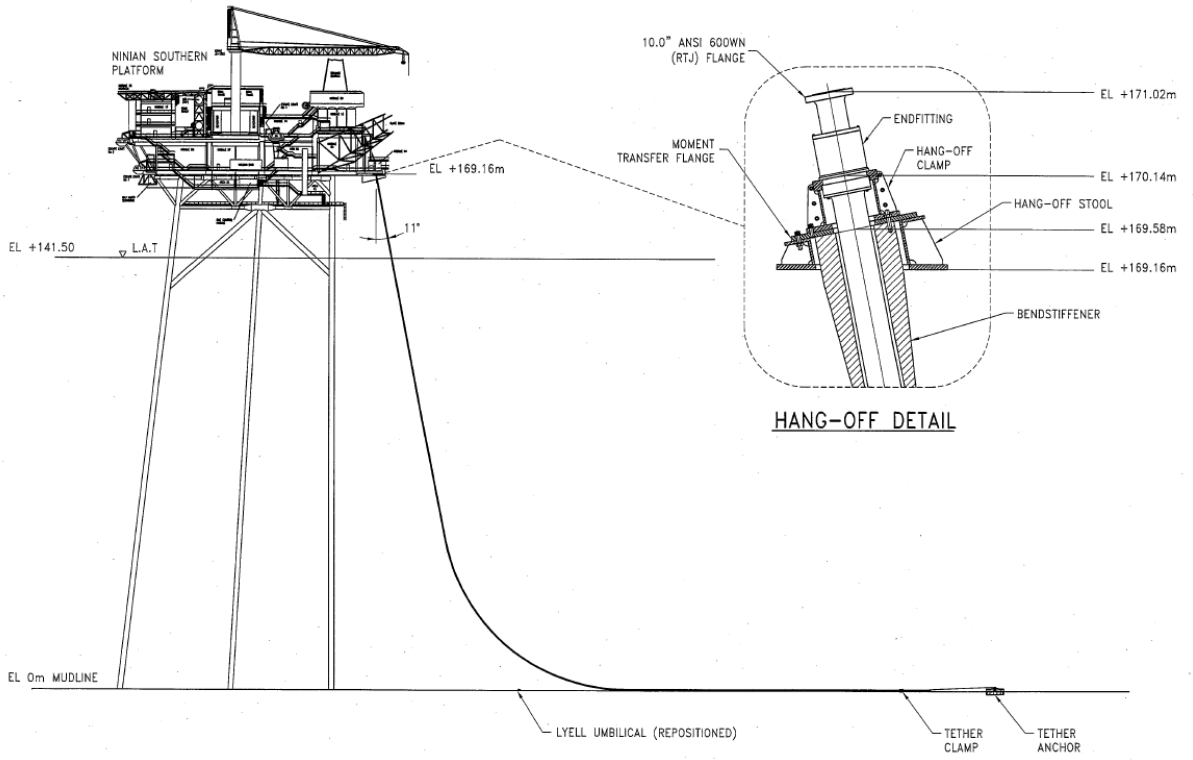


Figure 3-8 Elevation View of Catenary Export Riser PL1999

3.4. Wells

Table 3-6: Well Plug and Abandonment
There are 42 platform based well slots on NSP listed in Section 2.3 (Table 2-3). All wells will be plugged and abandoned in accordance with OEUK Well Decommissioning Guidelines, Issue 7, November 2022. Platform conductor strings will be cut below the footings elevation as close as possible to the cut height. This will ensure the conductors are removed to below the height of the jacket footings whilst leaving an adequate offset from the top of the drill cuttings pile to avoid disturbance of the pile caused by the cutting and conductor pulling operations. The remaining sections of conductors will be addressed within the sub-structure DP along with the jacket footings. A WONS / Marine Licence application will be submitted in support of any such work that is to be carried out.

3.5. Drill Cuttings

There is a drill cuttings pile located beneath the Ninian Southern Platform. The details and management of the drill cuttings pile is addressed within the Ninian Southern Platform Jacket Footings Decommissioning Programme.

3.6. Waste Streams

Table 3-7: Waste Stream Management Methods

Waste Stream	Removal and Disposal Method
Bulk liquids	During the EDC phase, flushing of bulk liquids will be undertaken offshore under an appropriate permit. Vessels and pipework will be drained and will be transported to shore in accordance with maritime transportation guidelines where it will be managed at a fully permitted onshore disposal facility. This includes the existing diesel storage in Leg F4 which will be retained until completion of a post-CoP turnaround, thereafter it shall be drained and cleaned. Temporary diesel storage will be provided as required. Further cleaning and decontamination will take place onshore prior to recycling or reuse.
Subsea infrastructure	As part of the EDC phase, pipelines and umbilicals connected to NSP topsides which convey hydrocarbons, chemicals and similar contaminants will be flushed to an acceptable cleanliness level, applying best available techniques (BAT) and best environmental practices (BEP), and under an appropriate permit prior to breaking containment. Lyell pipelines will be flushed by DSV back to NSP, while the cores of control umbilicals will be round trip flushed from NSP and back to the platform. Sections of pipeline and umbilicals recovered under these programmes will be transported to shore in accordance with maritime transportation guidelines where they will be managed at a fully permitted onshore disposal facility. If necessary, further cleaning and decontamination will take place onshore prior to recycling.
Marine growth	Where necessary and practicable to allow access, some marine growth on the upper jacket will be removed offshore, with the remainder taken onshore for disposal. A marine licence application will be submitted for the removal of marine growth on location. Onshore disposal of marine growth will be managed by the selected waste management contractor.
NORM/LSA Scale	Tests for NORM will be undertaken offshore and, where identified, material shall be transported onshore in accordance with CNRI's procedures and all relevant regulations. The selected waste management contractor will dispose of NORM under an appropriate permit and in accordance with their procedures, which shall meet or exceed CNRI's procedures and all relevant regulations.
Asbestos	Asbestos will be contained and transported onshore for disposal in accordance with CNRI's procedures and all relevant regulations.
Other hazardous wastes	Where other types of hazardous waste are identified these will be taken onshore and disposed of in accordance with CNRI's procedures and all relevant regulations. The selected waste management contractor will dispose of hazardous waste under an appropriate permit and in accordance with their procedures, which shall meet or exceed CNRI's procedures and all relevant regulations.
Onshore dismantling sites	An appropriately licensed site will be selected by the removals contractor. CNRI will ensure that the removal contractor has a proven disposal track record of waste stream management throughout the deconstruction process and can demonstrate their ability to deliver innovative recycling options. CNRI will perform audits on disposal yards to provide assurance that they

