

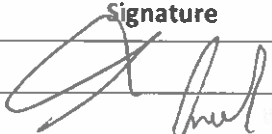
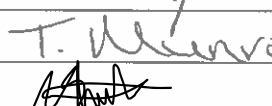
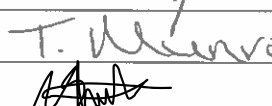
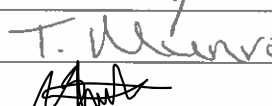
**DUART
DECOMMISSIONING PROGRAMMES**

FINAL

October 2022

Document Control

Approvals

	Name	Signature	Date
Prepared by	Colin Hopkins		October 2022
Checked by	Robbie Dunbar-Smith		October 2022
Reviewed by	Teresa Munro		October 2022
Approved by	Adam Sheikh		October 2022

Revision Control

Revision No	Reference	Changes/Comments	Issue Date
0.1	1 st pre-draft programmes	First Issue	11/08/20
0.2	2 nd pre-draft programmes	OPRED comments incorporated	13/11/20
0.3	3 rd pre-draft programmes	OPRED comments incorporated	18/03/21
0.4	Consultation Draft programmes	OPRED comments incorporated	27/04/21
0.5	Consultation Draft - Final	Finalised Consultation Draft	07/10/21
0.6	Final Version	Post Consultation Comments Incorporated	01/08/22
0.7	Final Version	Letters of support incorporated	October 2022

Distribution List

Name	Company	No of Copies
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning	1

Contents		INST	P/L
1 Executive summary	7	✓	✓
1.1 Decommissioning Programmes	7	✓	✓
1.2 Requirement for Decommissioning Programmes	7	✓	✓
1.3 Introduction	7	✓	✓
1.4 Overview of Installation(s)/Pipeline(s) Being Decommissioned	11	✓	✓
1.5 Summary of Proposed Decommissioning Programmes	13	✓	✓
1.6 Field Location Including Field Layout and Adjacent Facilities	15	✓	✓
1.7 Industrial Implications	18	✓	✓
2 Description of items to be decommissioned	19	✓	✓
2.1 Installation(s): Surface Facilities (Topsides/Jacket(s)/FPSO etc.)	19		
2.2 Installation(s): Subsea including Stabilisation Features	19		
2.3 Pipelines Including Stabilisation Features	20	✓	✓
2.4 Wells	22	✓	✓
2.5 Drill Cuttings	22	✓	✓
2.6 Inventory Estimates	23	✓	✓
3 Removal and disposal methods	24	✓	
3.1 Topsides	24		
3.2 Jacket(s)	25		
3.3 Subsea Installations and Stabilisation Features	25	✓	✓
3.4 Pipelines	26	✓	✓
3.5 Pipeline Stabilisation Feature(s)	29	✓	✓
3.6 Wells	29	✓	✓
3.7 Drill Cuttings	30	✓	
3.8 Waste Streams	31	✓	✓
4 Environmental appraisal overview	32	✓	✓
4.1 Environmental Sensitivities (Summary)	32	✓	✓
4.2 Potential Environmental Impacts and their Management	34	✓	✓
5 Interested party consultations	37	✓	✓
6 Programme management	40	✓	✓
6.1 Project Management and Verification	40	✓	✓
6.2 Post-Decommissioning Debris Clearance and Verification	40		✓
6.3 Schedule	40	✓	✓
6.4 Costs	42	✓	✓
6.5 Close Out	42	✓	✓
6.6 Post-Decommissioning Monitoring and Evaluation	42	✓	✓
7 Supporting documents	43	✓	
8 Partner letter(s) of support	44	✓	✓
9 Appendix A - Public Notice	45	✓	✓

Terms and Abbreviations

Abbreviation	Explanation
"	Inches
%	Percentage
°	Degrees
BAT	Best Available Technique
c.	circa
CA	Comparative Assessment
DCR	The Offshore Installation and Wells (Design and Construction etc.) Regulations 1996 (SI1996/913)
DP	Decommissioning Programme
E	East
EA	Environmental Appraisal
ESAS	European Seabirds at Sea
EUNIS	European Nature Information System
FPAL	First Point Assessment
H	Height
HLV	Heavy Lift Vessel
HSE	Health and Safety Executive
ICES	International Council for Exploration of the Sea
JNCC	Joint Nature Conservation Committee
km	Kilometre
KP	Kilometre Post
L	Length
m	Metre
m ²	Metres squared
m ³	Cubic Metres
MAT	Master Application Template
N	North
NCMPA	Nature Conservation Marine Protected Area
NFFO	National Fishermen's Federation Organisation
NORM	Naturally Occurring Radioactive Material
N/A	Not Applicable
OGA	Oil and Gas Authority

Abbreviation	Explanation
OGUK	Oil and Gas UK
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
OSPAR	from Oslo/Paris, the Convention for the Protection of the Marine Environment of the North East Atlantic
OSPAR 2006/5	OSPAR Recommendation on a Management Regime for Offshore Cuttings Piles
P&A	Plug & Abandon
PL	Pipeline (number)
PLU	Umbilical (number)
PMF	Priority Marine Features
PON5	Petroleum Operations Notice 5
PWA	Pipeline Works Authority
SAC	Special Area of Conservation
SAT	Subsidiary Application Template
SCAP	Supply Chain Action Plan
SE	South East
SEPA	Scottish Environmental Protection Agency
SFF	Scottish Fisherman's Federation
SLV	Single Lift Vessel
SNH	Scottish National Heritage
Te/ te	tonnes
TFSW	Trans Frontier Shipment of Waste
THP	Tartan, Highlander, Petronella
TNT	Tartan North Terrace
TS	Tartan Satellite
UK	United Kingdom
UKBAP	United Kingdom Biodiversity Action Plan
UKCS	United Kingdom Continental Shelf
UKHO	United Kingdom Hydrographic Office
W	Width
WGS84	World Geodetic System 1984
WHPS	Well Head Protection Structure
£m	Million Pounds

Figures and Tables

Table 1-1: Installation(s) Being Decommissioned	11
Table 1-2: Installation(s) Section 29 Notice Holders Details	12
Table 1-3: Pipeline(s) Being Decommissioned	12
Table 1-4: Pipeline(s) Section 29 Notice Holders Details	12
Table 1-5: Summary of Decommissioning Programme(s)	13
Table 1-6: Adjacent Facilities	16
Table 2-1: Surface Facilities Information	19
Table 2-2: Subsea Installations and Stabilisation Features	19
Table 2-3: Pipeline/Flowline/Umbilical Information	20
Table 2-4: Subsea Pipeline Stabilisation Features	21
Table 2-5: Well Information	22
Table 2-6: Drill Cuttings Pile(s) Information	22
Table 3-1: Cleaning of Topsides for Removal	24
Table 3-2: Topsides Removal Methods	24
Table 3-3: Jacket Removal Methods	25
Table 3-4: Subsea Installation(s) and Stabilisation Feature(s) decommissioning Options	25
Table 3-5: Pipeline or Pipeline Groups Decommissioning Options	26
Table 3-6: Outcome of Comparative Assessment	28
Table 3-7: Pipeline Stabilisation Feature(s)	29
Table 3-8: Well Plug and Abandonment	29
Table 3-9: Drill Cuttings decommissioning Options	30
Table 3-10: Waste Stream Management Methods	31
Table 3-11: Inventory Disposition	31
Table 4-1: Environmental Sensitivities	32
Table 4-2: Environmental Impact Management	34
Table 5-1: Summary of Stakeholder Comments	37
Table 6-1: Provisional Decommissioning Programme(s) costs	42
Table 7-1: Supporting Documents	43
Figure 1-1: Schematic showing the Tartan Development Area	9
Figure 1-2: Duart Field Layout	10
Figure 1-3: Field Location in UKCS	15
Figure 1-4: Adjacent Facilities	18
Figure 2-1: Estimated Inventory – Subsea Installations	23
Figure 2-2: Estimated Inventory – Pipelines, Umbilicals, Risers & Stabilisation features	23
Figure 3-1: Field Layout showing Pipeline Groups Outcome of Comparative Assessment:	27
Figure 6-1: Gantt Chart of Project Plan	41

1 EXECUTIVE SUMMARY

1.1 Decommissioning Programmes

This document contains two Decommissioning Programmes (DPs) for the subsea infrastructure associated with the Duart field operated by Repsol Sinopec Resources UK Limited.

It forms part of the overall Tartan Development Area Decommissioning, which also includes the Tartan Topsides, Tartan Substructure (Jacket), Tartan Subsea (TNT, TS, Petronella & Highlander) and Galley which will be covered by separate Decommissioning Programmes.

A summary of the subsea installations, pipelines and umbilicals to be decommissioned is detailed in the Tables in Sections 1.4.1 and 1.4.2.

1.2 Requirement for Decommissioning Programmes

Installation(s):

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the Tartan Development Area field pipelines (see Table 1.2) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for the decommissioning of the Subsea Installations detailed in Section 2.2 of this programmes. (See also Section 8 – Partner Letter(s) of Support).

Pipeline(s)/ Structures(s):

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the Tartan Development Area field pipelines (see Table 1.4) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for the decommissioning of the pipelines, umbilicals and structures detailed in Section 2.3 of this programmes. (See also Section 8 – Partner Letter(s) of Support).

In conjunction with public, stakeholder and regulatory consultations, these DPs are submitted in compliance with national and international regulations and OPRED guidelines. The offshore decommissioning activities started in 2020 with the Tartan field CoP, and the Duart decommissioning project activities are expected to last until 2033 with a contingency to end in 2037 (see Section 6.3).

