

NORTH CORMORANT TOPSIDE

Decommissioning Programme



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	A MacLean K Lilford		S Salter		D Taylor I Lewis	

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CONTENTS

CONTENTS	3
ABBREVIATIONS	4
FIGURES	6
TABLES	7
APPENDICES	7
1. EXECUTIVE SUMMARY	8
2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED	19
3. REMOVAL AND DISPOSAL METHODS	25
4 ENVIRONMENTAL APPRAISAL OVERVIEW	32
5 INTERESTED PARTY CONSULTATIONS	42
6 PROGRAMME MANAGEMENT	43
7 SUPPORTING DOCUMENTS	46
APPENDICES	47

ABBREVIATIONS

ABBREVIATIONS	
Abbreviation	Explanation
ALQ	Additional Living Quarters
bbls	Barrels
CoP	Cessation of Production
DP	Decommissioning Programme
EA	Environmental Appraisal
EDC	Engineer Down & Clean
EMS	Environmental Management System
EUNIS	European Nature Information System
HLV	Heavy Lift Vessel
HSE	Health and Safety Executive
IDS	Integrated Deck Structure
JNCC	Joint Nature Conservation Committee
km	Kilometres
Km ²	Kilometres Squared
LSA	Low Specific Activity Scale
LQ	Living Quarters
m	Metres
m ³	Metres Cubed
N/A	Not Applicable
NFFO	National Federation of Fishermen's Organisations
NIFPO	Northern Ireland Fish Producers Organisation Ltd
NLB	Northern Lighthouse Board
NNS	Northern North Sea
NOF	Business Development Organisation

ABBREVIATIONS (CONT.)	
Abbreviation	Explanation
NORM	Naturally Occurring Radioactive Material
OGA	Oil and Gas Authority
OGTC	Oil and Gas Technology Centre
OGUK	Oil & Gas UK
OPEP	Oil Pollution Emergency Plan
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	Oslo Paris Convention
P&A	Plug & Abandon
PETS	Portal Environmental Tracking System
PON	Petroleum Operations Notice
RoI	Reverse of Installation
SCAP	Supply Chain Action Plan
SCOL	Self-Contained Offshore Lighthouse
SFF	Scottish Fishermen's Federation
SLV	Single Lift Vessel
SPE	Society of Petroleum Engineers
SVT	Sullom Voe Terminal
TAQA	TAQA Bratani Limited
Te	Tonnes
TFS	Transfrontier Shipment (of Waste)
UKCS	United Kingdom Continental Shelf
UKHO	United Kingdom Hydrographic Office
WONS	Well Operations and Notifications System

FIGURES

FIGURES		
Figure Reference	Description	Page
Figure 1.1	Field Location in UKCS	12
Figure 1.2	TAQA NNS Field Layout	13
Figure 1.3	Adjacent Facilities Interdependency Overview	17
Figure 2.1	North Cormorant Topside	19
Figure 2.2	North Cormorant Topsides by Functional Category	23
Figure 2.3	North Cormorant Topsides by BEIS Category	24
Figure 3.1	North Cormorant Topsides Side Elevation	25
Figure 3.2	North Cormorant Topsides Modular Construction	26
Figure 3.3	North Cormorant Topsides Overview	27
Figure 6.1	North Cormorant Decommissioning Project Schedule	43

TABLES

TABLES		
Figure Reference	Description	Page
Table 1.1	Installation to be Decommissioned	10
Table 1.2	Installation Section 29 Notice Holders Details	10
Table 1.3	Summary of Decommissioning Programme	11
Table 1.4	Adjacent Facilities	14
Table 2.1	Surface Facilities Information	19
Table 2.2	Well Information	20
Table 3.1	Cleaning of Topsides for Removal	28
Table 3.2	Topsides Removal Methods	29
Table 3.3	Well Plug and Abandonment	29
Table 3.4	Waste Stream Management Methods	30
Table 3.5	Inventory Disposition	31
Table 3.6	Reuse, Recycling and Disposal Aspirations for Recovered Material	31
Table 4.1	Environmental Sensitivities	32
Table 4.2	Environmental Impact Management	35
Table 5.1	Summary of Stakeholder Comments	42
Table 6.1	Provisional Decommissioning Programme Costs	44
Table 7.1	Supporting Documents	46

APPENDICES

APPENDICES		
Appendix	Description	Page
1	Public Notice	47
2	Letters of Support	48

1. EXECUTIVE SUMMARY

1.1 Decommissioning Programme

This decommissioning programme is for the North Cormorant topside installation only.

The North Cormorant platform is located in Block 211/21a in the UK Northern North Sea. The field was discovered in May 1974 by Shell / Esso with the platform installed in 1981 and production starting in February 1982.

A CoP (Cessation of Production) application for North Cormorant is currently under preparation and will be submitted to the Oil & Gas Authority (OGA) in Q3 2020. The CoP date for North Cormorant is currently anticipated to be Q4 2023.

This North Cormorant Topside Decommissioning Programme is supported by an Environmental Appraisal which is a separate document and referred to in Section 7.

The early removal of the North Cormorant topside will not prejudice any decommissioning options for the remaining substructure. This will minimise the period between cessation of production and the removal of the topsides. This has safety and environmental benefits, as it reduces the length of time that people and equipment are mobilised to the platform to perform maintenance of the topsides to ensure they are in a safe condition for dismantling.

This decommissioning programme is for the North Cormorant topside with early planning having commenced and the execution window of 2024 as the earliest possible start date through to project completion in 2028.

1.2 Requirement for Decommissioning Programme

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the North Cormorant installation (see Table 1.2) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the North Cormorant topside detailed in Section 2.1 of this programme.

In conjunction with stakeholder and regulatory consultation, the decommissioning programme is submitted in compliance with national and international regulations and OPRED guidelines. This decommissioning programme is for an anticipated 9-year schedule, planning for which began in 2019.

Letters of Support from exited Section 29 Notice Holders are contained within the Appendices.

1.3 Introduction

North Cormorant is a fixed Installation serving as a manned drilling and production facility for the Cormorant North Field, which lies within the East Shetland Basin of the UKCS in licence block 211/21a.

The large steel jacket / sub-structure of the North Cormorant platform will be subject to a separate Decommissioning Programme.

The platform is located in 160 meters water depth and consists of an eight-legged steel jacket substructure, weighing 20,052 Te. The Module Support Frame (MSF) structure attached in one piece to the jacket, and acts as a base support for two levels of modules weighing 16,177 Te. The North Cormorant field has now produced 447MMbbls (to end Dec 2019) from a STOIP view of 982MMbbls, a recovery factor of 46%.

The ability for North Cormorant to continue producing to the limit of economic viability will be largely influenced by the performance of the Otter field and Multi Phase Pump (MPP) which provides significant support to the cash flow of the North Cormorant area economics, and the availability of an export route through Cormorant Alpha to the Sullom Voe Terminal (SVT). The current Otter CoP date is end Q4 2023.

The North Cormorant platform facilitates production from the North Cormorant and Cormorant East Fields. Oil and gas imported from Otter is separated out and processed via the North Cormorant process facilities. The oil is then routed to Cormorant Alpha for onward transmission through the Brent Oil Pipeline System to Sullom Voe. Associated gas, and gas imported from Tern Alpha, is exported through the Western Leg and the Far north Liquids and Associated Gas System (FLAGS) Pipeline to the St. Fergus terminal.

Two third party fields (Ithaca operated Causeway and Fionn) have utilised the North Cormorant facilities, however both of these fields have already ceased production. Cormorant East's production profile is in line with North Cormorant's and is therefore forecast to CoP at the same time. The Cormorant East wells will be P&A'd as part of the North Cormorant campaign. Therefore, the removal of the North Cormorant topsides will not strand any reserves.

TAQA have carried out a review of the North Cormorant asset to determine the feasibility of asset reuse. The alternatives for reuse included: an offshore renewable energy generation station (wind, wave or tidal), a marine research station, a training centre, fish farming site, carbon capture and storage site and reuse of the facilities at an alternative location. However, after a thorough review TAQA concluded that reuse was not a credible option because of the age of the infrastructure, its distance from shore and lack of demand for the converted facility. Therefore, the asset must be decommissioned.

Separate Decommissioning Programmes covering the remainder of the North Cormorant substructure, the associated pipelines, power cables, umbilicals and the Otter tie back are currently planned for 2020+.

Section 1.5 describes the boundaries of the decommissioning programme in detail.

1.4 Overview of Installation Being Decommissioned

1.4.1 Installation

TABLE 1.1 INSTALLATION TO BE DECOMMISSIONED			
Field:	Cormorant North	Production Type (Oil/Gas/Condensate):	Oil / Gas
Water Depth:	160 m	UKCS Block:	211/21a
Distance to Median (km):	35 km	Distance from Nearest UK Coastline (km):	113km from Unst
Surface Installation			
Number:	Type:	Topsides Weight (Te):	
1	Fixed Large Steel Jacket	16,177.74	
Number of Wells			
Platform:		41	

TABLE 1.2 INSTALLATION SECTION 29 NOTICE HOLDERS DETAILS		
Section 29 Notice Holders	Registration Number	Equity Interest (%)
TAQA Bratani Limited	05975475	100%
Shell U.K. Limited	00140141	0%
Esso Exploration and Production UK Limited	00207426	0%

1.5 Summary of Proposed Decommissioning Programme

TABLE 1.3 SUMMARY OF DECOMMISSIONING PROGRAMME

Proposed Decommissioning Solution	Reason for Selection
Topsides	
<p>North Cormorant Platform: complete removal of topsides for re-use, recycling or appropriate disposal</p> <p>Cleaned equipment refurbished for re-use where possible. Equipment which cannot be re-used will be recycled or other disposal routes as appropriate.</p> <p>The range for the topside cut height will be determined once the methodology for removal is selected. TAQA will advise OPRED.</p>	Meets regulatory requirements
Wells	
<p>Abandoned in accordance with Oil & Gas UK Guidelines for the suspension and abandonment of wells</p> <p>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. Currently planned to take place between H2 2020 & 2024.</p> <p>Above the seabed, the conductors will be cut at the derogation height with removed sections transported to shore for recycling. Once the cut heights are determined OPRED will be advised of the elevations.</p>	Meets OGA and HSE regulatory requirements
Interdependencies	
<p>As North Cormorant processes the production from both the Otter and Cormorant East fields they both have an interdependency on the North Cormorant topside. However, the production profiles from these fields are aligned with that of the native platform production therefore no economic production will be stranded due to the removal of North Cormorant topside.</p> <p>Gas is exported from the Western Isles Field Development which flows up and over the North Cormorant platform topside before tying into the Western Leg Gas Pipeline (WLGP). TAQA has engaged with the Western Isles Operator to agree future arrangements with regards to this service in advance of the topside decommissioning commencing. TAQA will also engage with the WLGP Operator to discuss arrangements for disconnecting from the WLGP.</p> <p>Separate decommissioning programmes will be submitted for both the North Cormorant substructure and the field pipeline infrastructure at a later date.</p>	