Table 3-7: Waste Stream Management Methods	
Waste Stream	**Removal and Disposal Method**
	are compliant with legislation. OPRED will be informed once a disposal yard has been selected

Table 3-8: Inventory Disposition			
	Total inventory tonnage	**Planned tonnage to shore**	**Planned left *in situ***
Installations	39,574.2 Te Note 1	39,574.2 Te Note 1	0 Te
Pipelines	170.4 Te	170.4 Te	0 Te

Notes:

1. Estimate includes topsides operational weight, upper jacket steel and marine growth weight.

4. ENVIRONMENTAL IMPACT ASSESSMENT

The ENVID Report [1] *Ninian Southern Platform (NSP) Topsides, Upper Jacket and Catenary Riser – ENVID Report, Genesis, PO1627589-GEN-EN-REP-00043* considered the potential for significant environmental effects as a result of interactions between the proposed decommissioning activities and sensitive environmental receptors. It has been prepared in accordance with BEIS Guidance Notes [2], Decom Mission's Environmental Appraisal Guidelines [3] and primarily draws upon the findings from the 2023/24 Environmental Baseline Survey conducted at the NSP site and referenced accordingly within the ENVID Report.

The environmental sensitivities around the NSP are summarised in Section 4.1. The environmental assessment has not identified any significant environmental effects as a result of activities described within these DPs.

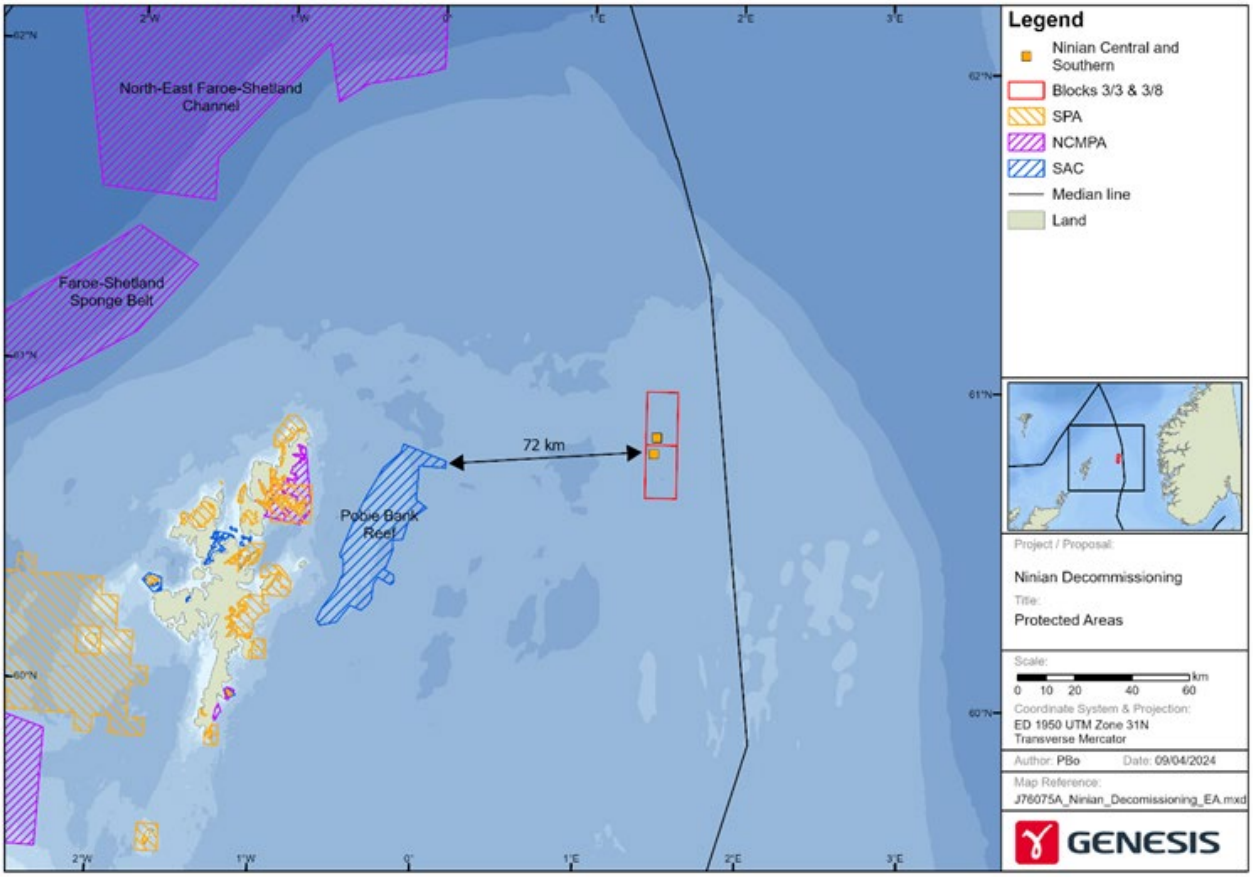


Figure 4-1 Map of designated areas around Ninian Field

CNRI acknowledges the NSTA's strategy to support the oil and gas industry in reducing greenhouse gas emissions and to help the British Government to reach its target of reducing greenhouse gas emission to net zero by 2050.

From the start of the Ninian South Decommissioning Project, CNRI has managed to reduce the duration of the NSP P&A program and EDC activities and improve the CoP target date, therefore reducing overall emissions from the platform. Through supply chain engagement, CNRI will continue to look for opportunities to reduce emissions for the remaining phases of the project.

4.1. Summary of Characteristics and Sensitivities

4.1.1. Physical Environment

NSP is in Block 3/8a of the NNS in water depth of approximately 140m, ref. Figure 1-1. The direction of residual water movement in the NNS is generally to the southeast. The mean residual current surrounding the NSP field is approximately 0.12 m/s. The prevailing winds in the NNS are from the south-west or north-northeast. 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 East Shetland Basin. 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.

4.1.2. Seabed Sediments and Contamination

In the NNS, seabed sediments generally comprise a veneer of unconsolidated terrigenous and biogenic deposits, generally much less than 1 m thick.

The seabed sediment in the NSP area generally showed low variation, classified as fine to very fine sands with smaller contributions of gravels. The seabed close to the NSP is impacted and comprises muddy sediments, often intermixed with drill cuttings.