1.3 Introduction

The Tartan Development Area comprises a number of fields; tied back to the Tartan Alpha (A) platform located in Block 15/16, approximately 140km east of the nearest Scottish coastline and in a water depth of approximately 135m. The fields include Tartan, Highlander, Duart, Petronella and Galley. From the Tartan A platform, the processed oil is exported to the Claymore platform. In addition, a gas export/import pipeline ties into the Frigg Gas Pipeline System. The Tartan Development Area consists of 92 wells; 21 Platform wells and 71 subsea wells; however, these DPs relate specifically to the Duart field which consists of just a single well; Figure 1-2.

The Duart Field is operated by Repsol Sinopec Resources UK Limited and is situated in Block 14/20, approximately 134km east of the nearest Scottish coastline and in a water depth of approximately 135m. The Duart field was discovered in October 1987 by the exploration well, 14/20b-18, and is tied back to Tartan; it is located 8km west of the Tartan A platform.

The Duart field lies in the south-eastern area of the Fladen Ground in the central North Sea within the area covered by the Scottish National Marine Plan. It is c. 25km from the Scanner Pockmark Special Areas of Conservation (SAC's), and c. 35km from the Central Fladen Nature Conservation Marine Protected Area (NCMPA).

The Duart field has not formally ceased production. Decommissioning operations will commence based on the assumption that Cessation of Production will have been formally approved by the North Sea Transition Authority. Following public, stakeholder and regulatory consultation, these DPs will be submitted without derogation and in full compliance with OPRED guidelines. These DPs explain the proposed decommissioning activities and is supported by a Comparative Assessment (CA) [Ref: 1] for the pipelines and umbilicals and an Environmental Appraisal (EA) [Ref: 2].

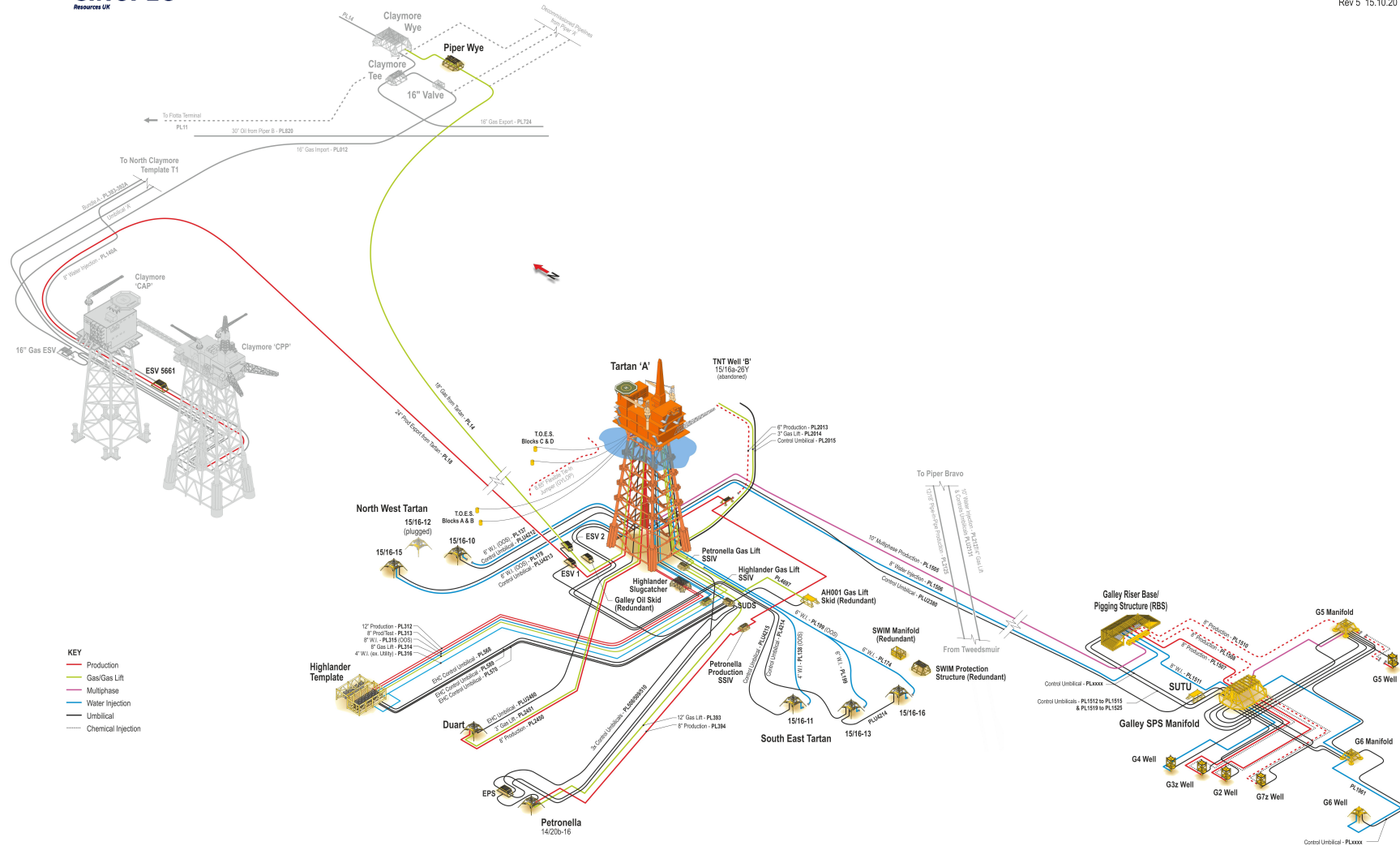
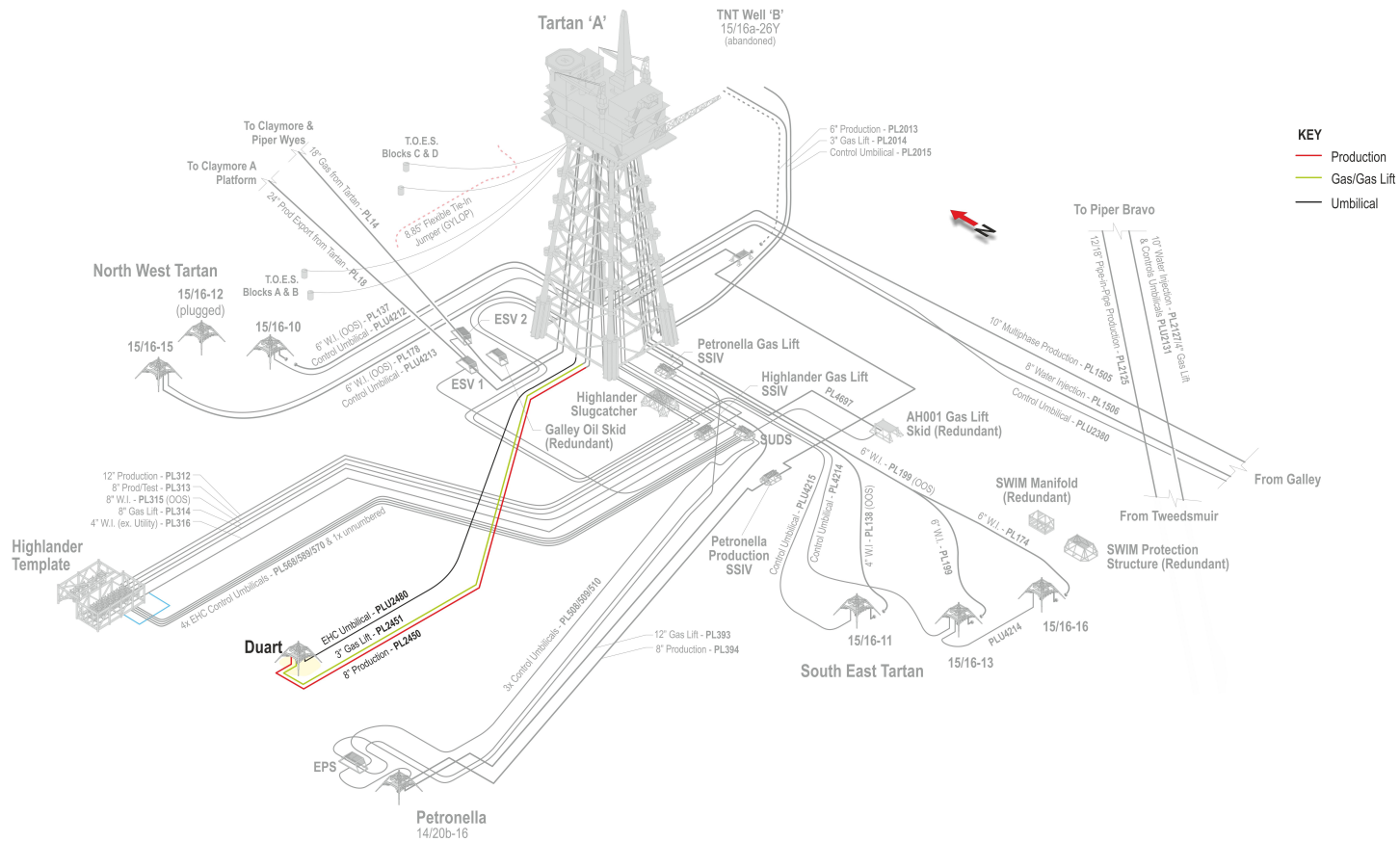


Figure 1-1: Schematic showing the Tartan Development Area



1.4 Overview of Installation(s)/Pipeline(s) Being Decommissioned

1.4.1 Installation(s)

Table 1-1: Installation(s) Being Decommissioned			
Field(s)	Duart	Production Type (Oil/Gas/Condensate)	Oil
Water Depth (m)	135	UKCS block	14/20
Distance to median (km)	91	Distance from nearest UK coastline (km)	134
Surface Installation(s)			
Number	Type	Topsides Weight (Te)	Jacket Weight (Te)
N/A ¹			
Subsea Installation(s)		Number of Wells	
Number	Type	Platform	Subsea
1	Wellhead Protection Structure	0	5
1	Chemical Injection Valve Support Skid		
Drill Cuttings pile(s)			
Number of Piles	N/A ²	Total Estimated Volume (m ³)	

¹ Decommissioning of the Tartan A topsides and substructure are covered by separate DP submissions.