1.6 Field Location Including Field Layout and Adjacent Facilities

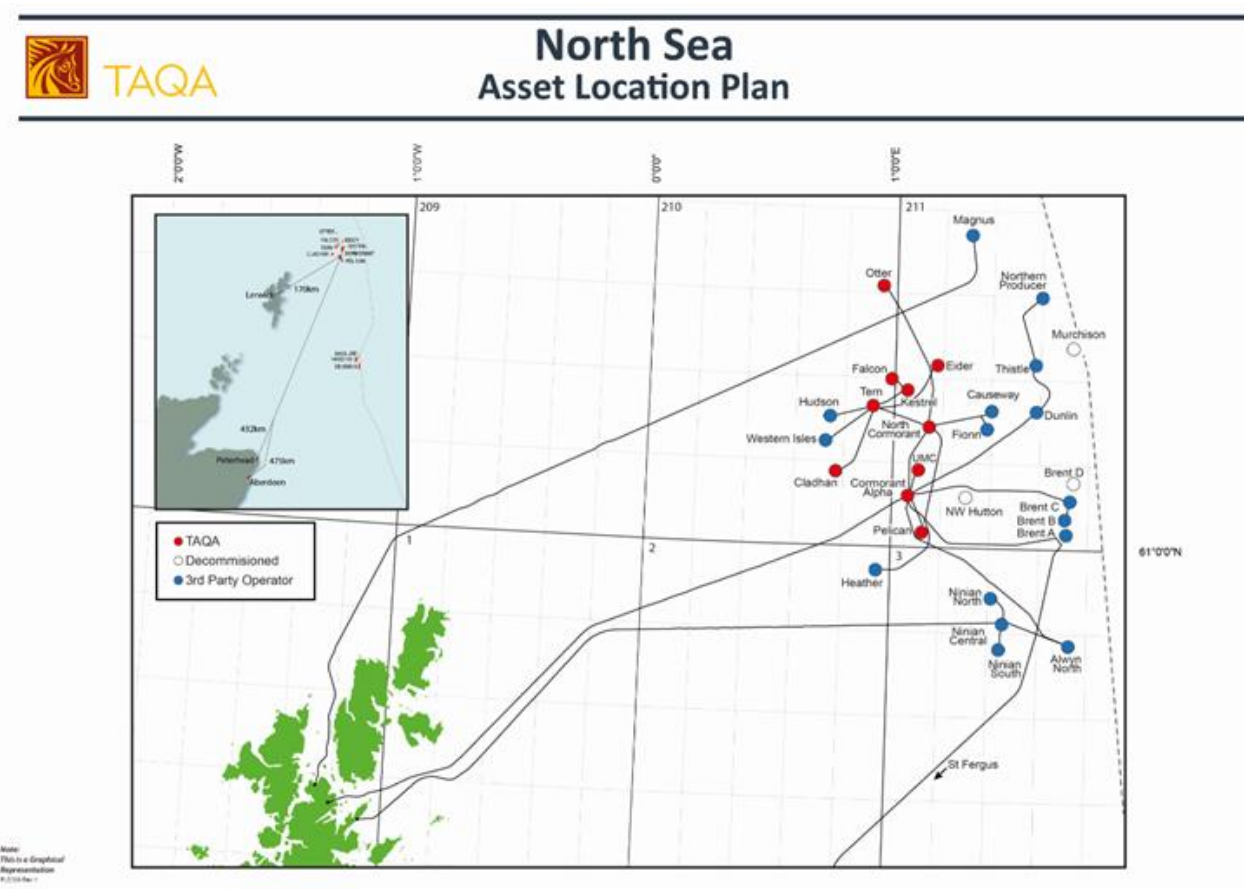


Figure 1.1 Field Location in UKCS

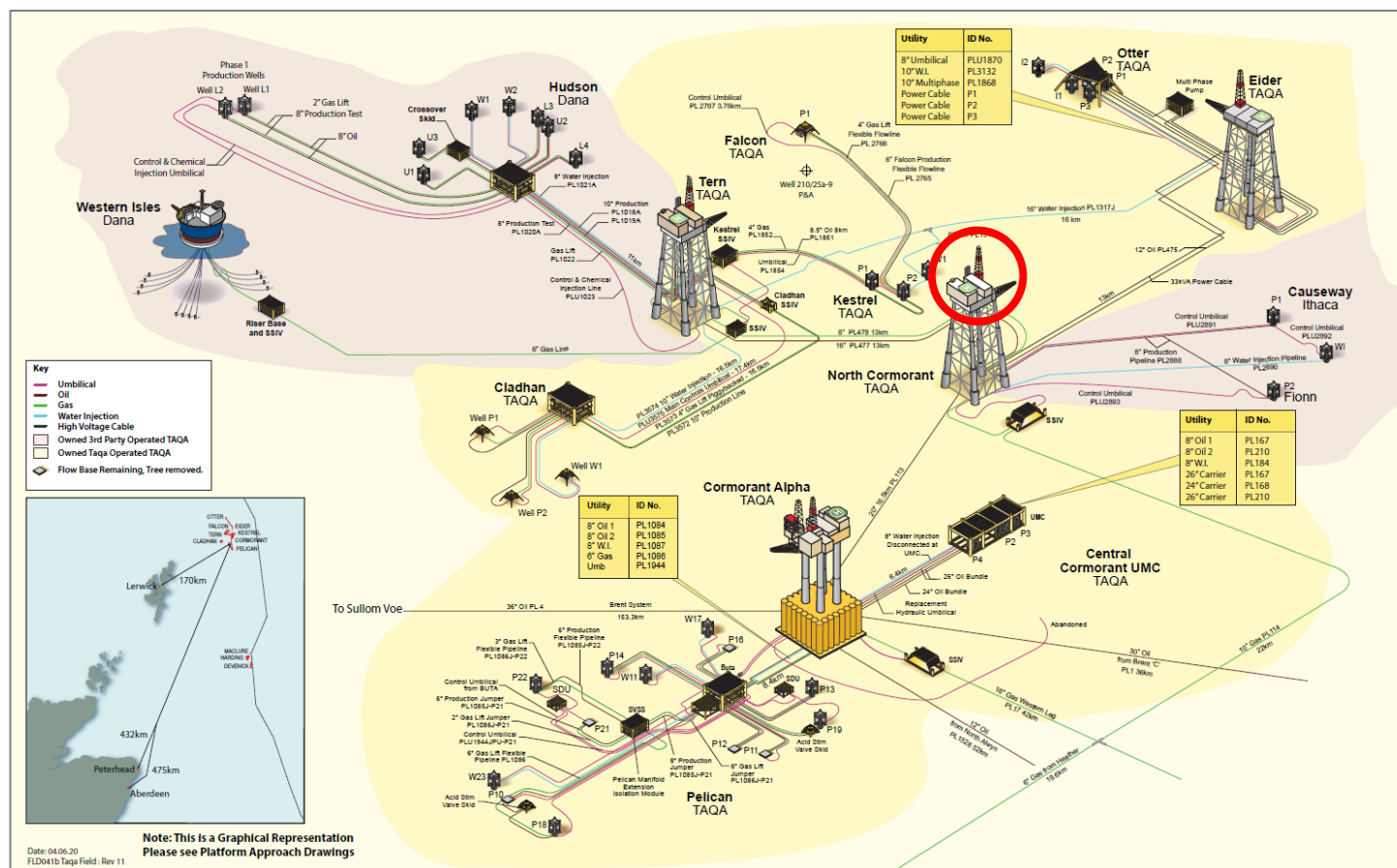


Figure 1.2 TAQA NNS Field Layout

TABLE 1.4 ADJACENT FACILITIES

Owner	Name	Type	Distance / Direction	Information	Status
TAQA Bratani Limited	Otter	Subsea Wells (Template)	32 km NW of CON	Water Injection / Production	Operational
TAQA Bratani Limited	Otter	Subsea Structure	32 km NW of CON	Multiphase Pump	Operational
TAQA Bratani Limited	Otter	12" Pipeline PL475	From Otter to CON 34 km	Export Pipeline to North Cormorant	Operational
TAQA Bratani Limited	Otter	10" Pipeline PL1868	From Otter to CON 34 km	Export Pipeline to North Cormorant	Operational
TAQA Bratani Limited	Eider / CON	Power Cable PL3815	(Two Way) CON to Eider 13.1 km	Power Cable	Operational
TAQA Bratani Limited	Eider	Platform	13 km NW of CON	Adjacent Platform	Operational
TAQA Bratani Limited	Tern	Platform	13 km WNW of CON	Adjacent Platform	Operational
TAQA Bratani Limited	Tern	8" Pipeline PL478	13 km Tern to CON	Gas Import / export Line	Operational
TAQA Bratani Limited	Tern	16" Pipeline PL477	13 km Tern to CON	Oil Export Line	Operational
Dana Petroleum (E&P) Ltd	Western Isles FPSO	Production Facility	21 Km West of CON	Adjacent production Facility	Operational
Dana Petroleum (E&P) Ltd	Western Isles	6" Pipeline PL3186	21 Km West of CON	Gas Import/Export line	Operational
Ithaca Energy Ltd	Causeway	Subsea Wells	15.6 km East of CON	Water Injection / Production	Shut in pending Decomm
Ithaca Energy Ltd	Causeway	8" Pipeline PL2888	15.6 km East of CON	Production	Shut in pending Decomm

TABLE 1.4 ADJACENT FACILITIES (Cont.)