The NSP cuttings pile (CP) is the main seabed feature that rises to approximately 17.5 m above the natural seabed, primarily surrounding the western jacket leg and extending beneath the platform to encompass all jacket legs. The total hydrocarbon content (THC) of the sediments is highly variable across the NSP site. Higher THC concentrations, exceeding the OSPAR THC threshold, have been recorded in the vicinity of the CP.

4.1.3. Fish and Shellfish

The NSP is located in International Council for the Exploration of the Sea (ICES) rectangle 50F1, an area of spawning and nursery grounds for several commercially important species.

ICES rectangle 50F1 is located within a high intensity spawning ground for cod (Jan to Apr), haddock (Feb to May), Norway pout and saithe (Jan to Apr), whiting (Feb to Jun) and sandeel (benthic spawning species) (Nov to Feb).

In addition, rectangle 50F1 is a nursery ground for anglerfish, blue whiting, European hake, haddock, herring, ling, mackerel, Norway pout, sandeel, spurdog and whiting (throughout the year).

4.1.4. Benthic Communities

NSP is located within the OSEA4 regional sea 1, an area of fine sediments. The NSP pre-decommissioning environmental survey examined the survey area for the presence of protected habitats and species.

Data from the survey indicates that:

- The presence of “Frequent” or higher burrow densities under the SACFOR scale across the survey area indicates a conformity with the OSPAR “Seapen and Burrowing Megafauna Communities” and/or the Scottish Priority Marine Feature (PMF) habitat. Sea pens and burrowing megafauna communities can therefore be deemed to be present. It should be noted that five transects out of a total of 12 were identified as “Frequent” on the SACFOR scale, the remainder being identified as “Common”.
- The NSP survey area would not be classified as the UK Biodiversity Action Plan (UK BAP) habitat “Subtidal Sands and Gravels”.

Juvenile specimens of *A. islandica* (<5cm shell size) were recovered within the grab samples and identified during taxonomic review of the samples. No living adult specimens (>5cm shell size) were recorded in any of the macrofaunal grabs and no evidence of distinct *A. islandica* siphons were observed on any of the video footage or still photographs across the survey area.

No evidence of subtidal reefs, submarine structures or any other potential Annex I Habitats are to be found in the vicinity of NSP.

4.1.5. Plankton

Phytoplankton and zooplankton communities are typical of the north and central North Sea with seasonality in abundance.

4.1.6. Seabirds

The following species have been recorded within the area; northern fulmar, northern gannet, Arctic skua, great skua, black legged kittiwake, great black backed gull, lesser black backed gull, herring gull, glaucous gull, Arctic tern, common guillemot, razorbill, little auk and Atlantic puffin.

Seabird densities in the area range from 15 – 52 individuals per km^2 over the winter months (November – March) and from 5 – 52 individuals per km^2 over the breeding/summer months (April – October), Table 4-1 below. The majority of species present are at very low (<1) to low (5 – 10) densities, however the northern fulmar exists at very high (5 – 39) densities between the months of August to February.

Table 4-1 Seabirds likely to be in the vicinity of the Ninian Hub

Species	Season	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Northern Fulmar	Breeding												
	Winter												
Northern Gannet	Breeding												
	Winter												
Arctic Skua	Additional												
Great Skua	Breeding												
Black legged Kittiwake	Breeding												
	Winter												
Black-headed Gull	Winter												
Great Black-backed Gull	Breeding												
	Winter												
Common Gull	Breeding												
Lesser Black-backed Gull	Breeding												
	Winter												
Herring Gull	Breeding												
	Winter												
Iceland Gull	Winter												
Glaucous Gull	Winter												
Arctic Tern	Breeding												
Common Guillemot	Breeding												
	Winter												
	Additional												
Razorbill	Additional												
Little Auk	Winter												
Atlantic Puffin	Breeding												
	Winter												
All Species	Breeding												
	Winter												
	Additional												
	Total												

Key:		<1 / km^2	1-5 / km^2	5-15 / km^2	15-30 / km^2	30-52 / km^2

Seabird sensitivity in Block 3/8 is low all year round. NSP is located approximately 121 km from the nearest UK coast and is therefore remote from sensitive seabird breeding areas on the coast.

The Seabird Oil Sensitivity Index (SOSI) identifies sea areas where seabirds are likely to be most sensitive to oil pollution. This data was combined with individual species sensitivity index values and summed at each location to create a single measure of seabird sensitivity to oil pollution. Block/month combinations that were not provided with data have been populated using the indirect assessment method provided by Webb et al. (2016)[3].

Seabird sensitivity in Block 3/8 is low all year round, refer Figure 4-2 below. In addition, the operations are located approximately 121 km from the nearest UK coast and are therefore remote from sensitive seabird breeding areas on the coast.

Quad /Block	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
3/2	5	5	5	5*	5*	5	5	5	4	4*	5*	5
3/3	5	5	5	5*	5*	5	5	5	4	4*	5*	5
3/4	5	5	5	5*	N	5*	5	5	5	5*	5*	5
3/7	5	5	3	3*	5*	5	5	5	5	5*	5*	5
3/8	**5**	**5**	**5**	**5***	**5***	**5**	**5**	**5**	**5**	**5***	**5***	**5**
3/9	5	5	5	5*	N	5*	5	5	5	5*	5*	5
3/12	5	5	5	5*	5*	5	5	5	5	5*	5*	5
3/13	5	5	5	5*	5*	5	5	5	5	5*	5*	5
3/14	5	5	5	5*	N	5*	5	5	5	5*	5*	5
Key	1 = Extremely high		2 = Very high		3 = High		4 = Medium		5 = Low		No data	
* in light of coverage gaps, an indirect assessment of SOSI has been made												

Figure 4-2 Seabird oil sensitivity in Block 3/8 and surrounding blocks

Over recent years there has been growing interest and reports of birds nesting on offshore installations, albeit in small numbers in the NNS. The species confirmed to have nested on offshore installation in the UKCS are black legged kittiwakes, herring gulls, razorbills, guillemots, and lesser black backed gulls.

Nesting bird surveys are performed over and above current JNCC recommendations and guidance. CNRI undertook vessel and topsides-based surveys to identify which bird species use the NSP ref. [1]. Ten bird species were identified in the vicinity of NSP during the survey (herring gull, kittiwake, starling, carrion crow, greater black back gull, gannet, lesser black back gull, northern fulmar, great skua, pied wagtail).

The 2023 survey found no evidence of current or previous nesting locations or birds displaying nesting behaviour ref. [1].