² There is no cuttings pile at the Duart drill centre. It is recognised that a section of the Duart lines are laid through the Tartan A cuttings pile. The impacts of disturbing the Tartan A cuttings pile when decommissioning the Tartan Development Area pipelines, including the Duart lines, is dependent on the outcome of the Tartan A substructure CA. Management of the Tartan A cuttings pile is and captured within the Tartan A substructure DP.

Table 1-2: Installation(s) Section 29 Notice Holders Details

Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
<i>Section 29 Notices Holders who are owners</i>		
Repsol Sinopec LNS limited	02483161	50.00
Neo Energy (Production) Limited	05896824	50.00
<i>Section 29 Notice Holders who are not owners</i>		
CNOOC Petroleum Farragon U.K. Limited	05645503	Exited
CNOOC Petroleum Europe Limited	01051137	Exited
Repsol Sinopec Oil Trading Limited	02307374	Exited
Repsol Sinopec Resources UK Limited	00825828	0.00
NEO Energy (SNS) Limited	SC291165	Exited

1.4.2 Pipeline(s)

Table 1-3: Pipeline(s) Being Decommissioned

Number of Pipeline(s) Details given in Table 2.3	3
--	----------

Table 1-4: Pipeline(s) Section 29 Notice Holders Details

Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)
<i>Section 29 Notices Holders who are owners</i>		
Repsol Sinopec LNS limited	02483161	50.00
Neo Energy (Production) Limited	05896824	50.00
<i>Section 29 Notice Holders who are not owners</i>		
CNOOC Petroleum Farragon U.K. Limited	05645503	Exited
CNOOC Petroleum Europe Limited	01051137	Exited
Repsol Sinopec Oil Trading Limited	02307374	Exited
NEO Energy (SNS) Limited	SC291165	Exited

1.5 Summary of Proposed Decommissioning Programmes

Table 1-5: Summary of Decommissioning Programme(s)		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
1. Topsides		
N/A		
2. Substructures (Jackets/FPSO etc)		
N/A		
3. Subsea Installation(s)		
Complete removal and recycling onshore.	To comply with OSPAR requirements leaving unobstructed seabed. Removes a potential obstruction to fishing operations and maximises recycling of materials.	WHPS is secured by conductor which will be cut -3m below seabed Chemical Injection Valve Support Skid, which is a gravity base structure will be recovered.
4. Pipelines, Flowlines & Umbilicals		
All pipelines and umbilicals are already trenched and buried and will be decommissioned in-situ with remediation of any exposed sections	Those lines to be decommissioned in situ are trenched and buried for most of their lengths and will not affect other users of the sea.	The trenched and buried pipelines and umbilicals will be decommissioned in situ. The exposed sections will be remediated by trenching and burying (the most preferred option) Other remediation options such as cutting and removing exposed sections to shore or by covering exposed sections with rock will also be carried forward to the Contracting and Procurement (C&P) engagement exercise and tendering process on all three options and the Operator will consult with OPRED should this exercise result in a change in preference of the remediation option.

5. Wells		
Well will be plugged and abandoned to Repsol Sinopec Resources UK Limited standards which comply with “Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996” and align with Oil & Gas UK Guidelines for the Suspension and Abandonment of Wells (Issue 6, June 2018).	Meets HSE regulatory requirements in accordance with O&G UK and OGA.	A Master Application Template (MAT) and the supporting Subsidiary Application Template (SAT) will be submitted in support of activities carried out. A PON5 will also be submitted to OGA for application to abandon the wells. Additionally, planned work will be reviewed by a well examiner to Repsol Sinopec Resources UK Limited standards then submitted to the HSE for review.
6. Drill Cuttings		
N/A ³		
7. Interdependencies		
<p>Recovery of the Duart Well WHPS will require plugging & abandonment of the associated well and Xmas tree recovery to be completed prior to recovery of the structure.</p> <p>The selected decommissioning options for the Tartan A substructure may impact on how the Tartan A ends of the Duart pipelines and umbilical are decommissioned. In addition, the BAT assessment being carried out to determine the optimal approach for managing the cuttings pile will take account of the results of the Tartan A substructure CA and the pipelines and umbilicals CA.</p>		

³ No cuttings pile at the Duart drill centre whilst the management of the Tartan A cuttings pile is captured in the Tartan A substructure DP.

1.6 Field Location Including Field Layout and Adjacent Facilities

Figure 1-3: Field Location in UKCS.

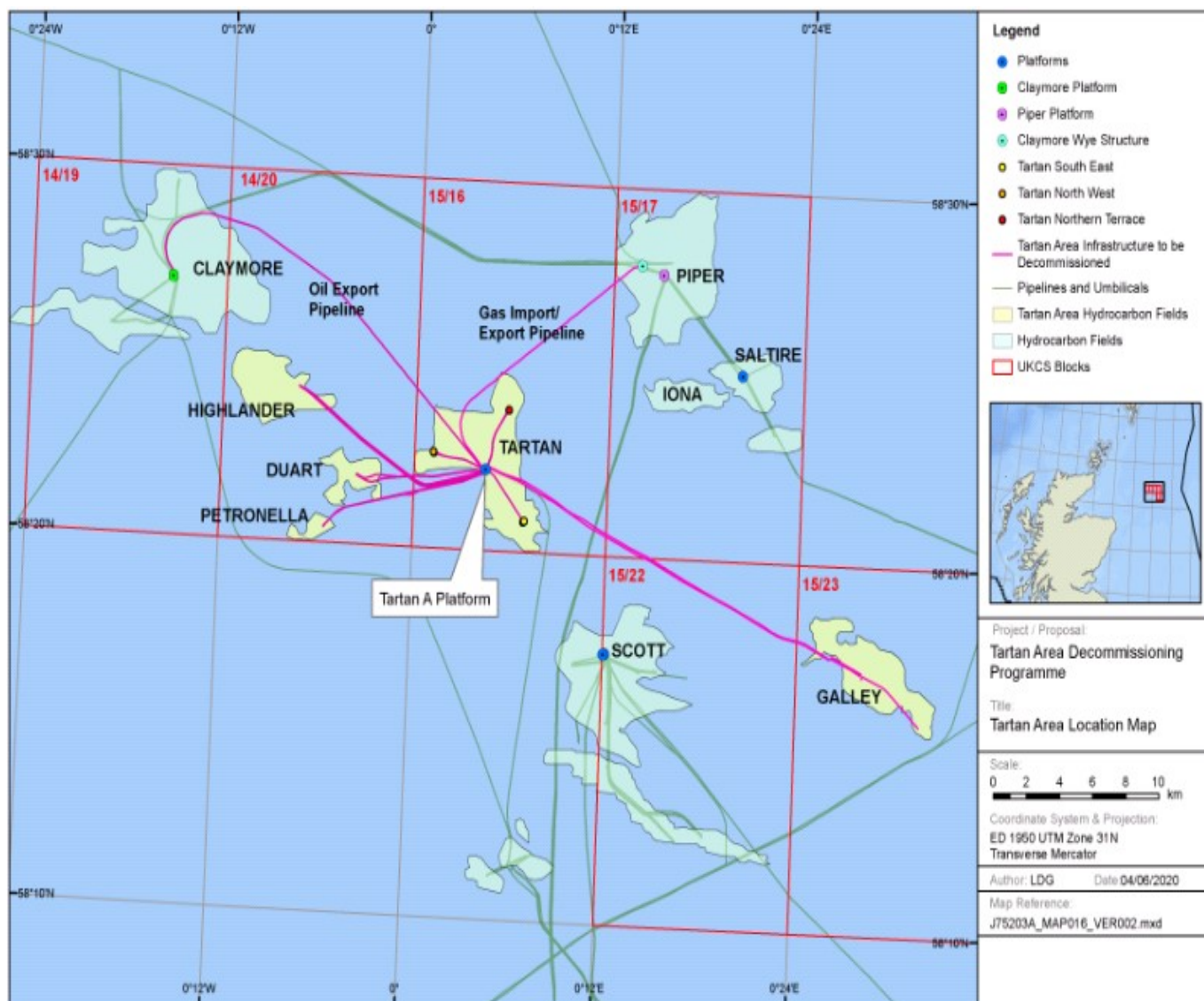


Table 1-6: Adjacent Facilities

Owner	Name	Type	Distance/Direction	Information	Status
CNOOC International	Scott	Fixed Platform	13km South East	Production steel drilling and Accommodation steel jack-up	Active
Repsol Sinopec Resources UK Limited	Piper B	Fixed Platform	13km North East	Drilling Production & Accommodation Fixed steel	Active
Repsol Sinopec Resources UK Limited	Saltire	Fixed Platform	16km East North East	Drilling production steel	Active
Repsol Sinopec Resources UK Limited	Claymore	Fixed Platform	27km North West	Drilling Production & Accommodation - steel	Active
Repsol Sinopec Resources UK Limited	Tartan	Fixed Platform	8km East	Drilling Production & Accommodation Fixed steel	Cessation of Production (Wells Suspended)
Repsol Sinopec Resources UK Limited	PL2013 / PL2014 / PLU2015	6" Production / 3" Gas Lift / Control Umbilical	10km East North East	Tartan North Terrace Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Well Abandoned)
Repsol Sinopec Resources UK Limited	PL137 / PL178 / PLU4212 / PLU4213	2No. 6" Water Injection / 2No. Control Umbilical	5km East North East	Tartan North West Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Wells Suspended)
Repsol Sinopec Resources UK Limited	PL138 / PL199 / PLU4214 / PLU4215	2No. 6" Water Injection / 2No. Control Umbilical	10km East South East	Tartan South East Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Wells Suspended)