Owner	Name	Type	Distance / Direction	Information	Status
Ithaca Energy Ltd	Fionn	Subsea Well	11.8 km East of CON	Water Injection / Production	Shut in pending Decomm
Ithaca Energy Ltd	Causeway	8" Pipeline PL2890	15.6 km East of CON	Water injection	Shut in pending Decomm
Ithaca Energy Ltd	Causeway	Umbilical PLU2891	15.6 km East of CON	Control Umbilical	Shut in pending Decomm
Ithaca Energy Ltd	Fionn	Umbilical PLU2893	11.8 km East of CON	Control Umbilical	Shut in pending Decomm
TAQA Bratani Limited	North Cormorant	10" Pipeline PL114	22 km CON to PL17 (WelGas2 tee)	Gas Import/Export Line	Operational
TAQA Bratani Limited	North Cormorant	20" Pipeline PL113	13 km CON to COA	Oil Export Line	Operational
TAQA Bratani Limited	Cormorant Alpha	Platform	15.8 km S of CON	Adjacent Platform	Operational
TAQA Bratani Limited	Underwater Manifold Centre (UMC)	Subsea Manifold	9km South of CON	Water Injection / Production	Operational
Shell UK Ltd	Western Leg Gas Pipeline	16" Pipeline PL17	COA Gas Export/Import Line to Brent Bypass tie-in	Gas Export	Operational
TAQA Bratani Limited	Brent System	36" Pipeline PL4	153 km COA to Sullom Voe	Oil Export	Operational

TABLE 1.4 ADJACENT FACILITIES (Cont.)

Impacts of Decommissioning

Production from Otter is flowed directly to North Cormorant with power generation, controls and chemical injection being provided by the Eider asset. This service from Eider and North Cormorant will terminate in line with the Otter CoP which is currently projected to be Q4 2023. A decommissioning programme will be submitted to support this at a future, yet to be determined, date. No alternative arrangements are within the current TAQA business plan.

Causeway and Fionn fields are tied back to the North Cormorant platform, however both fields have ceased production. The Cormorant East field is accessed by, and produced to, the North Cormorant platform however its production profile is aligned with that of the Cormorant North (and Otter) fields, therefore the removal of the North Cormorant Topside will not strand any economic production.

Gas is exported from the Western Isles Field Development which flows up and over the North Cormorant platform before tying into the Western Leg Gas Pipeline (WLGP). TAQA has engaged with the Western Isles Operator to agree future arrangements with regards to this service.

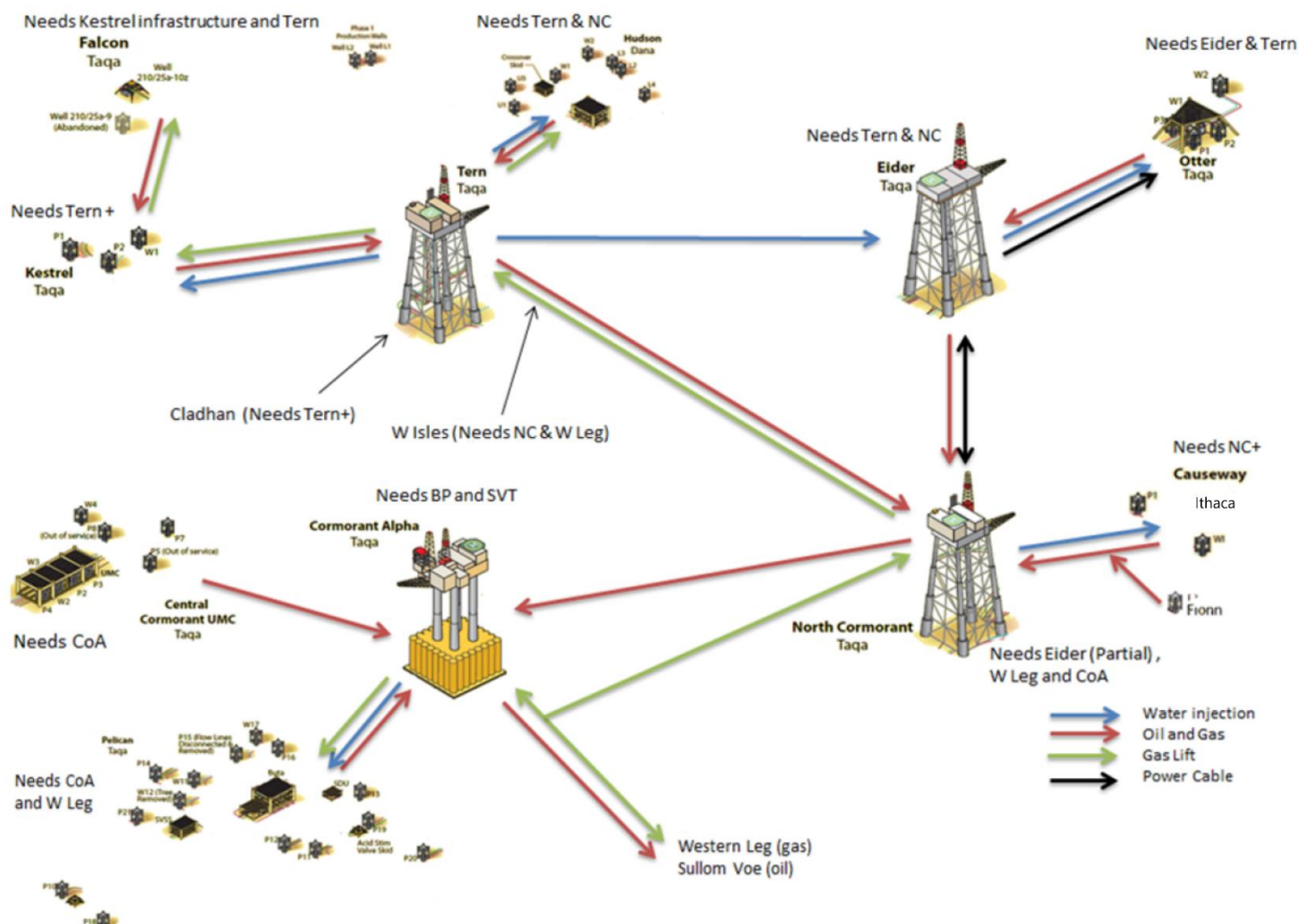


Figure 1.3: Adjacent Facilities Interdependency Overview

* BP refers to the Brent System Pipeline

1.7 Industrial Implications

The North Cormorant Decommissioning Programme will be managed by TAQA's UK business, to ensure safe, efficient and legally compliant delivery of the various elements of TAQA's decommissioning scope. The intention is to make efficient use of the supply chain to generate value through the application of knowledge, innovation and technology, explore collaboration opportunities and to employ best practice in the management of the supply chain to deliver a cost effective and reliable service.

This will be achieved through the following:

- TAQA will treat the supply chain in an ethical, fair and mutually rewarding way
- Drive continuous improvement through collaboration with other Operators and industry stakeholders
- TAQA has and will continue to actively support Regulatory and OGA industry initiatives including Showcase events and as part of the East of Shetland workgroup
- Will stimulate the supply chain and innovation through actively supporting and working with industry representative bodies including the OGTC, ONE, Decom North Sea, SPE and NOF
- Actively explore potential opportunities to drive efficiency through multi-asset, multi-field or multi-Operator campaigns
- Conduct detailed market analysis ensuring that not only established removal methodologies are considered, but genuine new market concepts also
- Use of open and transparent decision criteria on Contractor and contract strategy selection

TAQA have explored the possibility of working collaboratively with other Operators in the East of Shetland basin in order to execute our decommissioning strategies in the most efficient way possible. However, at this time, due to the differences in timing of forecast activities, this has not provided any opportunities to take forwards with regards topsides removal. TAQA will continue to collaborate with industry and the supply chain in the future.

TAQA have engaged with the OGA (January 2020) to discuss and agree the contracting strategy and tender approach as well as the supporting SCAP requirements.

Detailed feasibility studies with a number of short-listed removal contractors have commenced to allow the removal contractors to develop a proposal for a removal methodology and schedule with greatly reduced technical uncertainty, has been very well-received by the removal contractors, as a mutually beneficial collaborative approach.

2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation: Surface Facilities (Topsides)

TABLE 2.1 SURFACE FACILITIES INFORMATION

Name	Facility Type	Location		Topsides / Facilities	
				Weight (Te)	No. of Modules
North Cormorant (Topsides)	Large Fixed Steel	WGS84	61° 14' 25.542" N 01° 08' 58.396" E	16,177.74	14
		WGS84 Decimal Minute	61°-14.426'N 01°-08.973'E		



Figure 2.1: North Cormorant Topside

2.2 Wells

TABLE 2.2 WELL INFORMATION				
Platform Wells	Designation	Status	Category of Well	Date Abandoned
211/21a-N19Y	Water Injector	Operational	PL-1-3-3	n/a
211/21-N10	Water Injector	Operational	PL-3-3-3	n/a
211/21-N15	Water Injector	Operational	PL-3-3-3	n/a
211/21-N26	Water Injector	Operational	PL-3-3-3	n/a
211/21-N31	Oil Producer	Abandoned Phase 1	PL-0-3-3	17-Mar-17
211/21-N37	Water Injector	Operational	PL-1-4-3	n/a
211/21-N38	Oil Producer	Operational	PL-1-3-3	n/a
211/21-N39	Water Injector	Operational	PL-3-3-3	n/a
211/21-N41	Water Injector	Operational	PL-1-4-3	n/a
211/21-N46Z	Oil Producer	Operational	PL-1-4-3	n/a
211/21-N50	Water Injector	Completed (Shut In)	PL-1-4-3	20-Mar-19
211/21-N57	Oil Producer	Completed (Shut In)	PL-1-4-3	30-Jul-19
211/21-N59	Oil Producer	Operational	PL-1-3-3	n/a
211/21-N63	Oil Producer	Abandoned Phase 2	PL-0-0-3	24-Apr-19
211/21-N64	Oil Producer	Operational	PL-1-3-3	n/a

TABLE 2.2 WELL INFORMATION (CONT.)