4.1.7. Marine Mammals

4.1.7.1. Cetaceans

Cetacean species that could potentially occur within the area include white-beaked dolphin, minke whale and harbour porpoise. Harbour porpoises are listed under Annex II of the EU Habitats Directive and all three species are listed as Scottish PMFs. All cetacean species occurring in UK waters are afforded European Protected Species (EPS) status. Details of the sightings and

[3] Webb, A., Elgie, M., Irwin, C., Pollock, C. and Barton, C. 2016. Sensitivity of offshore seabird concentrations to oil pollution around the United Kingdom: Report to Oil & Gas UK. Document No HP00061701

abundance of these species within the vicinity of the NSP can be summarised as follows:-

- Minke whale – low density (July)
- Harbour porpoise – low density (May, Jul – Aug)
- White-beaked dolphin – low density (July)

4.1.7.2. Seals

NSP is located approximately 121 km offshore. As a result, grey and harbour seals may be encountered from time to time but it is not likely that they use the area with any regularity or in great numbers. This is confirmed by the grey and harbour seal density maps published by the Sea Mammal Research Unit (SMRU), which are provided in the NMPi (2023). The maps report the presence of grey and harbour seals in the NSP area as between 0 and 0.001% at sea population per 25 km^2.

4.1.8. Conservation Designations

The closest protected area to the NSP is the Pobie Bank Reef Site Special Area of Conservation (SAC), which lies 72 km to the west of the installation. Due to the distances involved, it is unlikely that these designated sites or the Annex I features within them will be affected by decommissioning operations at NSP.

There are no designated Nature Conservation Marine Protected Areas (NCMPAs) in the vicinity of the NSP. The closest NCMPAs to NSP are the Fetlar to Haroldswick (121 km to the west), the North-east Faroe-Shetland Channel (153 km to the north-west), and the Faroe-Shetland sponge belt (172 km north-west). Given the large distance to the NSP, no impacts are predicted as a result of decommissioning operations at NSP.

No evidence of subtidal reefs, submarine structures or any other potential Annex I Habitats are to be found in the vicinity of NSP.

4.1.9. Commercial Fisheries

NSP is located within ICES rectangle 50F1. UK fishing effort within this rectangle varies both monthly and annually with fishing occurring year-round. Annually the fishing effort (or importance of the area) is considered low, with a mean fishing effort of 323 days between 2019 and 2023. Fishing effort was highest in 2021 with 445 days fished. Fishing effort for 50F1 contributed, on average, 0.3% of the UK total effort each year from 2019 to 2023.

Landings are a combination of demersal, pelagic and shellfish species. Landing data from 50F1 indicates that demersal fisheries dominate both tonnage of landings and value. Over the last five years fishing in 50F1 contributed on average 0.6% of UK total landings by value and 0.6% by weight.

4.1.10. Shipping

The North Sea contains some of the world's busiest shipping routes, with significant traffic generated by vessels trading between ports at either side of the North Sea and the Baltic. North Sea oil and gas fields generate moderate vessel traffic in the form of support vessels, principally operating from Peterhead, Aberdeen, Montrose and Dundee in the north and Great Yarmouth and Lowestoft in the south.

NSP is located in an area that experiences low shipping intensity.

4.1.11. Other offshore industries

Oil and gas development in this region of the North Sea is relatively intensive, with a number of other fields located nearby (seven developments within a 40 km radius).

The nearest operational renewable energy project is the Moray offshore windfarm located approximately 364 km southwest of NSP. The nearest Scotwind lease area, offered to ESB Asset Development, is NE1, located approximately 83 km to the west. NSP is located within the Innovation and Targeted Oil and Gas (INTOG) area NE-b.

There are no active aquaculture or shellfish protected waters in the vicinity of the proposed operations. The closest active aquaculture site is located along the east coast of Shetland, approximately 121 km from the proposed operations.

4.1.12. Other users of the sea

4.1.12.1. Military activity

Block 3/8 features a Ministry of Defence (MoD) restriction as it lies within military training grounds. This does not mean that activities would necessarily be prohibited but highlights increased sensitivities/restrictions within Block 3/8, which would need to be addressed during various stages of the decommissioning process.

4.1.12.2. Submarine cables

There are no known cables in the vicinity of the NSP. The closest cable is an active telecom cable located approximately 73 km east southeast of the platform.

4.1.12.3. Wrecks

There are several non-dangerous wrecks in the vicinity of NSP. The closest known wrecks to the NSP are an unidentified non-dangerous wreck located 5 km north-northwest and the Fertile II non-dangerous wreck located 16 km south-southwest. Due to the distance from the proposed project area, no interaction with these wrecks is expected. There are no scheduled monuments (including wrecks), war graves or Historic Marine Protected Areas (HMPAs) located within Block 3/8 (NMPi, 2023).

4.1.13. Other marine licences / activities

There are no pending or active marine licence areas within the proposed project area. The closest Carbon Capture Storage (CCS) licence areas NNS 1 and NNS 2 are located approximately 55 km to the north of NSP.

4.2. Potential Environmental Impacts and their Management

There will be planned environmental impacts arising from the decommissioning of the NSP topsides, upper jacket and associated riser sections. Long-term environmental impacts arising from the decommissioning operations will be low. The majority of impacts will be short term, localised and of low significance provided the proposed mitigation measures are in place.

The accidental total loss of a project-supporting vessel and subsequent release of hydrocarbon inventory to sea has been ranked as representing a “medium” environmental risk, however the likelihood of an event of this nature occurring is extremely remote. In addition, there are multiple mitigations in place to reduce the likelihood of occurrence, including the use of navigational aids on the platform following down person and on the upper jacket following topsides removal. Refer to Section 6.6 for more details.

Disturbance of nesting birds has been ranked as a high environmental risk. However, CNRI continued to implement annual bird surveys through an independent specialist and monthly surveys conducted by trained platform personnel which, to date, have identified no nesting individuals. These surveys will continue on this basis throughout the duration of the decommissioning project. These surveys will contribute to informing the requirement to consider the further development of the current Bird Management Plan.

There is the potential for marine growth removed at sea to land on the seabed creating a disturbance. There are no known mitigation measures to reduce / negate any disturbance. Receptors include benthic species and protected species. The removal of marine growth may result in the removal of the protected species Desmophyllum pertusum (also known as Lophelia pertusa); however, when this species is growing on a manmade structure it is not protected.

The magnitude of effect is considered negligible as the volume of marine growth to be removed it relatively small (c. 1,629 Te), and marine growth has a small drop cone and is likely to fall within the immediate vicinity of the footings.

There also exists the potential for marine growth to land on the cuttings pile; however given the likely velocity of the marine growth and the fact that the Environmental Baseline Survey showed a layer of living marine growth atop the cuttings pile, it is unlikely that there will be releases from the cuttings pile. The overall impact significance is ranked as low.