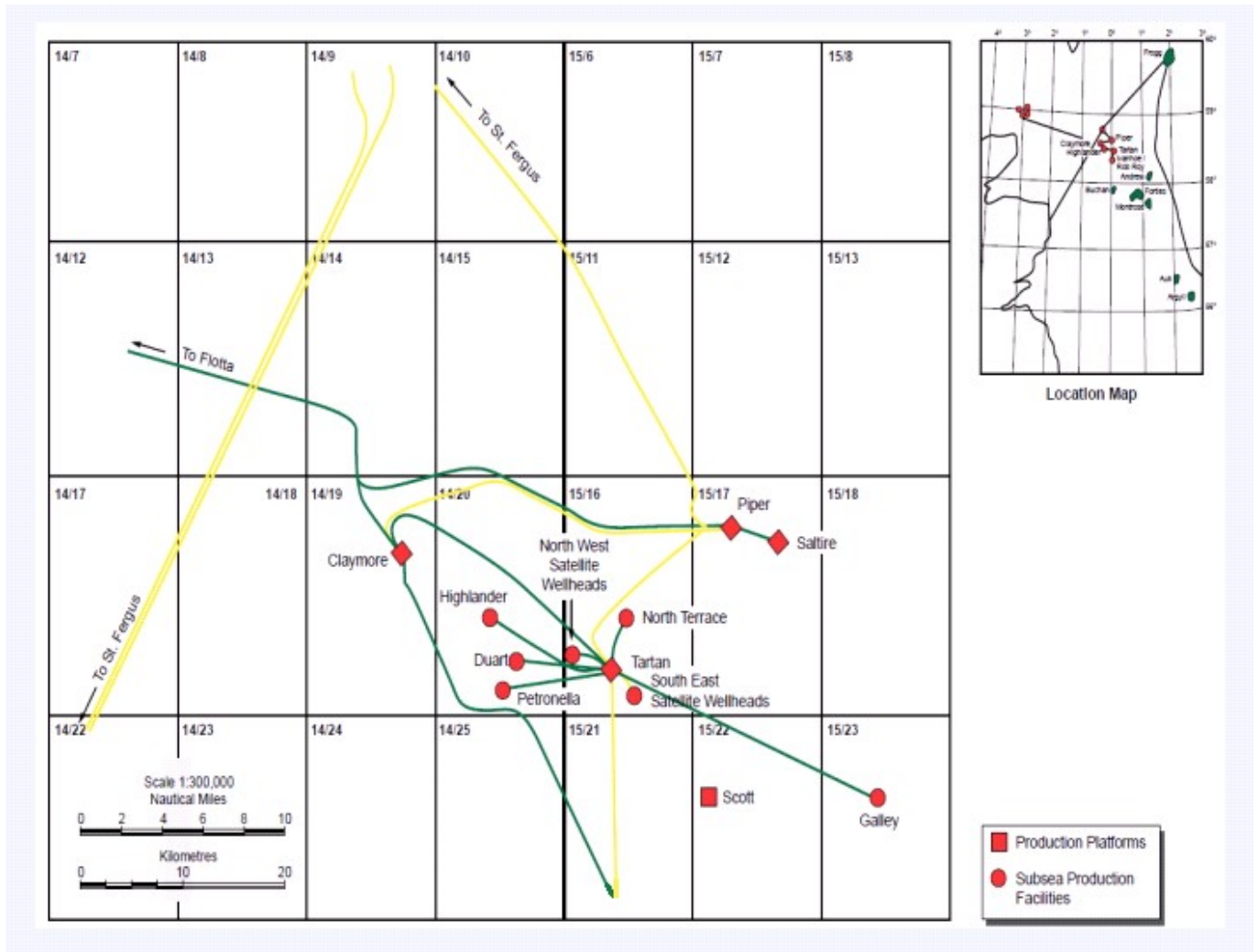
Repsol Sinopec Resources UK Limited	PL312 / PL313 / PL314 / PL315 / PL316 / PL568 / PL569 / PL570	12" Production / 8" Test & Production / 8" Gas Lift / 8" Water Injection / 4" Water Injection / 3No. Control Umbilical	6km North West	Highlander Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Wells Suspended)
Repsol Sinopec Resources UK Limited	PL393 / PL394 / PL508 / PL509 / PL510	12" Gas Lift / 8" Production / 3No. Control Umbilical	3km South West	Petronella Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Well Suspended)
Repsol Sinopec Resources UK Limited	PL1505 / PL1506 / PL1507 / PL1508 / PL1510 / PL1511 / PL1961 / PLU2380 / PLU5056 / PLU5058 / PLU5059 / PLU5060	10" Production / 8" Water Injection / 3No. 8" In-field Production / 8" In-field Water Injection / 6" In-field Water Injection / Control Umbilical / 3No. In-field Control Umbilical	32km East South East	Galley Subsea Infrastructure ^{NOTE 1}	Cessation of Production (Wells Suspended)

Impacts of Decommissioning Proposals

None of the adjacent facilities listed above are affected by these decommissioning programmes. However, the operators of these installations will be contacted to investigate any benefits and cost savings available through co-operation and alignment of decommissioning activities.

^{NOTE 1} Tartan 'Area' infrastructure which it is assumed will form part of a single Decommissioning Project for the Tartan 'Area'. As these crossings are overlaid with rock, no further work is expected at these locations. It is recognised there are numerous 'in field' crossings which will impact the methodology and sequencing of the individual lines as part of the decommissioning campaign.

Figure 1-4: Adjacent Facilities.



1.7 Industrial Implications

It is Repsol Sinopec Resources UK Limited's intention to develop a contract strategy that will result in an efficient and cost-effective execution of the decommissioning works. Repsol Sinopec Resources UK Limited will also try to combine Duart decommissioning activities with other developments or decommissioning activities in the Tartan Development Area to reduce mobilisation and demobilisation costs and realise efficiency gains through economies of scale. The decommissioning schedule is intended to allow flexibility for when decommissioning operations are carried out and completed.

Repsol Sinopec Resources UK Limited will demonstrate this intention by:

- Publishing information on the decommissioning project and timelines on its decommissioning website;
- Working closely with OGA and other industry bodies in engagement sessions with the decommissioning supply chain on issues relating to these DPs and timelines, including engaging directly with disposal yards that serve the North Sea;
- Utilising the First Point Assessment (FPAL) database as a source for establishing tender lists for contracts/purchases;
- Competitively tendering all removal scopes, including the onshore disposal scope;
- Aligning supply chain and decommissioning activity, wherever possible, with Operators of adjacent infrastructure to optimise efficiencies and cost reduction;
- Development and submission of the Supply Chain Action Plan (SCAP) to the OGA.

2 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation(s): Surface Facilities (Topsides/Jacket(s)/FPSO etc.)

Table 2-1: Surface Facilities Information									
Name	Facility Type	Location		Topsides/Facilities		Jacket (if applicable)			
				Weight (Te)	No of modules	Weight (Te)	Number of legs	Number of piles	Weight of piles (Te)
N/A									

2.2 Installation(s): Subsea including Stabilisation Features

Table 2-2: Subsea Installations and Stabilisation Features					
Subsea installations including Stabilisation Features	Number	Size(m)/Weight (Te)	Location		Comments/Status
Duart Well WHPS	1	9.2m (L) x 8.7m (W) x 5.4m (H) 72.0 Te	WGS84 Decimal	58.864617 0.059436	Structure is secured to the seabed by well conductor. Combined structure & Xmas tree to be removed during P&A activity.
			WGS84 Decimal Minute	58° 51' 52.62" N 0° 03' 33.97" W	
Chemical Injection Valve Support Skid	1	0.7m (L) x 0.4m (W) x 0.6m (H) 1.5 Te	WGS84 Decimal	58.864617 0.059436	Structure is a gravity-based structure, afforded protection by the Duart Well WHPS, by being on the seabed underneath / within the footprint of the Duart Well WHPS.
			WGS84 Decimal Minute	58° 51' 52.62" N 0° 03' 33.97" W	
Concrete Mattresses	0		N/A		

2.3 Pipelines Including Stabilisation Features

Table 2-3: Pipeline/Flowline/Umbilical Information									
Description	Pipeline Number	Diameter (inches)	Length (km)	Description of Component Parts	Product Conveyed	From – To End Points	Burial Status	Pipeline Status	Current Content
Production pipeline	PL2450	8	8.05	carbon steel / plastic coatings	Oil	Duart North Well to Tartan A Platform	Trenched / Backfilled	Out of Use	Treated seawater
Gas Lift Pipeline	PL2451	3	8.043	carbon steel / plastic coatings	Lift Gas	Tartan A Platform to Duart North Well	Trenched / Backfilled	Out of Use	Treated seawater
Umbilical to Duart Well	PLU2480	4.9 / 5.2	8.40	Electrical, Hydraulic & Chemical Carbon steel / copper / plastic & misc. coatings	Hydraulic Fluid / Methanol / Wax Inhibitor / Corrosion Inhibitor / Scale Inhibitor	Tartan A Platform to Duart North Well	Trenched / Backfilled	Out of Use	Hydraulic cores filled with Pelagic 100/ Chemical cores filled with Treated seawater

Table 2-4: Subsea Pipeline Stabilisation Features

Stabilisation Feature	Total Number	Weight (Te)	Location(s)	Exposed/Buried/Condition
Concrete mattresses (11 x 8.3Te/ 6x3x0.3m & 75 x 4.7Te / 6x3x0.15m)	86	443.8	Tartan Alpha Platform	Exposed
Grout Bags (25kg)	100	2.5	Tartan Alpha Platform	Exposed
Rock cover	N/A	138	Tartan Alpha Platform	N/A
Concrete mattresses (22 x 8.3Te / 6x3x0.3m)	22	182.6	Highlander Pipeline Crossings	Buried in rockcover
Rock cover	N/A	15,100	Highlander Pipeline Crossings	N/A
Rock cover	N/A	60,000	Intermittently along Duart to Tartan Alpha Production Pipeline Route	N/A
Concrete mattresses (36 x 4.7Te / 6x3x0.15m)	36	169.2	Duart Well	Exposed
Grout Bags (25kg)	100	2.5	Duart Well	Exposed
Rock cover	N/A	138	Duart Well	N/A

2.4 Wells

Table 2-5: Well Information			
Platform Wells	Designation	Status	Category of Well
None			
Subsea Wells			
14/20-7	Appraisal	Abandoned	N/A
14/20b-18	Exploration	Abandoned	N/A
14/20b-21	Exploration	Abandoned	N/A
14/20b-28	Appraisal	Abandoned	N/A
14/20b-33	Gas Lift Producer	Shut-in	SS 4/3/3

2.5 Drill Cuttings

Table 2-6: Drill Cuttings Pile(s) Information		
Location of Pile Centre (Latitude/Longitude)	Seabed Area (m ²)	Estimated volume of cuttings (m ³)
N/A ⁴		

⁴ No cuttings pile at the Duart drill centre and management of the Tartan A cuttings pile is captured in the Tartan A substructure DP.