Platform Wells	Designation	Status	Category of Well	Date Abandoned
211/21-N68	Oil Producer	Operational	PL-1-3-3	n/a
211/21-N70	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N71	Water Injector	Abandoned Phase 1	PL-0-4-3	31-Dec-18
211/21-N72	Oil Producer	Operational	PL-1-3-3	n/a
211/21-N73Z	Oil Producer	Operational	PL-1-3-3	n/a
211/21-N75	Water Injector	Operational	PL-1-3-3	n/a
211/21-N76	Oil Producer	Operational	PL-3-4-3	n/a
211/21-N77	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N77Z	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N79Z	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N80	Oil Producer	Operational	PL-2-3-3	n/a
211/21-N84	Oil Producer	Operational	PL-3-4-3	n/a
211/21-N85	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N86	Water Injector	Operational	PL-1-3-3	n/a

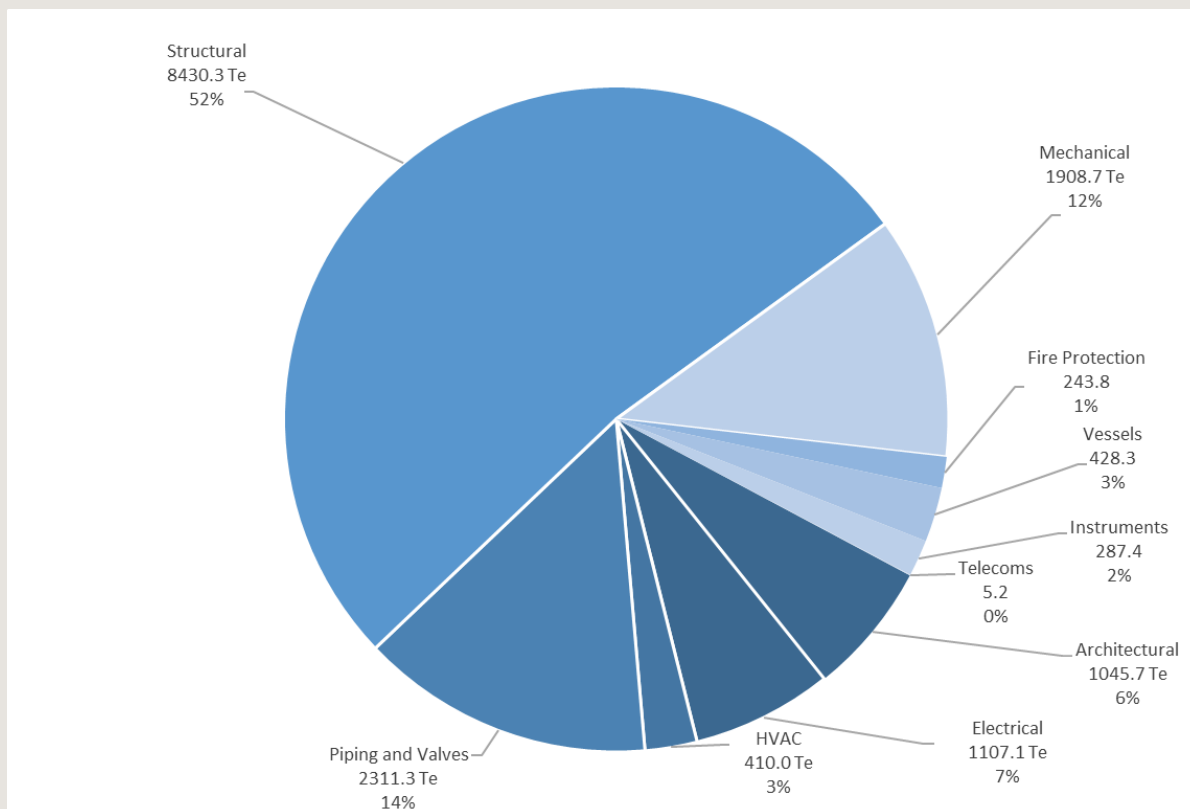
TABLE 2.2 WELL INFORMATION (CONT.)

Platform Wells	Designation	Status	Category of Well	Date Abandoned
211/21-N87Y	Oil Producer	Operational	PL-3-4-3	n/a
211/21-N88	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N89	Water Injector	Operational	PL-3-3-3	n/a
211/21-N90	Water Injector	Operational	PL-3-4-3	n/a
211/21-N91Z	Oil Producer	Operational	PL-4-3-3	n/a
211/21-N92	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N93	Water Injector	Operational	PL-3-3-3	n/a
211/21-N94	Oil Producer	Operational	PL-3-4-3	n/a
211/21-N95	Oil Producer	Operational	PL-3-3-3	n/a
211/21-N96Z	Water Injector	Completed (Shut In)	PL-3-3-3	12-Apr-17
211/21-N97	Water Injector	Operational	PL-1-4-3	n/a
211/21-N98	Oil Producer	Drilling	PL-3-3-3	n/a

Details of Wells categorisation have been taken from OGUK Guidelines: Well Decommissioning Guidelines Issue 6, June 2018. All platform wells will be plugged and abandoned (P&A'd) under the appropriate standards as per the current WONS and Marine Licences legislation.

2.3 Inventory Estimates

Figure 2.2: North Cormorant Topsides by Functional Category

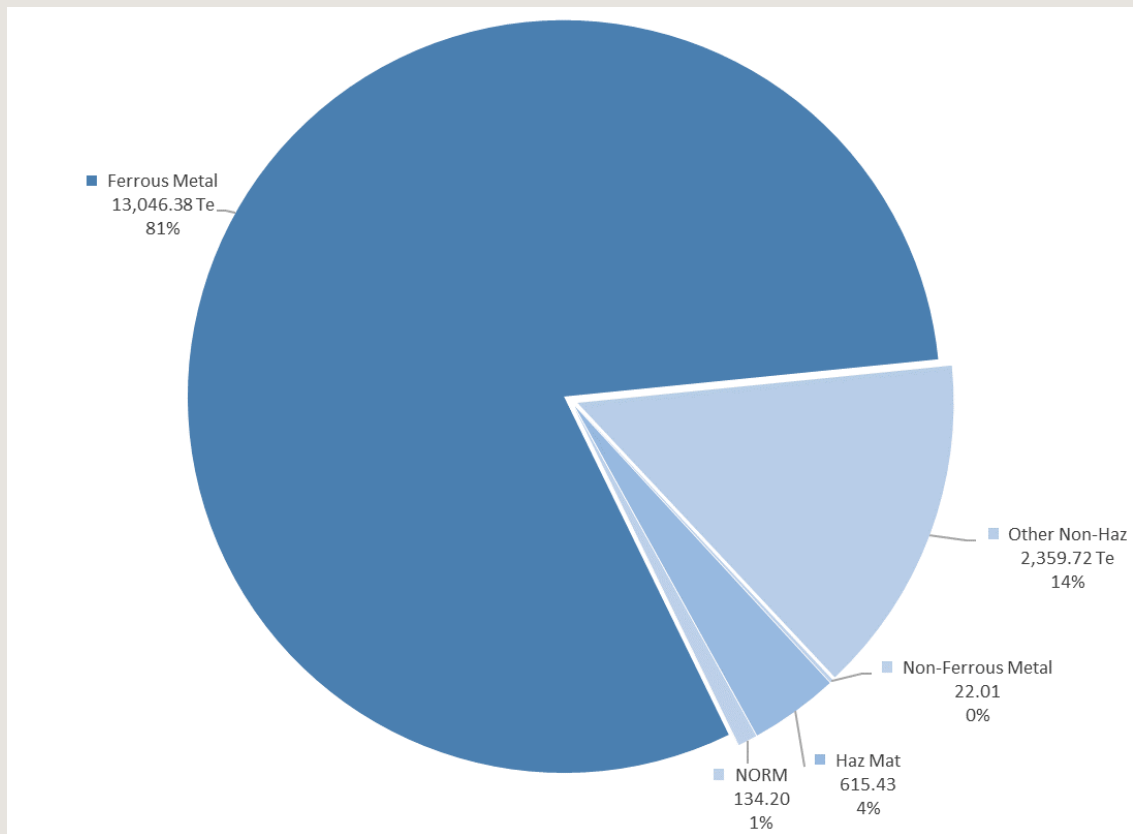


Total 16,177.74 Tonnes

Please refer to Section 2.7 within the Environmental Appraisal for further details on the materials inventory data. The total Topsides weight of 16,177.74 Te is inclusive of an estimated 615.43 Te of hazardous waste such as paint, as shown in Figure 2.3.

The North Cormorant topsides will be cut above the spider deck level of the platform (above EL. +10.0) and below the Lower Equipment Deck level of the topsides (Below EL. +15.22), that is within the Module Support Frame structure. The final cut height will be determined dependant on the removal method of the appointed contractor. To date there has been no evidence of marine growth extending up to the level of the spider deck and therefore it is extremely unlikely that any trace of marine growth will be removed with the topsides.

Figure 2.3: North Cormorant Topsides by BEIS Category



Total 16,177.74 Tonnes

Please refer to Section 2.7 within the Environmental Appraisal for further details on the materials inventory data.

3. REMOVAL AND DISPOSAL METHODS

3.1 Topsides

3.1.1 Topsides Decommissioning Overview

During the decommissioning of the North Cormorant topsides there will be a wide range of materials that will need to be processed and, where possible, either reused or recycled.

Preventing waste is ultimately the most preferential option, achieved through reducing consumption and using resources more efficiently. TAQA will comply with the Duty of Care requirements under the UK Waste Regulations and The Environmental Protection (Duty of Care) (Scotland) Regulations 2014. The hierarchy of waste management will also be followed at all stages of disposal and industry best practice will be applied.