Table 4-2: Environmental Impact Management – Topsides and Upper Jacket Removal

Main Impacts (Planned)	Management
Atmospheric Emissions Offshore Vessels Emissions associated with the offshore work scopes impacting on climate change and air quality. 27,564 tonnes of CO_2 equivalent are calculated for the topsides and upper jacket removal and transport operations, representing 0.19% of total UKCS CO_2e emissions in 2022.	• Use of low sulphur diesel fuel in vessels. • Contractor selection process – maintenance programme to be assessed to ensure on-board operational practices will address fuel efficiency • MARPOL compliance • Vessels will be managed to minimise duration of activities and on board operational practices will address fuel efficiency
Atmospheric Emissions Onshore Activities Emissions associated with e.g. transport and recycling impacting on climate change and air quality	• Contract for dismantlement to be awarded to an established site with appropriate experience, capability, licences, consents and community engagement in place • Environmental audit of site to be conducted (to include a site visit) • CNRI contractor management / selection process

Table 4-2: Environmental Impact Management – Topsides and Upper Jacket Removal	
	• Review site records of engagement with communities and close out of any issues arising
Seabed Disturbance Disturbance associated with laydown and recovery of flexible catenary riser	• Controlled laydown on to pre-planned seabed locations. • Laydown of riser to be supported by appropriate marine licences. • The riser will then be laid down on temporary stabilisation materials on the seabed away from the platform, avoiding the drill cuttings pile accumulation around leg F4; however, the riser may be laid down on seabed contaminated by the presence of the drill cuttings pile • Any additional temporary stabilisation materials required will be subject to the appropriate consents / approvals • Appropriate risk assessment through the MATs / SATs (MCAA) system
Seabed Disturbance Disturbance associated with marine growth removed at sea to land on the seabed	• No known mitigation measures
Resource Use Offshore and Onshore Activities Fuel used in plant / equipment / vessels and vehicles	• Vessel and plant / equipment maintenance • Monitor fuel use to identify excessive fuel consumption which may indicate, for example, equipment malfunction, lack of effective maintenance, operator error • Vessel and vehicle scheduling to optimise fuel use i.e. minimise transits and transit time, ensure vessels / vehicles fully utilised
Resource Use Onshore Activities Use of landfill space	• Maximum re-use, recovery/recycling opportunities to be pursued by disposal contractor. Waste management hierarchy to be followed • Selection of suitably experienced and competent disposal contractor • Project waste management plan in place • Accurate materials inventory
Discharges to Sea Offshore Vessels Discharges (routine) e.g. greywater, ballast water	• Vessels to follow IMO Ballast Water Management Convention. All vessels to implement a ballast water management plan and maintain a ballast water record book • All discharges to be in line with IMO / MARPOL standards • Vessels to comply with CNRI marine assurance standards
Discharges to Sea Offshore Activity Cutting of risers leading to discharges of residual hydrocarbon / chemicals / inhibited seawater in hard to reach areas which have not been fully removed by DFPV The release of non-CEFAS registered chemicals was considered in the ENVID.	• Predefined cleanliness achieved though hydrocarbon freeing. CNRI aims to achieve below, as technically feasible, 30 mg/l oil in water content and 5 bq/g NORM contamination in the pipeline being decommissioned. • Rationalisation / minimisation of chemical / hydrocarbon inventory • Pre-removal inspections to identify and mitigate/remove potential release sources • Implement BAT/BEP/ALARP for cleanliness standards • There is no history of wax within the Lyell pipeline. • Wax is expected in the export pipeline to NCP. Flushing and pigging operations to facilitate disconnections, will be discussed and agreed with OPRED as a basis for demonstrating that BAT/BEP has been achieved and reasonable endeavours to remove wax have been attempted. This will be addressed via the following methodology: 1. Enhanced pigging just pre-CoP, including use of mitigation practices, such as the application of wax dissolvers / wax

Table 4-2: Environmental Impact Management – Topsides and Upper Jacket Removal	
	inhibitors if necessary. Post-pigging assessment to establish the effectiveness of the process. 2. Flushed during platform EDC activities, as PL1999 is flushing fluid export route. 3. Further flushing and/or pigging at pipeline EDC to meet cleanliness spec (< 30 mg/l) – verified via sampling on NCP. 4. Leave treated seawater filled, air gapped on both NSP and NCP. • Residual wax – following the above defined flushing and pigging steps and prior to riser disconnection, the quantity of residual wax within the risers will be determined. Discharge risk assessments and other mitigations will be employed • Non CEFAS registered chemicals – prior to decommissioning, the content of each umbilical and riser will be determined. Where prior removal of the chemicals by flushing is not possible, discharge risk assessments and other mitigations will be employed. If chemicals have left the CEFAS list, it may be possible to source historic templates to use in discharge risk assessments
Underwater Noise Offshore Vessels Injury/disturbance to marine species including Elasmobranchs should they be in the vicinity of the works.	• Optimisation of vessel activities to minimise vessel durations
Underwater Noise Offshore Activities Cutting of jacket legs to facilitate lifting and removal of topsides and upper jacket	• Implementation of JNCC Guidance in respect of noise mitigation to include the use of marine mammal observers, passive acoustic monitoring and acoustic deterrent devices where appropriate
Physical Presence Offshore Vessels Impact on other users of the sea	• Standard communication channels to be utilised to inform other users of the sea of vessel presence e.g. UK Hydrographic Office, Kingfisher, Notice to Mariners, Radio Navigation Warnings • Collision risk assessment • Stakeholder consultation • Logistics plan • Optimisation of vessel activities to minimise vessel durations
Noise and Odour Onshore Dismantling Yard	• Contract for dismantlement to be awarded warded to an established site with appropriate experience, capability, licences, consents and community engagement in place • Environmental audit of site to be conducted (to include a site visit) • CNRI contractor management / selection process • Review site records of engagement with communities and close out of any issues arising
Main Impacts (Unplanned)	**Management**
Discharges to Sea Offshore Vessels Hydrocarbon releases to sea	• SOPEP • Collision risk assessment • Maintenance procedures • SIMOPs • Vessels will be selected that comply with IMO/MCA codes for prevention of oil pollution