2.6 Inventory Estimates

Figure 2-1: Estimated Inventory – Subsea Installations

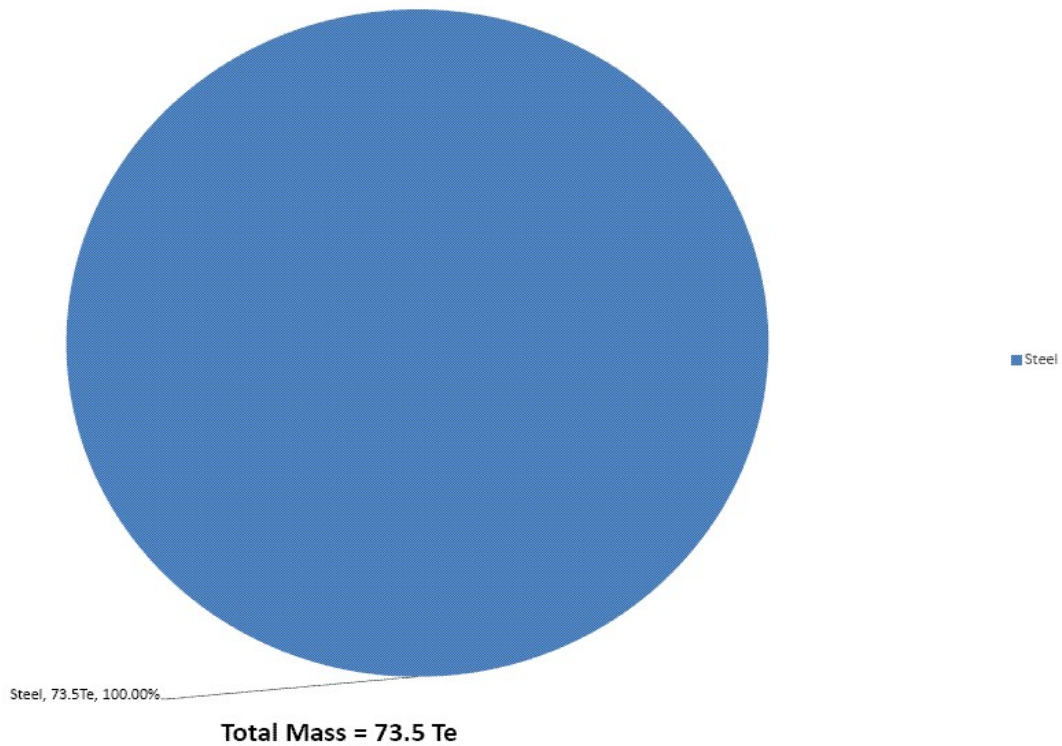
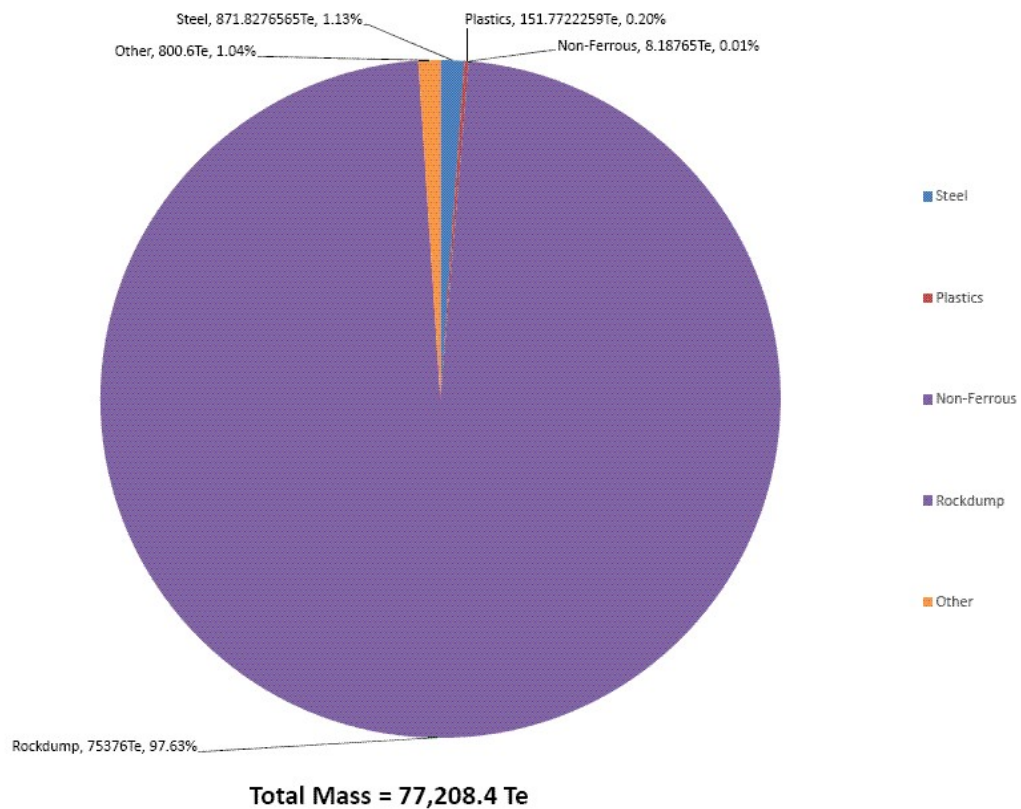


Figure 2-2: Estimated Inventory – Pipelines, Umbilicals, Risers & Stabilisation features



3 REMOVAL AND DISPOSAL METHODS

In line with the waste management hierarchy, the re-use of an installation (or parts thereof) is first in the order of decommissioning options. Repsol Sinopec Resources UK Limited considered other potential reuse options, however, none yielded a viable commercial opportunity.

On removal and where practicable, Repsol Sinopec Resources UK Limited will ensure the principles of the waste management hierarchy will be met in the handling of materials from the Duart decommissioning to maximise the amount of material which can be reused or recovered/ recycled.

Repsol Sinopec Resources UK Limited and the selected contractor (s) will monitor and review the disposal route of all materials and waste to the point of final reuse, recycling or disposal. As the decommissioning is not scheduled to be completed imminently, Repsol Sinopec Resources UK Limited propose to take advantage of any future advances in technology to aid waste management, including the further reuse, recycle or scrapping of parts of the installations as appropriate.

3.1 Topsides

Topsides Decommissioning Overview:

N/A

Preparation/Cleaning:

Table 3-1: Cleaning of Topsides for Removal		
Waste Type	Composition of Waste	Disposal Route
N/A		

Removal Methods:

Table 3-2: Topsides Removal Methods	
1) HLV (semi-submersible crane vessel) <input type="checkbox"/> 2) SLV <input type="checkbox"/> 3) Piece small <input type="checkbox"/> 4) Other <input type="checkbox"/>	
Method	Description
N/A	

3.2 Jacket(s)

3.2.1 Jacket Decommissioning Overview:

N/A

3.2.2 Jacket Removal Methods

Table 3-3: Jacket Removal Methods	
1) HLV (semi-submersible crane vessel) <input type="checkbox"/> 2) SLV <input type="checkbox"/> 3) Piece small <input type="checkbox"/> 4) Other <input type="checkbox"/>	
Method	Description
N/A	

3.3 Subsea Installations and Stabilisation Features

Table 3-4: Subsea Installation(s) and Stabilisation Feature(s) decommissioning Options			
Subsea installation(s) and stabilisation feature(s)	Number	Option	Disposal Route (if applicable)
Duart Well WHPS	1	Full Removal	Return to shore for reuse/ recycling/ disposal
Chemical Injection Valve Support Skid	1	Full Removal	Return to shore for reuse/ recycling/ disposal

3.4 Pipelines

Decommissioning Options:

*Key to Options:

- | | | |
|--|---|--|
| 1) Total removal - by reverse reeling | 2) Total removal – by reverse S-lay | 3) Total removal – cut and lift |
| 4) Remediation in-situ – exposed sections rock covered | 5) Remediation in-situ – exposed sections trenched and buried | 6) Remediation in-situ – exposed sections cut and lift |

Table 3-5: Pipeline or Pipeline Groups Decommissioning Options

Pipeline or Group (as per PWA)	Condition of line/group (Surface laid/trenched/ buried/spanning)	Whole or part of pipeline/group	Decommissioning options* considered
Group C ^{Note 1} PL2450 PL2451 PLU2480	Rigid Pipelines and umbilicals, trenched and buried	Part of a pipeline group covering pipelines in other fields within the Tartan Development Area ^{Note 1}	1), 4), 5), 6) ^{Note 2}
<p>Notes</p> <p>1. One combined CA workshop was convened covering all pipelines and umbilicals across all fields within the Tartan Development Area and for expediency some pipeline groups with similar facets were grouped together, regardless of field location. Only pipelines/umbilicals within the Duart field are reported in this table, with other pipelines within the pipeline group located in other fields reported in their applicable Decommissioning Programmes. See Figure 3-1 for details.</p> <p>2. Option 2) Total Removal by reverse S-Lay and Option 3) Total Removal by cut and lift were discounted for this pipeline Group C during the pre-screening studies and before the CA workshop as this pipeline group consists of smaller diameter pipelines which could be recovered using reverse reeling techniques, which achieved a Total Removal Option in a more efficient method than Options 2) and 3), incurring less deck space requirements, less manual handling and lower cost than adopting Reverse S-lay techniques.</p>			

Comparative Assessment Method:

A Comparative Assessment (CA) was carried out for all pipelines and umbilicals in line with the recommendations of the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) Guidance Notes. The CA considered Technical, Safety and Environmental Risks and Societal and Economic Impacts. The assessments closely followed the Guidelines on CA's in DPs published by Oil and Gas UK (OGUK).