The North Cormorant topsides will be removed and returned to shore for reuse, recycling or disposal. TAQA will select a recycling and disposal facility considering the factors of safety, environmental, socio-economic and cost. UK, European and other international facilities may be considered. Once a facility is selected TAQA will advise OPRED. The successful facility along with the chosen removal contractor will be required to have a proven track record and clearly documented and legislatively compliant procedures including the handling of transfrontier shipment of waste in the event that is required. Regulations governing the transfrontier shipment of waste (TFS) as implemented in the UK by the “Transfrontier Shipment of Waste Regulations 2007” details the UK required procedures in order for compliance with the legislation. All waste material will be handled in accordance

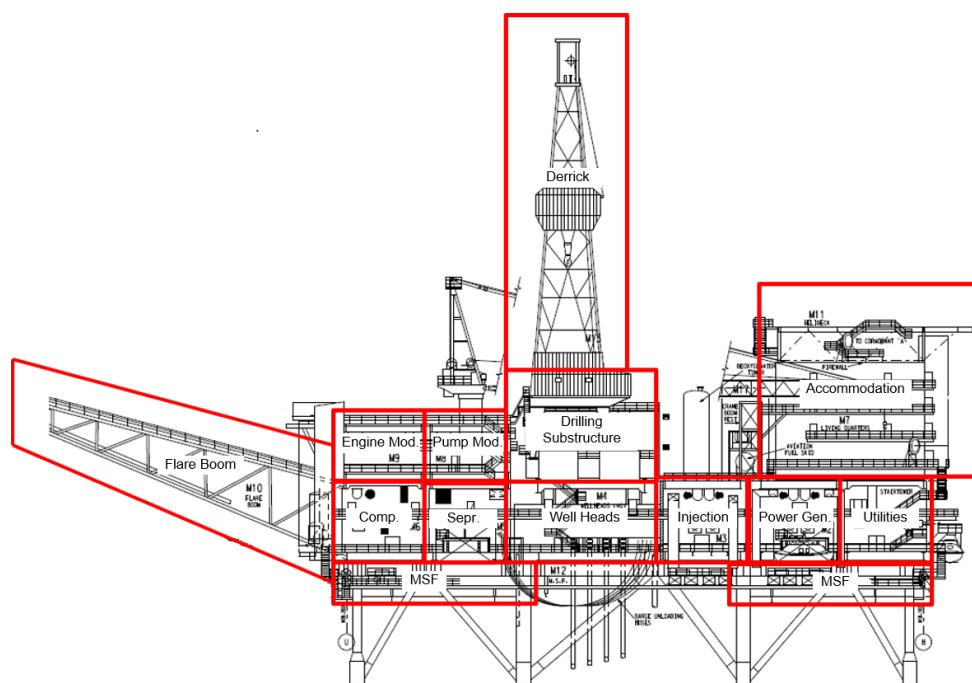


Figure 3.1: North Cormorant Topsides Side Elevation

For illustrative purposes: red boxes show main function of the topside models

with UK and relevant International legislation. TAQA and the selected contractor(s) will address any transfrontier shipment of waste to ensure that the associated issues are appropriately managed.

The North Cormorant Topside Structure comprises 14 modules (see figure 3.2) with a total weight of 16,177.74 tonnes. The topsides construction is of a modular form, the Module Support Frame (MSF) acts as a base support for two levels of modules. Containing a wellbay, process bay and utilities bay. The IDS then support a flare boom, a drilling derrick, drilling module and living quarters (LQ) having three

levels and additional living quarters (ALQ) with a helideck. The modular construction of the topsides is illustrated in Figure 3.2.

The removal methodology for the North cormorant topsides has not been finalised yet, as this will be subject to a commercial tendering process.

However, TAQA have conducted a study (77-DEC00001-X-SW-0003-000) which reviewed options deemed technically feasible. Options studied included: single lift, reverse of installation (RoI), and a hybrid (piece small / RoI). These methodologies were reviewed against a common and consistent set of assumptions. This is discussed in detail in section 2 of the Environmental Appraisal (EA).

For an overview of the North Cormorant topsides see figure 3.3

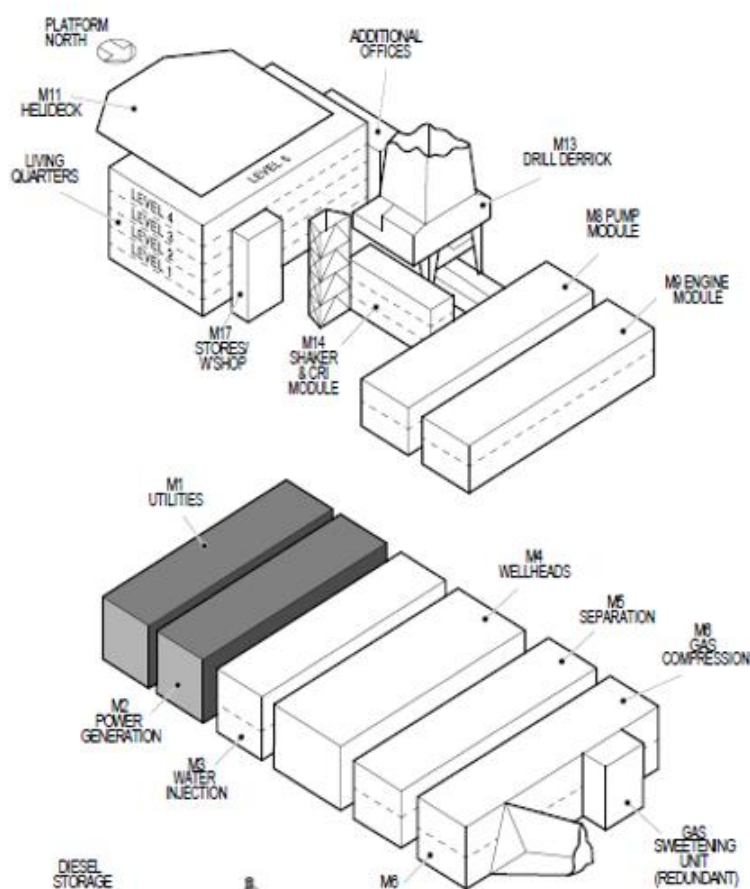
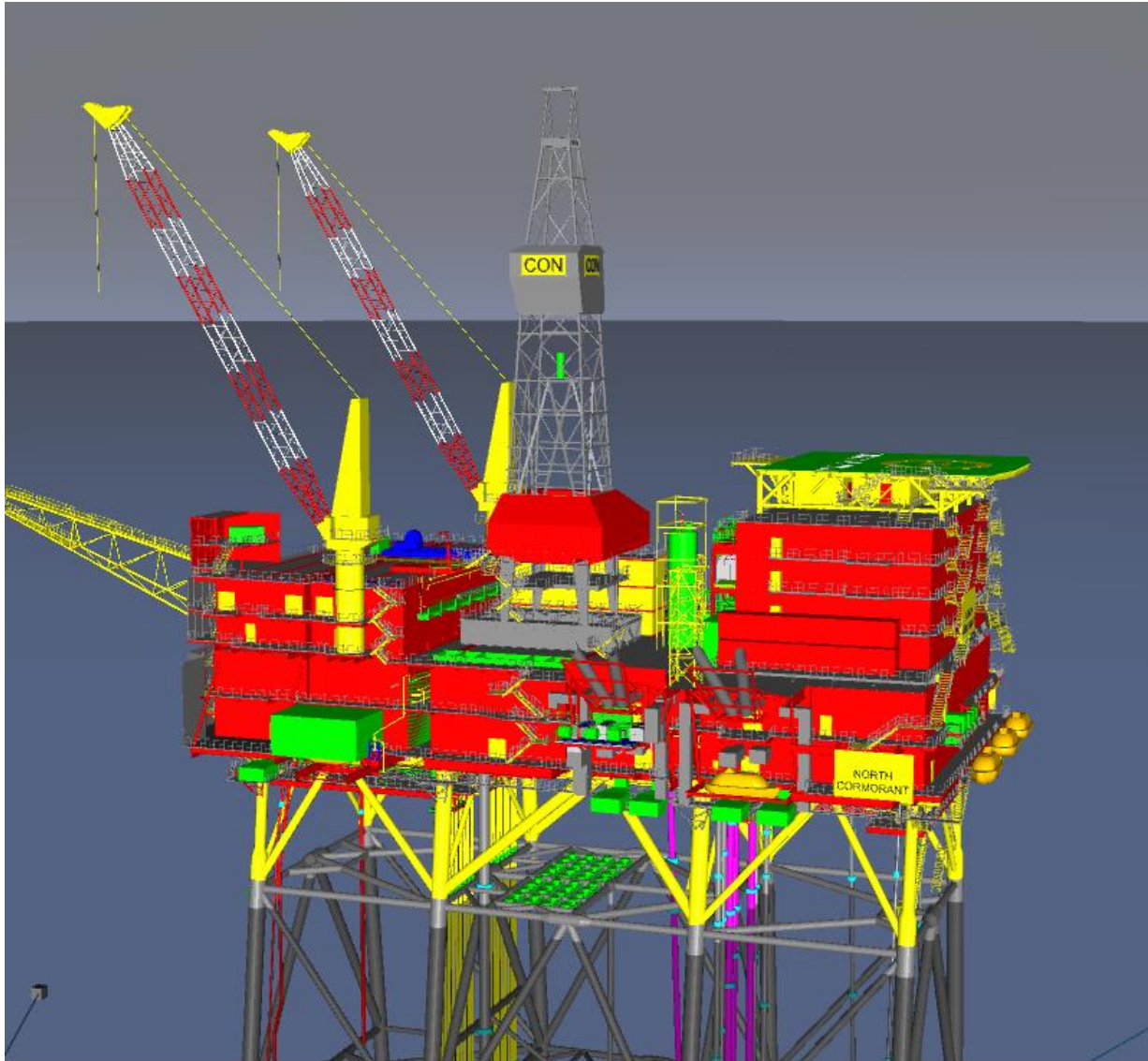


Figure 3.2: North Cormorant Topsides Modular Construction

Module	
M01	UTILITIES
M02	POWER GENERATION
M03	INJECTION
M04	WELLHEADS
M05	SEPARATION
M06	COMPRESSION
M07	LIVING QUARTERS & HELIDECK M11
M08	PUMP MODULE
M09	ENGINE MODULE
M10	FLARE BOOM
M12	MODULE SUPPORT FRAME
M13	SUBSTRUCTURE & DERRICK
M14	SHALE SHAKER
M15	SKID BASE

Figure 3.3: North Cormorant Topside Overview



Preparation and cleaning: Table 3.1 describes the methods that will be used to drain, flush, purge or clean the topsides, prior to removal to shore.