Table 4-2: Environmental Impact Management – Topsides and Upper Jacket Removal	
	• Pre mobilisation audits to be carried out to include a comprehensive review of spill prevention procedures
Discharges to Sea Topsides Equipment (pipework, containment vessels) Hydrocarbon and / or chemical spills to sea	• Predefined cleanliness achieved through hydrocarbon freeing • Rationalisation / minimisation of chemical / hydrocarbon • Pre-removal inspections to identify and mitigate/remove potential release sources • Implement BAT/BEP/ALARP for cleanliness standards
Seabed Disturbance Dropped Object Impact on virgin seabed (jacket sections and associated structural elements)	• Intensive review of cutting plans and "fail safe" or alternative cutting and lifting methodologies • Lifting procedures/plans in place • Lifting contractor adverse weather policy; (adequate lifting windows) • Equipment checks/assurance • Drop surveys • Lifting contractor lifting policies • Certified crane and crew competency • Stability analysis/Engineering/Centre of Gravity (COG) Checks • Marine warranty (surveyor)
Seabed Disturbance Dropped Object Impact on cuttings pile (jacket sections and associated structural elements)	• Intensive review of cutting plans and "fail safe" or alternative cutting and lifting methodologies • Lifting procedures/plans in place • Lifting contractor adverse weather policy; (Adequate lifting windows) • Equipment checks/assurance • Drop surveys • Lifting contractor lifting policies • Certified crane and crew competency • Stability analysis/Engineering/COG Checks • Marine warranty (surveyor)
Seabed Disturbance Dropped Object Impact on seabed (jacket appurtenances)	• Planned campaign to remove or secure appurtenances ahead of upper jacket lift will minimise risk of dropped object • Equipment checks/assurance • Drop surveys
Seabird Disturbance Disturbance of nesting birds and / or fledglings	• Annual nesting bird survey of the asset including vessel-based vantage point surveys, topsides nesting bird surveys and a monthly bird census on the asset (findings logged in a dedicated online portal). • Ongoing annual bird survey programme to inform the requirement to publish and implement a targeted Bird Management Plan. This will include consideration of the use of bird deterrent technologies / methodologies

4.3. Transboundary and Cumulative Impacts

At this time, final destinations of materials from the removal of the topsides, upper jacket and catenary riser are not known; however, should they require transportation and/or disposal out with the UK, audits of the non-UK locations and all necessary permits will be in place (e.g. TFSW). Transboundary effects may occur should a catastrophic unplanned event take place e.g. sinking of a support vessel or vessel collision resulting in a total loss of hydrocarbon inventory.

In terms of cumulative impacts, the operational schedule is not fully defined and therefore temporal or spatial overlap between Ninian Hub activities and neighbouring activities (including third parties) cannot currently be defined or appropriately assessed. However, as the project develops, this information will be available and consideration of transboundary and/or cumulative impacts will be assessed as part of the permitting requirements for the decommissioning activities.

5. INTERESTED PARTY CONSULTATIONS

5.1. Scope and Form of Consultation

Consultation with stakeholders on the NSP topsides/upper jacket decommissioning has always been set in the context of the NSP platform as a whole, i.e. including the lower jacket and footings, and as part of the broader plans for the Ninian Field, including Ninian Central Platform (NCP) and subsea decommissioning.

An iterative approach was taken, building on an initial stakeholder workshop to identify areas for further exploration and research. The objective was to ensure that comments and questions raised in connection with NSP, as well as additional learnings gathered during this process, could be used to inform the development of the plans for decommissioning NCP and subsea infrastructure in order to avoid stakeholder fatigue.

5.2. Communications Methods Summary

This section indicates the methods used to communicate and consult with stakeholders prior to the formal statutory and public consultation on the draft DP. It indicates the methods used to communicate and consult with other, non-statutory stakeholders prior to the formal consultation. Response to the latter will be added to the final DP when presented to OPRED for approval.

Table 5-1: Summary of Other Stakeholder Activity			
Informal Consultations Record			
Stakeholder	**Date**	**Activity**	**Response**
NSTA	11/05/23	Asset repurposing screening template completed for Ninian Hub and returned in association with Tier 2 Review for 2022, with follow up meeting held May 2023.	Agreed no value in pursuing repurposing or reuse option for NSP
100 stakeholder organisations	04/07/2024	Invited to participate in an online workshop introducing Ninian Field decommissioning in general and NSP in particular. 53 people from 39 external organisations attended. Pre-read information and follow up report issued capturing discussions and comment issued to all 100 stakeholder organisations. Materials published online.	Stakeholder meetings set up in direct response to points raised (see below). Other points raised captured for addressing in DP and supporting documentation.
Marine Alliance for Science and Technology for Scotland (MASTS)	5/7/2024	Discussion on approach to involving academics in research opportunities and role which MASTS could play.	Used to inform approach to Research Academics meeting 28.8.24.
Edinburgh University	Aug/Sept 2024	Post-workshop academic literature review and consultation with specialist organisations including JNCC and others regarding potential presence of and impact of decommissioning on elasmobranchs (including	Incorporated into environmental assessment. While studies on this are limited, from the information found, it is unlikely elasmobranchs would be severely impacted given a) natural response to avoid, and b) limited

Table 5-1: Summary of Other Stakeholder Activity			
Informal Consultations Record			
Stakeholder	**Date**	**Activity**	**Response**
		porbeagles, skates and rays) in the North Sea.	presence which would be expected in context of an extended period of time and so on. Research paper in *Nature* about elasmobranchs and noise has been included in environmental impacts assessment as a basis of behavioural response.
Global Marine Systems	19/08/2024	Post-workshop follow-up on cable proximity, confirming that nearest active cables are >45 km away. Agreement that if decommissioning plans change and seabed invasive operations are to occur near existing telecom infrastructure, operational notifications to any nearby cable owners of any upcoming operations will be required.	Noted.
JNCC and WDC	21/08/2024	Post-workshop follow-up meeting with JNCC following WDC remarks, held to explore operator need for guidance on noise measurement and new modelling techniques, and research opportunities in the context of NSP and Ninian Field decommissioning.	Liaison to continue with JNCC, keeping WDC informed on progress.
Northern Lighthouse Board (NLB)	28/08/2024	Post-workshop follow-up meeting held to explore navigational safety matters in more detail and to seek guidance from NLB in that context in relation to different decommissioning phases.	Navaid experiences of other operators to be sought out. Liaison to continue as plans evolve, involving the Maritime and Coastguard Agency in future meetings.
Fairfield Energy, Repsol, Shell, Taqa	various	Experiences from other operators regarding aids to navigation gathered to inform approach to risk mitigation during different decommissioning phases.	To be used to inform NSP and NCP safety planning during execution.
Research Academics (Aberdeen University, National Decommissioning Centre and Edinburgh University) and	28/08/2024	Post-workshop follow-up meeting held to set out research collaboration opportunities on both regular and *ad hoc* offshore interventions and hear about research programmes which may benefit from this.	Liaison to continue, particularly in the context of INSITE Phase 3 and ValMas Research Programmes