A combined CA Workshop covering all pipelines and umbilicals in the Tartan Development Area was held by Repsol Sinopec Resources UK Limited (representatives from the safety, environmental and subsea teams present) using established terms of reference, detailed data on field facilities, results were recorded and approved by participants. The results specific to the pipelines and umbilicals the Duart field only are described in these DPs.

Figure 3-1: Field Layout showing Pipeline Groups

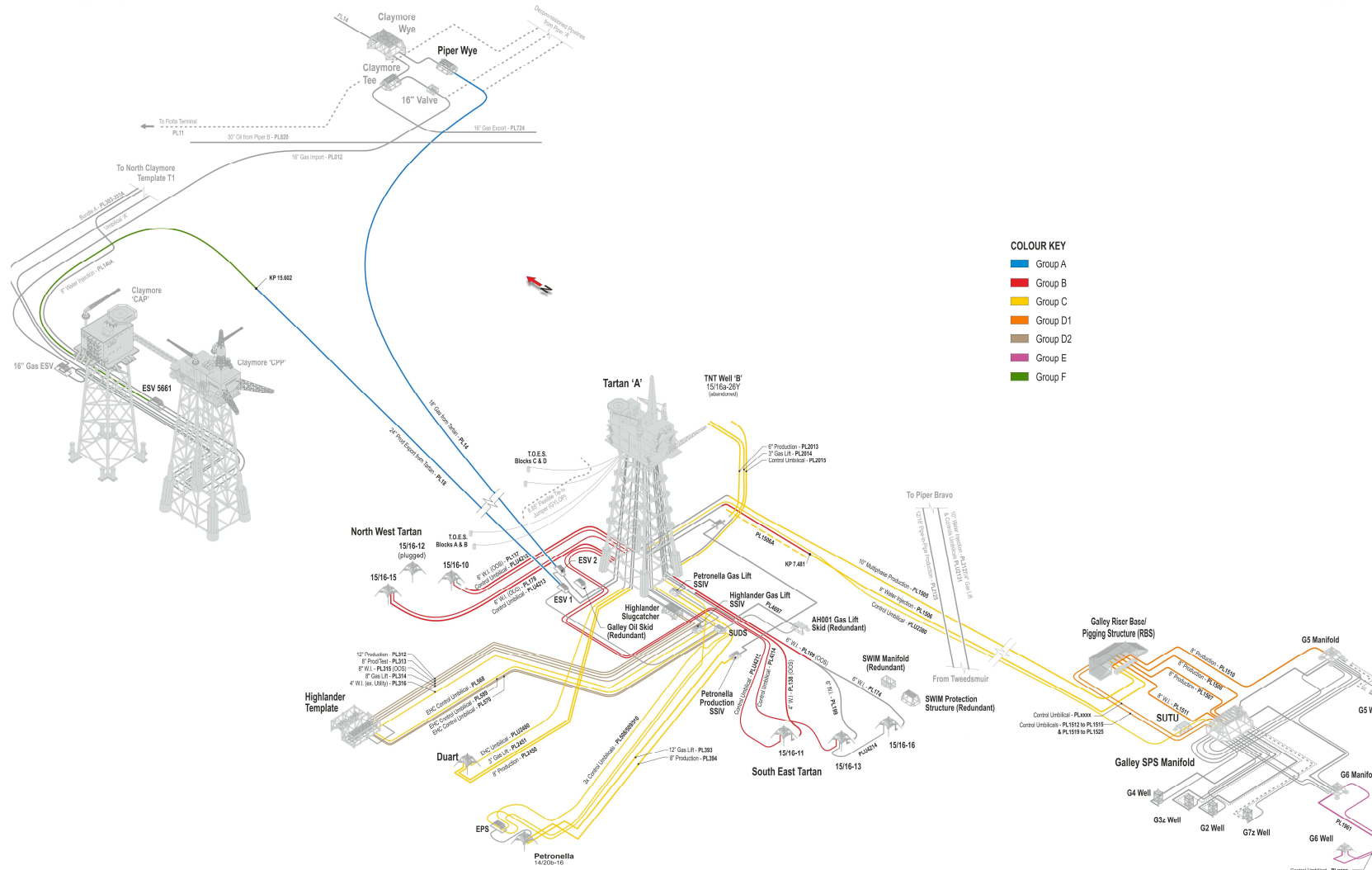


Table 3-6: Outcome of Comparative Assessment

Pipeline or Group (as per PWA)	Recommended Option	Justification
Group C	Decommission by leaving trenched and buried sections in situ and remediating the exposed sections by trench and bury techniques ^{Note1.}	<p>The pipelines and umbilicals in this group are buried to an average depth greater than 0.6m to top of pipe and, based on a review of the historic survey information it is expected or has been demonstrated that these pipelines and umbilicals will remain buried.</p> <p>Total removal options were discounted for these trenched and buried pipelines as full removal of the lines would be technically challenging, whilst the increased safety risk exposure time to project personnel both offshore and onshore in having to handle large pipeline and umbilical lengths was a concern. In addition, recovery of the pipelines would result in excessive seabed disturbance.</p> <p>There will be minimum legacy risk to other users of the sea in leaving these pipelines <i>in-situ</i> as historical surveys have demonstrated that the trenched and buried sections of the pipelines will remain stable.</p> <p>The exposed sections will be remediated by trench and bury ^{Note 1.}</p>
<p>^{Note 1} The conclusion of the CA was that there is no significant differentiator on each of the remediation options for the exposed sections of pipelines and umbilical. However, the slight differences have resulted in the remediate in situ options being prioritised for Group C as follows:</p> <ul style="list-style-type: none"> • Priority 1 – Trench and bury (Option 5) • Priority 2 – Cut and lift (Option 6) • Priority 3 – Rock cover (Option 4) <p>Given that there is no significant differentiator Repsol Sinopec Resources UK Limited intend to carry out a Contracting and Procurement (C&P) engagement exercise and tendering process on all three options and will consult with OPRED should this exercise result in a change in preference of the remediation option from Option 5).</p>		

3.5 Pipeline Stabilisation Feature(s)

Table 3-7: Pipeline Stabilisation Feature(s)			
Stabilisation feature(s)	Number	Option	Disposal Route (if applicable)
Exposed Concrete Mattresses (11 x 8.3Te / 111 x 4.7Te)	122	Full recovery of exposed concrete mattresses. It is intended that the mattresses will be recovered to shore, however in the event of practical difficulties during the removal execution, OPRED will be consulted and an alternative method of decommissioning will be examined through a comparative assessment.	Return to shore for reuse/ recycling/ disposal
Exposed Grout Bags (25kg)	200	Full recovery.	Return to shore for reuse/ recycling/ disposal
Rock cover (Te)	75,376	To remain in place.	N/A
Buried Concrete Mattresses (8.3Te)	22	To remain in place (buried under rock cover).	N/A

3.6 Wells

Table 3-8: Well Plug and Abandonment
The well (listed in Table 2.5) will be plugged in compliance with the requirements of the Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996 (DCR) and abandoned in accordance with the latest version of the Oil & Gas UK Guidelines for the Suspension and Abandonment of Wells (Issue 6, June 2018).

3.7 Drill Cuttings

Table 3-9: Drill Cuttings decommissioning Options	
How many drill cuttings piles are present?	N/A ⁵
Tick options examined: <input type="checkbox"/> Remove and re-inject <input type="checkbox"/> Leave in place <input type="checkbox"/> Cover <input type="checkbox"/> Relocate on seabed <input type="checkbox"/> Remove and treat onshore <input type="checkbox"/> Remove and treat offshore <input type="checkbox"/> Other	
Review of Pile characteristics	Pile 1
How has the cuttings pile been screened? (desktop exercise/actual samples taken)	
Dates of sampling (if applicable)	
Sampling to be included in pre-decommissioning survey?	
Does it fall below both OSPAR thresholds?	
Will the drill cuttings pile have to be displaced	
What quantity (m ³) would have to be displaced/removed?	
Will the drill cuttings pile have to be displaced in order to remove any pipelines?	
What quantity (m ³) would have to be displaced/removed?	
Have you carried out a Comparative Assessment of options for the Cuttings Pile?	

Comparative Assessment Method:

N/A

Outcome of Comparative Assessment:

N/A

⁵ No cuttings pile at the Duart drill centre and details of the Tartan A cuttings pile are captured in the Tartan A substructure DP.