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 re-use / disposal within in UK*
Other Hazardous Materials	Chemicals for cleaning topsides. Hazardous waste such as NORM radioactive material, instruments containing heavy metals & batteries	Discharge of cleaning chemicals offshore will be managed under relevant permits. Waste chemicals, bulk NORM solids and other hazardous materials will be transported ashore for re-use / disposal within the UK*
Original Paint Coating	Lead-based paint. 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, so appropriate safety measures will be taken
Asbestos and Ceramic Fibre	Asbestos has been identified in surveys. Additional surveys will be undertaken.	Appropriate control and management will be enforced

* Some waste types may be removed with the topsides and depending on the location of the onshore disposal facility, this may be out with the UK.

The sampling of lead-based paint was included within the scope of a specialist material inventory and waste characterisation consultant who visited North Cormorant in 2019. During this visit lead-based paint was sampled and analysed to determine its composition. However, asbestos will not be sampled as it is recorded in the TAQA asbestos register, and is actively managed in line with

TAQA procedures. A demolition survey will be required to be carried out by a specialist prior to the planned removal of the topsides. The method for the disposal of asbestos and ceramic fibre will be determined by the onshore facility who will be selected to dismantle the North Cormorant topsides and will be in line with their policies and procedures and will be compliant with all relevant legislation.

Removal Methods: possible methods are outlined in Table 3.2. The final decision on the decommissioning method of the topsides will

be made following a commercial tendering process. Once a decision has been made TAQA will advise OPRED.

TABLE 3.2 TOPSIDES REMOVAL METHODS

1) HLV (Semi-submersible crane vessel) ☒ 2) SLV ☒ 3) Hybrid ☒

Method	Description
Single lift removal by HLV / SLV	Removal of topsides as a complete unit and transportation to shore for re-use of selected equipment, recycling, break up, and / or disposal. All methodologies are being carried forward into competitive tendering. A final decision on decommissioning method will be made following a commercial tendering process
Modular removal and re-use / recycle by HLV	Removal of parts / modules of topsides for transportation and re-use in alternate location(s) and / or recycling / disposal. All methodologies are being carried forward into competitive tendering. A final decision on decommissioning method will be made following a commercial tendering process
Hybrid of offshore removal 'piece small' for onshore re-use / disposal and modular removal	Combination of removal of topsides by breaking up offshore and transporting to shore using work barge. Items will then be sorted for re-use, recycling or disposal and the removal of parts / modules of the topsides and transportation to shore via HLV for use in alternate location(s) and / or recycling / disposal. All methodologies are being carried forward into competitive tendering. A final decision on the decommissioning method will be made following a commercial tendering process

3.2 Wells

TABLE 3.3 WELL PLUG AND ABANDONMENT

At the time of writing six of the platform Wells for North Cormorant have been shut in or abandoned, plus the remaining 35 Wells still to be abandoned. All Wells will be fully decommissioned in accordance with the Oil and Gas UK (OGUK) "Well Decommissioning Guidelines" (issue 6, June 2018.)

3.3 Waste Streams

TABLE 3.4 WASTE STREAM MANAGEMENT METHODS

Method	Removal and Disposal Method
Bulk Liquids	During the EDC phase, flushing of bulk liquids will be undertaken offshore under an appropriate permit. Vessels, pipework and sumps will be drained prior to removal to shore and shipped in accordance with maritime transportation guidelines. Further cleaning and decontamination will take place onshore prior to recycling / re-use at a fully permitted onshore disposal facility.
Marine Growth	It is not anticipated that any marine growth will be recovered as part of this topside decommissioning scope. However, if it is encountered it will be taken ashore for disposal under appropriate permits. Some marine growth maybe encountered during well plugging and abandonment works including removal of conductors. The marine growth is likely to be present in localised areas on the conductors around the wave zone and upon removal to the topside, most marine growth is likely to fall to sea. Where applicable, the discharge of marine growth during removal will be covered under relevant permits (Marine Licence) and onshore disposal sites will prepare for additional cleaning.
NORM / LSA Scale	NORM may be partially removed offshore under appropriate permits.
Asbestos	Will be contained and taken onshore for disposal.
Other Hazardous Wastes	Will be recovered to shore and disposed of under appropriate permits.
Onshore Dismantling Sites	Appropriate licenced sites will be selected. TAQA will ensure that the removal contractor has a proven track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver innovative recycling options. TAQA will carry out audits on disposal yards to provide assurance that they are compliant with legislation.

TABLE 3.5 INVENTORY DISPOSITION

	Total Inventory Tonnage	Planned Tonnage to Shore	Planned Left <i>in situ</i>
Installations	Topsides: 16,177.74 Te	Topsides: 16,177.74 Te	Topsides: Zero

Topside material will be landed ashore in the window of 2024 to 2027. It is not possible to forecast the reuse market with any accuracy or confidence this far forward, so the following is a statement of disposal aspirations. Percentages shown relate to the weight of material which is expected to be recovered to shore. Refer to Sections 2.8 and 2.9 of the EA for further detail.

TABLE 3.6 REUSE, RECYCLE & DISPOSAL ASPIRATIONS FOR RECOVERED MATERIAL

Reuse	Recycle	Disposal
< 10%	90-97%	< 3%

4 ENVIRONMENTAL APPRAISAL OVERVIEW

4.1 Environmental Sensitivities (Summary)

The Key environmental and social sensitivities in the North Cormorant area have been summarised below in Table 4.1.

TABLE 4.1 ENVIRONMENTAL SENSITIVITIES

Environmental Receptor	Main Feature
Conservation interests	<p>There are no Nature Conservation Marine Protected Areas (NCMPAs), Special Protection Areas (SPAs), Special Areas of Conservation (SACs) or Demonstration and Research Marine Protected Areas (MPAs) within 40 km of the North Cormorant platform.</p> <p>The closest designated site is the Pobie Bank Reef SAC (77 km), located to the south west of the North Cormorant platform.</p>
Seabed	<p>The North Cormorant platform is located at a water depth of 160 m. The annual mean wave height within the Cormorant North field ranges from 2.1 m – 2.4 m, and current speeds are low (0.11 – 0.25 m/s). The combined energy at the seabed from wave and tide action is also low. Recent survey work indicates that the seabed sediments range from fine silt to fine sands, with patches of coarse material. This is consistent with mapped information which classifies this region of the North Sea as the EUNIS broadscale habitats 'Offshore Circalittoral Sand', 'Deep Circalittoral Coarse Sediment' and '<i>Capitella capitata</i>, <i>Thyasira</i> spp. in organically – enriched Offshore Circalittoral Mud and Sandy Mud'.</p> <p>Invertebrate communities living within the sediments are dominated by annelid species characteristic of background conditions in this part of the NNS, and evident in baseline surveys. The North Cormorant area has a high abundance of polychaetes, however, a high abundance of the taxa Nematoda is present closer to the North Cormorant platform, potentially as a result of the high barium concentrations associated with the drill cuttings here. Four individual ocean quahog (bivalves) were observed in a recent survey (Benthic Solutions, 2019).</p> <p>No OSPAR threatened and/or declining species/habit, or other species/habitat of conservation concern were found to be present in the offshore decommissioning project area.</p>

Fish	<p>The North Cormorant platform sits within known spawning grounds for haddock, Norway pout, saithe, whiting and cod. The area is known to be an area of high intensity spawning for cod. The area is also a potential nursery ground for haddock, Norway pout, whiting, blue whiting, hake, herring, ling, mackerel and spurdog. The area is known to be a high intensity nursery ground for blue whiting. However, published sensitivity maps indicate that the probability of aggregations of juvenile cod, common sole, haddock, herring, horse mackerel, mackerel, plaice, sprat, whiting and Norway pout occurring in the offshore decommissioning Project area is low, and blue whiting and hake are medium.</p>
Fisheries	<p>The North Cormorant platform is located in International Council for the Exploration of the Sea (ICES) Rectangle 51F1. This region is primarily targeted for demersal species, with some minor shellfish and pelagic fishing occurring therein. Annual fishery landings by live weight and value in 2018 are considered low for shellfish and pelagic fisheries and moderate for demersal fisheries in comparison to other areas of the North Sea. According to the Scottish Government (2019) fisheries statistics, fishing effort has remained low within this region for the last five fishing years and is dominated by bottom-towed demersal fishing gears. Fishing effort generally peaks in the summer months within ICES Rectangle 51F1.</p> <p>Shipping density in the NNS in the vicinity of the proposed decommissioning activities is low. Between 200 - 300 vessels transit through Block 211/21 annually.</p>
Marine Mammals	<p>Harbour porpoise are the most abundant and frequently recorded species recorded in the survey block covering the offshore decommissioning Project area, which is reflective of these being the most abundant and widely distributed cetaceans in the North Sea. Around the North Cormorant platform, both grey and harbour seal densities are predicted to be between 0 and 1 seals per 25 km², which is considered to be low.</p>
Birds	<p>Offshore in the NNS, the most numerous species present are likely to be northern fulmar, black-legged kittiwake and common guillemot. The North Cormorant decommissioning area is located within or close to hotspots for northern fulmar, northern gannet and Atlantic puffin during their breeding season, when adults of these species can be seen foraging far from their coastal breeding colonies. In addition, after the breeding season ends in June, large numbers of moulting auks (common guillemot, razorbill and Atlantic puffin) disperse from their coastal colonies and into the offshore waters from July onwards.</p>

	<p>At this time these high numbers of birds are particularly vulnerable to oil pollution.</p> <p>Seabird sensitivity to oil pollution in the region of the offshore decommissioning Project area is considered low throughout the year.</p>
Onshore Communities	<p>North Cormorant platform is located approximately 113 km from the north-east coast of the Shetland Isles. Due to this distance, no impacts to onshore communities are expected from offshore operations at the North Cormorant Decommissioning Area. Waste generated from the Decommissioning activities will be transported onshore and managed in line with legislation and TAQA's associated Active Waste Management Plan.</p>
Other Users of the Sea	<p>The proposed decommissioning operations are located in a well-developed area for oil and gas extraction. However, there is little activity from other sea users recorded in the area. Apart from pipelines and cables associated with the North Cormorant field, there are no other cables or pipelines in the vicinity, no designated military practice and exercise areas, no offshore renewable or wind farm activity and no designated or protected wrecks which could interact with the decommissioning activities. Shipping density in the NNS in the vicinity of the proposed decommissioning activities is low. Between 200 - 300 vessels transit through Block 211/21 annually.</p>
Atmosphere	<p>Emissions from short-term decommissioning activities e.g. vessel and platform fuel combustion emissions are considered small compared to those previously arising from the asset over its operational life.</p>

4.2 Potential Environmental Impacts and their Management

Environmental Impact Assessment Summary:

A review of potentially significant environmental and social interactions has been completed and, considering the mitigation measures that will be built into the project activities, there is expected to be no significant impact on receptors from North Cormorant topsides decommissioning. Further information and justification statements can be found in the North Cormorant Topside Environmental Appraisal (77IFS-156680-H99-0001-000).