Table 5-1: Summary of Other Stakeholder Activity			
Informal Consultations Record			
Stakeholder	**Date**	**Activity**	**Response**
INSITE North Sea Programme			
Scottish Fishermen's Federation (SFF)	19/09/2024	Post-workshop follow-up meeting held to explore commercial fisheries' interests, especially regarding navigational safety and risk mitigations during and after NSP decommissioning, as well as for the Ninian Hub area decommissioning, covering NCP and Hub Subsea decommissioning more broadly. Discussion of requirements and recent experiences by other operators, need for visibility of aids to navigation, arrangements for marking during different decommissioning phases.	Liaison to continue as plans progress.
Scottish Association for Marine Science (SAMS)	27/09/2024 and 28/10/2024	Post-workshop follow-up meeting held 27.9.24 to set out research collaboration opportunities across the Ninian Field on both regular and *ad hoc* offshore interventions and hear about research programmes which may benefit from this. Further meeting held 28.10.24 to explore specific opportunities to be pursued.	Liaison to continue.
31 stakeholder organisations	10/09/2024	Draft Environmental Impact Assessment Scoping Report issued for 30-day consultation with regulatory, statutory, academic, and eNGOs with known societal and environmental interests. Three of 31 stakeholders (OPRED EMT, JNCC and Edinburgh University) responded.	Comments incorporated, and also used to inform NCP scopes.
NSTA and OPRED (Offshore Decommissioning Unit and Environmental Management Team)	Ongoing	Ongoing liaison at regular meetings and associated correspondence. NSTA Tier 1 and Tier 2 meetings held 3.12.24 (Tier 1) and 30.10.24 and 15.11.24 (Tier 2),	Liaison to continue.
Maritime & Coastguard Agency (MCA) and NLB	10.12.2024	Multilateral meeting to explore plans for ensuring suitability of aids to navigation during different decommissioning stages	Liaison to continue

Table 5-1: Summary of Other Stakeholder Activity			
Informal Consultations Record			
Stakeholder	**Date**	**Activity**	**Response**
CNRI Website	Ongoing	Regular updates to website as relevant information becomes available.	To continue.

5.3. Statutory Consultees Engagement and Comment

[HOLD 1]

Table 5-2: Summary of Stakeholder Comments		
UK Statutory and Public Consultation		
Stakeholder	**Comment**	**Response**
National Federation of Fishermen's Organisations	[HOLD 1]	[HOLD 1]
Scottish Fishermen's Federation	[HOLD 1]	[HOLD 1]
Northern Ireland Fish Producers' Organisation	[HOLD 1]	[HOLD 1]
Global Marine Systems Limited	[HOLD 1]	[HOLD 1]
NSTA		CNR International (U.K.) Limited has consulted with NSTA under S29(2A) of the Petroleum Act
Public	[HOLD 1]	[HOLD 1]

5.4. Responses to Statutory Consultations by Interested Stakeholders

[HOLD 1]

Table 5-3: Consultations - Summary of Responses (Non-Statutory Consultees)		
Responses to Statutory Consultations by Interested Stakeholders		
Stakeholder	**Comment**	**Response**
	[HOLD 1]	[HOLD 1]
	[HOLD 1]	[HOLD 1]
	[HOLD 1]	[HOLD 1]
	[HOLD 1]	[HOLD 1]
	[HOLD 1]	[HOLD 1]

6. PROGRAMME MANAGEMENT

6.1. Project Management and Verification

On behalf of the Section 29 holders, a CNRI project management team will be appointed to manage the operations of competent contractors selected for the well abandonment, decommissioning, and removal and disposal scopes of work.

Operational controls, hazard identification and risk management will be governed by CNRI's Safety, Health and Environmental Management System. The work will be coordinated with due regard to the interfaces with other operators' oil and gas assets and with other users of the sea.

CNRI will control and manage the progress of all permits, licences, authorisations, notices, consents and consultations required. Any changes to these decommissioning programmes will be discussed with OPRED and approval sought.

6.2. Post-Decommissioning Debris Clearance and Verification

The base case for the removal of NSP topsides is between 2027 and 2029 with removal of the upper jacket by 2030. The exact removal date of the topsides and upper jacket will be determined by the removals contractor and dependent on vessel availability.

6.2.1. Platform Down-Person

Following CoP and completion of all the P&A and EDC activities and any other preparatory works that necessitate personnel being maintained on the platform, the platform crew will disembark from NSP for the final time. While the topsides remains in place without personnel to monitor shipping in the area it will be necessary to install self-contained navigational aids, in compliance with the Standard Marking Schedule[4], to identify the location of the platform to local shipping. The maintenance of navigational aids is described further in Section 6.6.

6.2.2. Jacket Interim Status

Following removal of the topsides the remaining jacket structure will also be marked by navigational aids. An as-left survey will be conducted on the jacket following topsides removal. The current 500m safety zone will remain in place until the upper jacket is removed.

Sacrificial anodes provide local protection to the jacket, and whilst the topsides remains in place and powered, there is further regional protection provided by an impressed current system.

6.2.3. As Left Status

Following the removal of the upper jacket CNRI will conduct an as-left survey of the lower jacket footings (pending their decommissioning), to confirm that upper jacket removal is in accordance with the approved DPs. The post-decommissioning survey results will be notified to OPRED and the United Kingdom Hydrographic Office (UKHO) for marking on Admiralty Charts and inclusion in Notices to Mariners, and uploaded to Kingfisher for inclusion in the FishSAFE system.

A subsea safety zone will be applied for the period between removal of the upper jacket and completion of the footings and subsea decommissioning, which will be covered under separate decommissioning programmes as part of the wider Ninian Hub decommissioning project.

Oilfield related seabed debris will be recovered as part of the Ninian Hub subsea removals

[4] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/208141/Standard_Marking_Schedule.pdf

campaign(s), for onshore disposal or recycling in line with existing disposal methods.

Following complete Ninian Hub decommissioning, an independent verification of the seabed will be performed, and CNRI will conduct a further environmental survey.