3.8 Waste Streams

Table 3-10: Waste Stream Management Methods

Waste Stream	Removal and Disposal method
Bulk liquids	Residual hydrocarbons will be removed and transported to shore. Pipework 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. All pipelines will be flushed, cleaned and filled with seawater prior to decommissioning activities taking place.
Marine growth	Where necessary and practicable to allow access, some marine growth will be removed offshore. The remainder will be brought ashore and disposed of in accordance with health, safety and environmental protocols.
NORM	Tests for NORM will be undertaken offshore and work will be carried out in full compliance with all relevant regulations.
Asbestos	N/A
Other hazardous wastes	Will be recovered to shore and disposed of in full compliance with all relevant regulations.
Onshore Dismantling sites	Appropriate licensed sites will be selected. Dismantling sites must demonstrate waste stream management throughout the deconstruction process and the ability to deliver innovative reuse and recycling options. Existing sites would need a proven track record.

As part of the Contracting Strategy, Repsol Sinopec Resources UK Limited will ensure the selection of waste competent Contractor(s), experienced in the handling of all wastes associated with the decommissioning of Oil and Gas infrastructure.

The waste management provider's/disposal yards shall follow the waste management hierarchy in the handling of materials from the Tartan Development Area decommissioning Project to maximize the amount of material from the projects which is reused or recovered/recycled. Repsol Sinopec Resources UK Limited and the selected removal contractor(s) will, monitor and review the disposal route of all materials and waste to the point of final reuse, recycling or disposal and reserves the right to audit to fulfil any Duty of Care responsibilities. Geographic locations of potential disposal yard options may require the consideration of Trans Frontier Shipment of Waste (TFSW), including hazardous materials. Early engagement with the relevant waste regulatory authorities will ensure that any issues with TFSW are addressed.

Table 3-11: Inventory Disposition

	Total Inventory Tonnage	Planned tonnage to shore	Planned left in situ
Installations	N/A	N/A	N/A
Subsea Installations	73.5te	73.5te	0
Pipelines	77,208.4te	694.2te	76,514.2te

4 ENVIRONMENTAL APPRAISAL OVERVIEW

4.1 Environmental Sensitivities (Summary)

Table 4-1: Environmental Sensitivities	
Environmental Receptor	Main Features
Conservation interests	<p>The nearest protected areas to the Tartan Development Area are the Scanner Pockmark Special Area of Conservation (SAC), and the Central Fladen Nature Conservation Marine Protected Area (NCMPA), located c. 25 km west and c. 35 km north of the fields, respectively. Given the distance to these sites, the activities associated with decommissioning the Duart Field will not impact on designated areas. .</p>
Seabed	<p>Repsol Sinopec Resources UK Limited commissioned a pre-decommissioning environmental survey in September/October 2019. As part of the survey, video, stills of the seabed and seabed samples were collected to assess the existing environmental conditions.</p> <p>The sediments across the area covered by the pre-decommissioning survey were considered to be relatively homogenous and to comprise three main habitats: circalittoral fine mud (EUNIS A5.36), circalittoral sandy mud (EUNIS A5.35) and deep circalittoral mixed sediment (EUNIS A5.45).</p> <p>The sea pens <i>Virgularia mirabilis</i> and <i>Pennatula phosphorea</i> and burrows and tracks created by megafauna (e.g. <i>Nephrops norvegicus</i>) were widespread throughout the survey area. The majority of the Tartan Development Area is therefore considered to meet the criteria for the OSPAR listed threatened and/or declining habitat 'Sea pen and burrowing megafauna communities' as well as the UK Habitat Feature of Conservation Importance and UKBAP habitat 'mud habitats in deep water'.</p> <p>Juvenile specimens of the OSPAR protected species ocean quahog (<i>Arctica islandica</i>) were recorded in a number of the grab samples taken as part of the environmental survey at the Duart field.</p> <p>The survey did not identify any accumulations of drill cuttings in the Duart Field such that there is no cuttings pile associated with the drill centre.</p>
Fish	<p>Several fish species are known to spawn in the area including (but not limited to): cod, whiting, lemon sole, Norway pout, <i>Nephrops</i>, and sprat. Group 0 fish for a number of species have been found in the area indicating it is used as a nursery ground for these species including (but not limited to): anglerfish, whiting, cod, hake, haddock, Norway pout, <i>Nephrops</i>, blue whiting and sprat.</p> <p>Of the fish species identified in the area, cod, Norway pout, whiting, blue whiting and anglerfish have been assessed by the Scottish Natural Heritage (SNH) and the Joint Nature Conservation Committee (JNCC) as Priority Marine Features (PMFs) in Scotland.</p>

Fisheries	The infrastructure associated with the Duart field occurs within International Council for Exploration of the Sea (ICES) rectangles 45E9 and 45F0. Pelagic, demersal and shellfish species are fished from both these rectangles. Available data suggests that these ICES rectangles encompass an area that is relatively important to the UK fishing industry such that fishing activity in the area can be considered high. A review of the Scottish Government landings data for 2014 to 2018 shows that trawl gear is used in both rectangles, whilst seine nets are also active in rectangle 45E9.
Marine Mammals	The Atlas of Cetacean Distribution in Northwest European Waters suggests that moderate to low densities of Atlantic white-sided dolphin and harbour porpoise and high to low densities of white-beaked dolphin and minke whale have been sighted in the immediate vicinity of the Tartan Development Area infrastructure.
Birds	European Seabirds at Sea (ESAS) data collected over 30 years , indicates the presence of a number of bird species in the area including but not limited to the northern gannet, northern fulmar, black-legged kittiwake, lesser and greater black-backed gull, razorbill, great and Arctic skua, little auk, herring gull, common gull, common guillemot and Atlantic puffin.
Onshore Communities	At this stage of the project, the onshore dismantling and disposal yards are not yet chosen and therefore it is not possible to describe the specific locations where activities will take place. Repsol Sinopec Resources UK Limited intends to engage approved dismantling contractors to handle the recovered materials. In addition, approved waste management contractors will be selected to handle, store and dispose of any materials that cannot be recycled or reused.
Other Users of the Sea	Based on available data, shipping activity in the vicinity of the Tartan Development Area is considered low. There are no offshore windfarm developments within the vicinity of the Tartan Development Area. The fields are located in a well-developed oil and gas area with a number of developments in the area including Scott (c. 13 km southeast), Piper B (c. 13 km northeast) Saltire (c. 16 km east northeast) and Claymore (c. 27 km northwest).
Atmosphere	Offshore, emissions to the atmosphere will arise from the vessels used to decommission the Duart infrastructure. Onshore emissions will result from the yard activities including recycling of the steel associated with the material returned to shore. Repsol Sinopec Resources UK Limited acknowledge that these emissions will contribute to the cumulative effect of emissions on climate change, though the impact will be minimised via the application of the mitigation measures identified in Table 4-2.

4.2 Potential Environmental Impacts and their Management

Environmental Impact Assessment Summary:

Table 4-2: Environmental Impact Management		
Activity	Main Impacts	Management
Topsides Removal	N/A	N/A
Jacket(s)/Floating Facility Removal	N/A	N/A
Subsea Installation(s) Removal	<p>When assessing the impacts associated with recovery of the two subsea installations identified in Table 3-4 the aspects considered as part of the EA process included:</p> <ul style="list-style-type: none"> • The physical presence of vessels; • Energy use and atmospheric emissions; • Underwater noise from vessels; • Discharges to sea from vessels; • Temporary disturbance to the seabed from activities, including cutting and recovery; • Discharges to sea from the subsea installations during recovery operations; • Production of waste materials. <p>Applying the mitigations summarised in this table (to be detailed in the EA Report) the environmental and societal significance of the proposed activities associated with recovering the subsea installations is considered low.</p>	<p>During decommissioning of the subsea installations, a number of mitigation measures will be adhered to, in order to minimise the marine environmental and socio-economic impacts. These will be identified in the EA Report and are summarised here:</p> <ul style="list-style-type: none"> • Repsol Sinopec Resources UK Limited will carry out a detailed assurance process on all vessels prior to contract award and all contractors will originate from countries signed up to the International Maritime Organisation and will adhere to their guidelines. • Vessel use will be optimised. • Flushing and cleaning have been completed in line with BAT/BEP (Best Available Technique/Best Environmental Practice) requirements. • Work procedures will be in place to minimise duration of activities and minimise likelihood of dropped objects. • Any potential SIMOPS (simultaneous operations) will be managed through bridging documents and communications. • Cutting/dredging/jetting work plans will be in place. • Internal cutting of the conductor associated with the WHPS. • Preference will be given to the use of side scan sonar surveys to

Table 4-2: Environmental Impact Management

Activity	Main Impacts	Management
		<p>determine a clear seabed.</p> <ul style="list-style-type: none"> • Post decommissioning survey strategy.
Decommissioning Pipelines	<p>The two Duart pipelines and the Duart umbilical described in Table 2-3 are trenched and buried with an average depth of cover > 0.6 m. The three lines will be decommissioned <i>in situ</i> with remediation of the exposed ends.</p> <p>Aspects considered for the decommissioning of the pipelines and umbilical include those considered for 'Subsea Installation Removal'. In addition, they included:</p> <ul style="list-style-type: none"> • Legacy impacts. <p>Applying the mitigations summarised in this table (to be detailed in the EA Report) the environmental and societal significance of the activities associated with decommissioning the pipelines and umbilical is considered low.</p>	<p>During decommissioning of the pipelines and umbilical the relevant mitigation measures identified for 'Subsea Installation Removal' (see above) will be applied. In addition:</p> <ul style="list-style-type: none"> • With respect to remediating the pipeline and umbilical ends trench and bury or cut and recover will be prioritised over the use of rockcover. • If rockcover is used it will be minimised and will be laid in profiles aligned with industry standards. • Preference will be given to the use of side scan sonar surveys to determine a clear seabed. • Post decommissioning survey strategy.
Decommissioning Stabilisation Features	<p>The base case is to decommission the existing rockcover in situ and recover the exposed mattresses and grout bags. The 22 buried mattresses (see Table 3-7) will be decommissioned in situ.</p> <p>Aspects considered for the decommissioning of the stabilisation materials include those considered for 'Subsea Installation Removal'.</p> <p>In addition, as for 'Decommissioning of Pipelines' legacy impacts were also considered.</p> <p>Following the mitigations summarised in this table (to be detailed further in the EA Report) the environmental and societal significance of the activities associated with decommissioning</p>	<p>During decommissioning of the 'Stabilisation Features' the relevant mitigation measures identified for 'Subsea Installation Removal' (see above) will be applied. In addition:</p> <ul style="list-style-type: none"> • In the event that any exposed mattresses or grout bags cannot be recovered Repsol Sinopec Resources UK Limited will consult with OPRED to discuss alternative approaches. • A survey strategy will be agreed with OPRED for monitoring any stabilisation features that will be decommissioned <i>in situ</i>.