Given the remote offshore location of the North Cormorant field, there is no potential for North Cormorant topsides decommissioning to impact any European or nationally designated protected sites.

The Environmental Appraisal has considered the Scottish National Marine

Plan, adopted by the Scottish Government to help ensure sustainable development of the marine area. TAQA considers that the proposed decommissioning activities are in alignment with its objectives and policies.

Therefore, based on the findings of the Environmental Appraisal including the identification and subsequent application of appropriate mitigation measures, and project management according to TAQA's Health, Safety, Security and Environment Policy and Environmental Management System (EMS), it is considered that the proposed North Cormorant topside decommissioning activities do not pose any significant threat of impact to environmental or societal receptors within the UKCS.

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT

Impact	Further Assessment	Management
Emissions to air	No	Emissions during decommissioning activities, (largely comprising fuel combustion gases) will occur in the context of the cessation of production. As such, emissions from operations and vessels associated with operation of the North Cormorant topsides will cease. Reviewing historical European Union (EU) Emissions Trading Scheme data and comparison with the likely emissions from the proposed work scope suggests that

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT (Cont.)

Impact	Further Assessment	Management
		<p>emissions relating to decommissioning will be small relative to those during production. The majority of emissions for the North Cormorant topsides decommissioning can be attributed to vessel time or are associated with the recycling of material returned to shore. As the decommissioning activities proposed are of such short duration this aspect is not anticipated to result in significant impact. The estimated CO₂ emissions to be generated by the worst-case decommissioning option (Single Lift) is 17,018 te. Of this total, vessel emissions equate to 4,485 te, representing less than 0.06 % of the total UKCS vessel emissions in 2017 (7,800,000 te; BEIS, 2019).</p> <p>Considering the above, atmospheric emissions do not warrant further assessment.</p>
Disturbance to the seabed	No	<p>Currently it is envisaged that all vessels undertaking the decommissioning and removal works would be dynamically positioned vessels. As a result, there will be no anchoring associated with the decommissioning of the topsides. Should this change following the commercial tendering process and an anchor vessel be required, any potential seabed impact would be assessed and captured in the Consent to Locate application, Marine Licence application and supporting Environmental Impact Assessment (EIA) justification within the Portal Environmental Tracking System (PETS).</p> <p>On this basis, no further assessment needs to be undertaken.</p>

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT (Cont.)

Impact	Further Assessment	Management
Physical presence of vessels in relation to other sea users	No	<p>The presence of a small number of vessels for topsides decommissioning activities will be short-term in the context of the life of the North Cormorant installation. Activity will occur using similar vessels to those currently deployed for oil and gas installation, operation and decommissioning activities. The decommissioning of the North Cormorant topsides is estimated to require up to seven vessels depending on the selected method of removal.</p> <p>If applicable, Notices to Mariners will be made in advance of activities occurring. This may not be a requirement as decommissioning/ installation activities will only take place within the existing 500 m safety exclusion zone. Stakeholders will have time to make any necessary alternative arrangements for the very limited period of operations.</p> <p>Considering the above, temporary presence of vessels does not need further assessment.</p>
Physical presence of infrastructure decommissioned <i>in situ</i> in relation to other sea users	No	<p>As topsides will be fully removed, there will be no mechanism for associated long-term impact through physical presence.</p> <p>Considering the above, no further assessment related to long term presence of infrastructure is justified.</p>
Discharges to sea (short-term and long-term)	No	<p>Discharges from vessels are typically well-controlled activities that are regulated through vessel and machinery design, management and operation procedures. In addition, the topsides will be Drained, Flushed, Purged and Vented (DFPV) using the TAQA DFPV philosophy prior to any decommissioning activities commencing. There would be no planned discharges from the topsides. Any residual remaining material will be in trace levels/volumes following the DFPV regime and therefore would not pose any significant risk. Oil spill modelling conducted for a release of hydrocarbons associated with vessel collision was conducted for the field's operational phase; this was based on</p>

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT (Cont.)

Impact	Further Assessment	Management
		<p>a volume of 450 m³ of diesel and indicated no significant impact due to the remote offshore Project location. Any hydrocarbon inventories on site during decommissioning will be of significantly smaller volume than those modelled.</p> <p>As the topsides will be fully removed, there will be no potential for releases in the longer term from the facilities. Considering the above, discharges to sea from the topsides should not be assessed further.</p>
Underwater noise emissions	No	<p>Cutting required to remove the topsides will take place above the waterline, and there will be no other noise-generating activities. Vessel presence will be limited in duration. The project is not located within an area protected for marine mammals.</p> <p>With industry-standard mitigation measures and JNCC guidance, EAs for offshore oil and gas decommissioning projects typically show no injury, or significant disturbance associated with these projects.</p> <p>On this basis, underwater noise assessment does not need assessed further.</p>
Resource use	No	<p>Generally, resource use from the proposed activities will require limited raw materials and be largely restricted to fuel use. Such use of resources is not typically an issue of concern in offshore oil and gas. The estimated worst-case (Single Lift option) total energy usage for the project is 197,027 GJ.</p> <p>Material will be returned to shore as a result of project activities, and expectation is to recycle at least 97% of this returned material. There may be instances where infrastructure returned to shore is contaminated and cannot be recycled, but the weight/volume of such material is not expected to result in substantial landfill use.</p>

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT (Cont.)

Impact	Further Assessment	Management
		Considering the above, resource use does not warrant further assessment.
Onshore activities	No	<p>The onshore waste management process is likely to have negligible consequences for the human population in terms of an increase in dust, noise, odour and reduced aesthetics.</p> <p>It should be noted that, through TAQA's Waste Management Strategy, only licenced contractors will be considered who can demonstrate they are capable of handling and processing the material to be brought ashore (e.g. permitted capacity to accept the relevant waste streams). This will form part of the commercial tendering process, including duty of care audits and due diligence on the successful contractor. Approval is determined through due-diligence assessment comprising site visits, review of permits and consideration of the facilities design and construction has been developed to minimise environmental impact. TAQA understands that dismantling sites will also require consents and approvals from onshore regulators such as the Environment Agency, who apply conditions relating to mitigation, management and who are responsible for the provision of permits for such work.</p>
Waste	No	<p>It is waste management, not generation, that is the issue across DPs, with capacity to handle waste within the UK often cited as a stakeholder concern. The limited waste to be brought to shore, which will be routine in nature, will be managed in line with TAQA's Waste Management Strategy as part of the project Active Waste Management Plan, using approved waste contractors.</p> <p>On this basis, no further assessment of waste is necessary.</p>

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGAMENT (Cont.)

Impact	Further Assessment	Management
Employment	No	TAQA will communicate regularly with all crew members throughout. TAQA will also be working closely with its contractor companies to retain and redeploy crew where possible. Following the above measures and continued communications further assessment is not warranted for this aspect.
Unplanned Events	No	<p>The topsides process system will have been through the DFPV process prior to the decommissioning activities described herein being carried out. Release of a live hydrocarbon and chemical inventory is therefore not a relevant impact mechanism.</p> <p>The lift vessel to be used for removing the topsides is likely to have the largest fuel inventory of the few vessels involved in the decommissioning activities. However, the inventory is likely to be less than the worst-case crude oil spill from loss of well containment modelled and assessed in the North Cormorant field oil pollution emergency plan (OPEP). In addition, the vessel's fuel inventory is likely to be split between a number of separate fuel tanks, significantly reducing the likelihood of an instantaneous release of a full inventory. Overall, therefore, the potential impact from fuel inventory release will be at worst equivalent to that already assessed and mitigated for the operational phase of North Cormorant.</p> <p>The current OPEP for the North Cormorant topsides considers a diesel release of approx. 850 m³. For such a spill, no beaching is expected, and under normal weather conditions, the spill will disperse naturally within 9 hours.</p> <p>As the methodology for the removal to shore of the topsides has not been defined in detail, there exists the possibility that during transport of the topsides materials, elements may dislodge and drop from the transport vessel. Dropped object procedures are industry-standard and there is only a very remote probability of any interaction with any live infrastructure.</p>

TABLE 4.2 ENVIRONMENTAL IMPACT MANAGMENT (Cont.)