6.3. Indicative Schedule

The main milestones in the NSP Topsides, Upper Jacket and Associated Riser Sections decommissioning process are anticipated to be:

- NSP cessation of production: 2025
- Topsides removal: 2027 - 2029
- Upper jacket removal: by 2030 (following topsides removal)
- Upper jacket removal as left survey: 2027 - 2030
- Post removal survey: Post 2030

The proposed NSP Topsides and Upper Jacket decommissioning schedule is shown in Figure 6-1, below. Activities are subject to vessel availability and thus activity schedule windows are included to account for uncertainty.

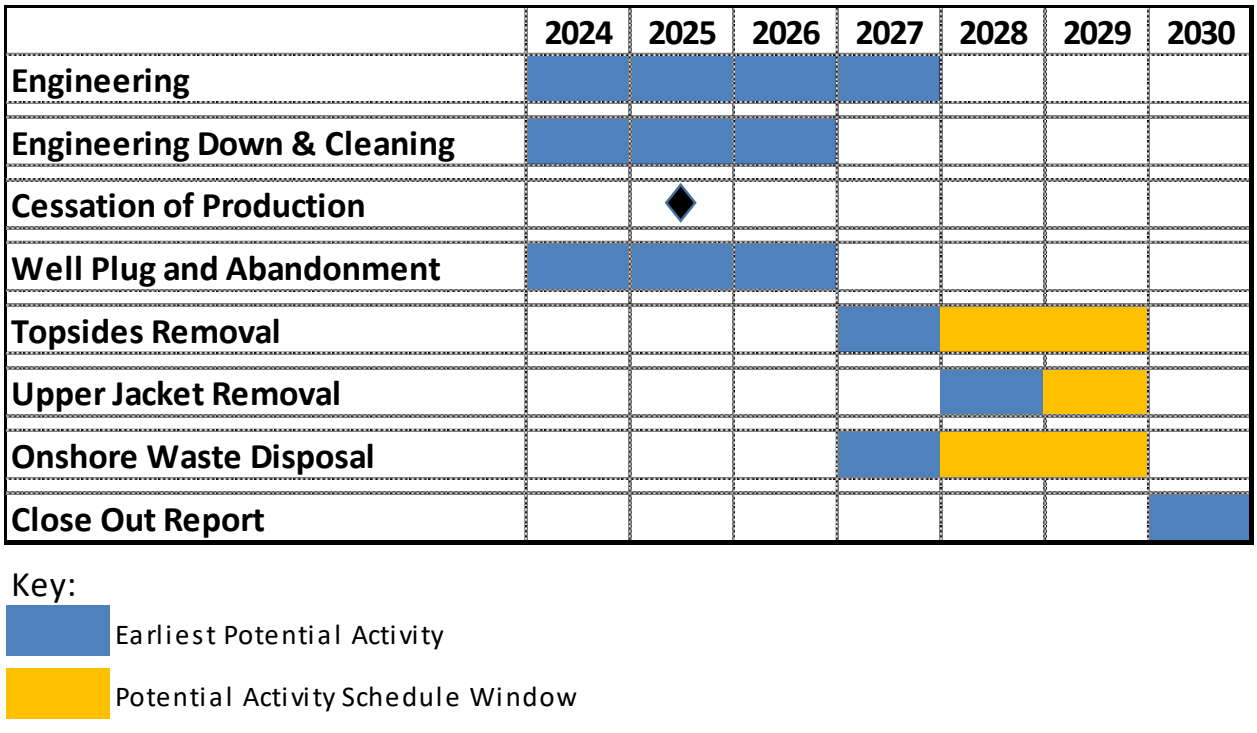


Figure 6-1 Indicative Project Schedule

6.4. Costs

Table 6-1: Provisional Decommissioning Programme(s) Costs	
Item	**Estimated Cost (£m)**
WBS 1 – Operator Project Management	Provided to OPRED
WBS 2 – Post CoP OPEX	Provided to OPRED
WBS 3 – Well Abandonment	Provided to OPRED
WBS 4 – Facilities / Pipelines Make Safe	Provided to OPRED
WBS 5 – Topsides Preparation	Provided to OPRED
WBS 6 – Topsides Removals	Provided to OPRED
WBS 7 – Sub-structure Removals	Provided to OPRED
WBS 8 – Topsides and Sub-structure Onshore Recycling	Provided to OPRED
TOTAL	Provided to OPRED

6.5. Close Out

In accordance with the guidelines, a close out report will be submitted to OPRED within twelve months of the completion of the offshore decommissioning scope and disposal. Any variances from the approved Decommissioning Programmes will be described and explained in the close out report.

6.6. Post-Decommissioning Monitoring and Evaluation

A post decommissioning environmental seabed survey will be carried out in the vicinity of the NSP following the completion of Ninian Hub decommissioning. The survey will focus on chemical and physical disturbances resulting from the completed decommissioning operations and will be compared with the pre-decommissioning survey.

In the interim stage, whilst the upper jacket remains *in situ* and above sea level, the 500m exclusion zone will also remain. Navigational aids will be installed to mitigate the potential risk of ship collision. These will be manufactured in such a way that they can be accessed for maintenance and a process will be in place to monitor and rectify any issues for the period that they are in use. A Consent to Locate will be applied for and engagement with the relevant statutory bodies such as the NLB will be conducted to agree the specific markers. CNRI will develop maintenance and monitoring procedures that will include remote monitoring, periodic maintenance and testing in compliance with the Consent to Locate. The design, manufacture, installation and maintenance of the navigational aids will be assured via an independent verification scheme and will be further defined in the Safety Case.

Following removal of the upper jacket to the cut height, NSP will no longer be classed as an installation (as defined in the Offshore Installations and Pipeline Works (Management and Administration) Regulations (MAR) 1995) by the Offshore Safety Directive and as such the 500m safety zone will be removed. As stated previously, following topsides and upper jacket removal, residual risk to other users of the sea from the remaining subsea infrastructure are proposed to be mitigated through the establishment of an interim 500m safety zone.

7. SUPPORTING DOCUMENTS

Table 7-1: Supporting Documents

Ref.	Title
[1]	Ninian Southern Platform (NSP) Topsides, Upper Jacket and Catenary Riser – ENVID Report, PO1627589-GEN-EN-REP-00043, A1, Dec 2024
[2]	BEIS Guidance Notes – Decommissioning of Offshore Oil and Gas Installations and Pipelines, Nov 2018
[3]	Decom North Sea Environmental Appraisal Guidelines: Offshore Oil & Gas Decommissioning, 2018

8. PARTNERS' LETTERS OF SUPPORT

[HOLD 2]

APPENDIX

Public Notice

[HOLD 3]

Statutory Consultee Correspondence

[HOLD 4]