Impact	Further Assessment	Management
		<p>Although the risk of oil spill is remote, an OPEP will be in place for the North Cormorant Decommissioning activities. Any spills from vessels in transit and outside the 500 m zone are covered by separate Shipboard Oil Pollution Emergency Plans (SOPEPs). Up to seven vessels will be deployed during decommissioning activities, including a heavy lift vessel, tug vessels (4), a barge vessel, a standby vessel and supply vessels (2).</p> <p>Any dropped objects of significant size will be removed (i.e. those reported to OPRED via PON2 notifications). Any small non-significant objects will be marked and will be within the safety zone of the substructure. These dropped objects will be addressed during the debris clearance survey post decommissioning activities associated with the substructure decommissioning activities.</p>
Dropped Objects	No significant impacts identified	<p>Any dropped objects of significant size will be removed. Any small non-significant objects will be marked and will be within the safety zone of the substructure. These dropped objects will be addressed during the debris clearance survey post decommissioning activities associated with the substructure decommissioning activities.</p>

5 INTERESTED PARTY CONSULTATIONS

TABLE 5.1 SUMMARY OF STAKEHOLDER COMMENTS

Who	Comment	Response
Statutory Consultations		
National Federation of Fisherman's Organisations	28 th January email to provide high level summary of the scope & intent of the project	NFFO thanked TAQA for the information provided. However, as the infrastructure in question lays in Scottish Waters NFFO believe the Scottish Fisherman's Federation, who they work very closely with, are best placed to take the lead role in commenting.
Scottish Fisherman's Federation (SFF)	28 th January email to provide high level summary of the scope & intent of the project	SFF thanked TAQA for the information provided. As the DP is focusing on topside removal work, they may provide comment at consultation.
Northern Irish Fish Producers Organisation	28 th January email to provide high level summary of the scope & intent of the project	A specific location map was requested to gauge what, if any impact there might be for NIFPO. NIFPO confirm that the location of the proposed decommissioning programme is out with their geographical area of interest.
Global Marine Systems Limited	28 th January email to provide high level summary of the scope & intent of the project Follow up 25 th May	Given the topside only scope & no anticipated interaction with the seabed, GMS have no comment. Should this change GMS request nearby cable operators are advised.
Informal Stakeholder Consultations		
Public	No comments received	

6 PROGRAMME MANAGEMENT

6.1 Project Management and Verification

A Project Management team will be appointed to manage suitable sub-contractors for the removal of the installation. Standard procedures for operational control and hazard identification and management will be used. Where possible the work will be coordinated with other decommissioning operations in the NNS. The Management team will monitor and track the process of consents and the consultations required as part of this process. Any changes in detail to the offshore removal programme will be discussed and agreed with OPRED.

6.2 Post Decommissioning Debris Clearance and Verification

During topside decommissioning OPRED will be provided with progress reports and once the North Cormorant topside is removed TAQA will inform OPRED and subsequently provide a close out report.

The existing 500m radius safety zone around the platform will remain in place. Following the completion of decommissioning activities in the wider North Cormorant area verification of the safe seabed state for other users of the sea will be obtained by over-trawl trials, or alternative methods, to be discussed and agreed with OPRED in areas of decommissioning activities or any buried items that will remain in situ. Following verification TAQA will notify all relevant governmental departments and non-governmental organisations. The survey results will also be shared with UK Fisheries Offshore Oil and Gas Legacy Trust Fund Ltd for inclusion in their FishSAFE system and to the United Kingdom Hydrographic Office for marking on Admiralty Charts and notices to mariners as required.

6.3 Schedule

Project Plan: Please refer to the latest plan below

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Well Plug & Abandonment										
Topsides & Pipelines Clean & Make Safe										
Removal Contract Tender & Award										
Topsides Removal										
Close Out Report Submission										

KEY:


 Potential Activity Window

Figure 6.1: North Cormorant Decommissioning Project Schedule

6.4 Long Term Facilities Management

Following the removal of the North Cormorant topsides there will be a period of time before the substructure is removed. During this time the substructure will remain above sea level. Throughout this phase of decommissioning the existing 500m safety zone will remain in place and the North Cormorant Consent to Locate will be revised to reflect the change in structure. In addition, an appropriate navigational aid will be fitted.

Upon completion of the topside decommissioning activities the substructure will be placed in a cold stack prior to its removal. During this period, the substructure will have a temporary 'Aid to Navigation'. It is envisaged that the system will be developed in consultation with the Northern Lighthouse Board (NLB) with the monitoring and maintenance of the system will be provided by a service contract with a specialist contractor. The existing 500m safety zone will remain in operation during the cold stack phase. In addition

to the maintenance of navigational aid TAQA will continue to maintain an Oil Pollution Emergency Plan (OPEP) for the installation and a Dismantling Safety Case will be in place to cover all activities required to complete the substructure removal operations.

During Topside removal operations, navigational aid installation requirements will be fulfilled by the HLV contractor. Once removal of the topside has been completed, the HLV will install the navigational aid using the vessel crane.

TAQA will consult with the NLB to ensure that the design of the navigational aid unit meets all regulatory requirements. It is anticipated that the unit will be of a self-contained offshore lighthouse (SCOL) design and will be helicopter portable to facilitate maintenance and replacement as required. Following the topsides removal TAQA will confirm this with the United Kingdom Hydrographic Office (UKHO) along with the details of the SCOL e.g. light colour, sequence and range.

6.5 Costs

TABLE 6.1 PROVISIONAL DECOMMISSIONING PROGRAMME COSTS

Item	Estimated Cost (£m)
Operator Project Management	Provided to BEIS in confidence
Facility Running / Owner Costs	
Well Plug & Abandonment	
Facilities Make Safe	
Topside Preparation	
Topsides Removal	
Jacket / Substructure Removal	
Topside & Jacket / Substructure Onshore Recycling	
Site Remediation	
Monitoring	
TOTAL	Provided to BEIS

6.6 Close Out

In accordance with the OPRED guidelines, a close out report will be submitted to OPRED within 1 year of the completion of the offshore decommissioning scope. The report will detail the removal of the North Cormorant topsides and any major variances from the programme.

6.7 Post Decommissioning Monitoring and Evaluation

TAQA will also carry out surveys following the full field decommissioning. Proposals for the future monitoring will be discussed and agreed with OPRED.

7 SUPPORTING DOCUMENTS

TABLE 7.1 SUPPORTING DOCUMENTS

Document Number	Title
1	North Cormorant Topsides Environmental Assessment (Non-Derogation) 77IFS-156680-H99-0001-000
2	Detailed Feasibility Study – Decommissioning of TAQA NNS Assets 77-DEC00001-X-SW-0003-000

APPENDICES

Public Notice

PUBLIC NOTICE

PETROLEUM ACT 1998

Removal of North Cormorant Topsides

North Cormorant Topsides Decommissioning Programme

TAQA Bratani Limited ("TAQA") has submitted, for the consideration of the Secretary of State for Business, Energy and Industrial Strategy, a draft decommissioning programme for the removal of the North Cormorant topsides, in accordance with the provisions of the Petroleum Act 1998 (The Act). It is a requirement of the Act that interested parties be consulted on such proposals.

The facilities covered by the North Cormorant topsides draft decommissioning programme are in Block 211/21 in the northern North Sea, approximately 112km north east of Unst, Shetland and 35km from the UK/Norwegian median line. The facilities comprise fourteen modules split over two levels, these sit upon the module support frame, which is attached in one piece to the jacket.

TAQA hereby gives notice that the North Cormorant topsides draft decommissioning programme is available, from the following location during office hours (by appointment) or can be requested by email as indicated:

TAQA Bratani Limited
TAQA House
Prospect Road
Arnhall Business Park
Westhill Aberdeenshire
AB32 6FE

If, due to Coronavirus restrictions, visiting TAQA House is not possible please contact the undernoted to obtain a paper copy:

Alastair MacLean, Decommissioning Stakeholder Manager
01224 275275
stakeholderdecomuk@taqaglobal.com

Representations regarding the draft decommissioning programme should be submitted in writing to Alastair MacLean using the contact details above (preferably by email) where they must be received by the consultation closing date, 4th September 2020, and should state the grounds upon which any representations are being made.

Exited Parties Letter of Support



Department for Business, Energy and Industrial Strategy
Offshore Decommissioning Unit
AB1 Building, 3rd Floor
Crimon Place
Aberdeen
AB10 1BJ

Shell U.K. Limited
1 Altens Farm Road
Nigg
Aberdeen
AB12 3FY
United Kingdom
Tel +44 1224 882000
Email james.blackburn@shell.com
Internet <http://www.shell.com>

3rd November 2020

Dear Sir or Madam,

Petroleum Act 1998

NORTH CORMORANT TOPSIDE DECOMMISSIONING PROGRAMME

We acknowledge receipt of your letter dated 2nd November 2020 regarding the abandonment programme for the North Cormorant Topside installation.

We, Shell UK Limited, confirm that TAQA Bratani Limited (TAQA) is authorized on our behalf to submit an abandonment programme relating to the North Cormorant Topside, as directed by the Secretary of State on the above date.

We confirm that we are aligned with the proposed details in the North Cormorant Topside Decommissioning Programme which has been submitted for approval in November 2020 by TAQA, in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under Section 29 of the Petroleum Act 1998..

Yours faithfully



James Blackburn
UK Decommissioning BOM

For and on behalf of Shell UK Limited

Shell U.K. Limited
Registered in England number 140141
Registered office Shell Centre London SE1 7NA
VAT reg number GB 235 7632 55

Exited Parties Letter of Support

DocuSign Envelope ID: F379A184-EFF5-48DB-9065-4CC91A640C9D

Esso Exploration and Production UK Limited
Emyn House
Emyn Way
Leatherhead
Surrey KT22 8UX
+44 (0) 1372 222000 Telephone
+44 (0) 1372 222622 Facsimile

ExxonMobil

Ruth Ledingham
Department for Business, Energy
& Industrial Strategy
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

11 November 2020


Dear Ruth,

**DECOMMISSIONING OF THE CORMORANT NORTH PLATFORM TOPSIDES
INSTALLATION DECOMMISSIONING PROGRAMMES PETROLEUM ACT 1998**

We, Esso Exploration and Production UK Limited confirm that we authorise TAQA Bratani Limited to submit on our behalf an abandonment programme relating to the Cormorant North Platform Topsides as directed by the Secretary of State on 2 November 2020.

We confirm that we support the proposals detailed in TAQA Bratani Limited's Decommissioning Programme dated November 2020, which is to be submitted by TAQA Bratani Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under Section 29 of the Petroleum Act 1998.

Yours sincerely,

DocuSigned by:

48B39534581477...

Margaret Rogacki
Joint Interest Asset Manager - UK CNNS

For and on behalf of Esso Exploration and Production UK Limited

Registered in England
Number: 207426
Registered Office:
Emyn House, Emyrn Way
Leatherhead, Surrey KT22 8UX
An ExxonMobil Subsidiary

CONTACT

TAQA Bratani Limited
TAQA House
Prospect Road, Arnhall Business Park
Westhill, Aberdeenshire
AB32 6FE
Scotland UK

Tel: +44 (0)1224 275275

www.taqa.com