Table 4-2: Environmental Impact Management

Activity	Main Impacts	Management
	the stabilisation features is considered low.	
Decommissioning Drill Cuttings	N/A	N/A

5 INTERESTED PARTY CONSULTATIONS

Consultations Summary:

As part of the informal stakeholder engagement process in August 2020 Repsol Sinopec Resources UK Limited issued a Scoping Report to a number of stakeholders.

The Scoping Report provided an overview of the Tartan Development Area, the proposed decommissioning activities and an overview of the impacts to be assessed in this EA. Recipients of the Scoping Report were invited to comment on the Scoping Report with respect to any concerns they may have.

In addition to issuing the Scoping Report, Repsol Sinopec Resources UK Limited carried out a number of informal stakeholder engagement sessions including separate meetings with various stakeholders as the project progressed. Repsol Sinopec Resources UK Limited also carried out two Stakeholder Engagement Workshops in February 2020 to share the proposed decommissioning activities. No major concerns were raised.

Table 5.1 summarises the main concerns that the stakeholders have identified to date and full details are provided in Chapter 2 of the EA Report.

Table 5-1: Summary of Stakeholder Comments		
Who	Comment	Response
Informal Stakeholder Consultations		
OPRED	No response was received from OPRED on the Scoping Report OPRED attended the Stakeholder Engagement Workshop and raised no concerns.	N/A
JNCC	In response to the Scoping Report, JNCC provided guidance on information to be included in the EA. In addition, they requested that the amount of additional hard substrate is minimised. At the Stakeholder Engagement Workshop, JNCC raised discussion points on the cuttings pile modelling carried out to support the EA and on the use of rock cover to mitigate exposed line sections.	JNCC's guidance with respect to the EA has been noted and applied where relevant. All surface laid pipelines and umbilicals will be recovered. The base case is to trench and bury or cut and recover the exposed sections of the buried pipelines and umbilical. Should the application of rockcover be selected during the C&P process, rock volumes will be minimised and laid in line with industry standards. At the Stakeholder Engagement Workshop, JNCC raised no concerns in relation to the proposed decommissioning activities. The discussion points raised are detailed in Chapter 2 of the EA Report.
Scottish Environment	No response was received from SEPA on the Scoping Report.	N/A

Protection Agency (SEPA)	SEPA attended the Stakeholder Engagement Workshop and raised no concerns.	
United Kingdom Hydrographic Office (UKHO)	In response to the Scoping Report, the UKHO advised that at this point of the project they had no specific requests and would comment on the DPs issued for public consultation.	N/A
Scottish Fishermen's Federation (SFF)	In their response to the Scoping Report, SFF referred Repsol Sinopec Resources UK Limited to their Oil and Gas Decommissioning Policy and advised they had no comments on the Scoping Report. At the Stakeholder Engagement Workshop, SFF raised discussions in relation to: <ul style="list-style-type: none"> • Fate of subsea structures; and • Exposures on lines decommissioned <i>in situ</i>. 	Repsol Sinopec Resources UK Limited will continue to take account of the SFF Oil and Gas Decommissioning Policy during the Tartan Development Area Decommissioning Project. Repsol Sinopec Resources UK Limited confirmed that all subsea structures will be recovered. In addition, they confirmed that all exposures would be mitigated such that no free spans would remain.
Marine Scotland science (MSS)	No response was received from MSS on the Scoping Report. MSS attended the Stakeholder Engagement Workshop and raised discussions on (1) the cuttings piles and potential impacts of disturbance, and (2) pipeline exposures.	Repsol Sinopec Resources UK Limited confirmed that the cuttings piles occur within existing 500 m exclusion zones, and that the EA Report assesses any potential cumulative impacts of disturbing the different cuttings piles. In addition, Repsol Sinopec Resources UK Limited confirmed that all exposures would be mitigated.
Oil and Gas Authority (OGA)	No response was received from the OGA on the Scoping Report. The OGA attended the Stakeholder Engagement Workshop and raised discussions on potential reuse options for the pipelines.	Repsol Sinopec Resources UK Limited confirmed that reuse options had been considered but were not found to be feasible.
Health and Safety Executive (HSE)	No response was received from the HSE on the Scoping Report. The HSE attended the Stakeholder Engagement Workshop and raised discussions on post activity ground truthing of the results of the modelling of the disturbance to the cuttings piles and sediment types in the area.	Repsol Sinopec Resources UK Limited confirmed that post decommissioning surveys would be carried out (further details are included in the EA Report). In addition, Repsol Sinopec Resources UK Limited confirmed the sediment types associated with the area (further details are included in the EA Report).
Statutory Consultations		
Various Statutory Consultees	Following statutory consultation (5 th April – 27 th May 2022), RSRUK received a number of guidance notes, questions and actions relating to the Duart Decommissioning Programmes and supporting documents	All consultee comments have been satisfactorily addressed throughout OPRED's process, and minor updates to the Decommissioning Programmes and supporting documents have been

	from the consultees.	implemented where appropriate.
Public	No comments received.	N/A

6 PROGRAMME MANAGEMENT

6.1 Project Management and Verification

Repsol Sinopec Resources UK Limited has established a multi-disciplinary team lead by a Project Manager responsible for the implementation of activities and co-ordination of all services. An execution plan will align with established Repsol Sinopec Resources UK Limited Health, Safety and Environment policies and meet all relevant legislative requirements. A contracting strategy will be based on Repsol Sinopec Resources UK Limited procurement and contracts policies, including competitive tendering for all contractor services. Where possible, activities will be co-ordinated with other decommissioning operations and take account of any initiatives promoted by the OGA. Repsol Sinopec Resources UK Limited will report regularly on the execution of the DPs to OPRED and discuss any changes in plans in advance.

6.2 Post-Decommissioning Debris Clearance and Verification

A pre-decommissioning survey has been completed to identify debris within the installations' 500 m zones and within the 100 m pipeline corridors. Any seabed debris related to offshore oil and gas activities will be recovered for onshore recycling or disposal in line with existing waste management policies. The clear seabed will either be validated by an independent verification trawl over the installation sites and pipeline corridors or by the post decommissioning survey. A 100m corridor of the pipeline routes and within a 500m radius of the installation sites will be the subject to oilfield debris clearance and as-left verification surveys when decommissioning activity has concluded. The main risk from infrastructure remaining in situ is the potential for interaction with other users of the sea, specifically from fishing related activities. Where the infrastructure is trenched below seabed level or trenched & buried below, the effect of interaction with other users of the sea is considered to be negligible. The infrastructure is currently shown on Admiralty Charts and the FishSafe system. Once the Duart field installations and pipelines are removed RSRUK will inform OPRED and provide evidence of removal. When decommissioning activity has been completed, updated information will be made available to update Admiralty Charts and FishSafe system. When decommissioning activities have been completed, and where applicable, the safety zones around offshore infrastructure will be removed.

The licence holders recognise their commitment to undertake post-decommissioning monitoring of infrastructure left in situ. After the post-decommissioning survey reports have been sent to OPRED and reviewed, a post-decommissioning monitoring survey regime, scope and frequency, will be agreed with OPRED.

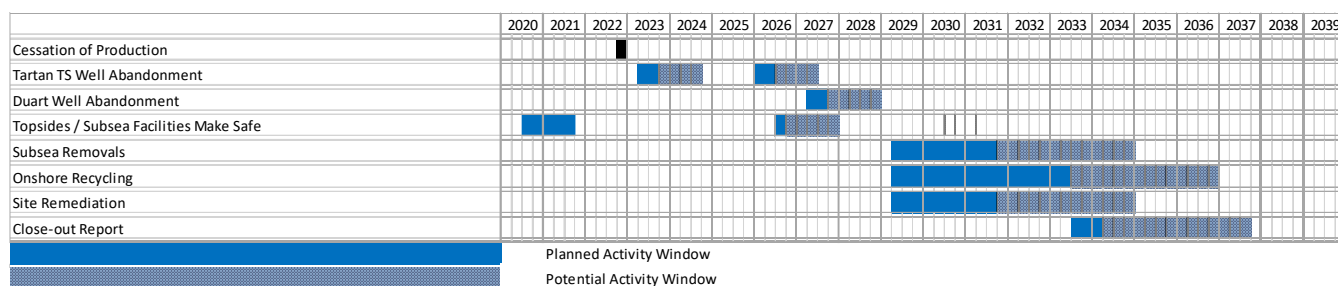
6.3 Schedule

The main milestones on the Duart DPs are:

- Wells abandonment
- Subsea infrastructure removal
- Post removal survey

The schedule may change to maximise economic recovery or to exploit opportunities to minimise decommissioning impacts by combining other decommissioning activities within our portfolio into campaigns, or by combining Tartan Development Area decommissioning operations with third party decommissioning. The schedule for the Duart DPs are outlined in Figure 6.1.

Figure 6-1: Gantt Chart of Project Plan



Note The Duart subsea facilities make safe operations have been completed as part of the 2020 decommissioning project campaign.

6.4 Costs

Table 6-1: Provisional Decommissioning Programme(s) costs	
Item	Estimated Cost (£m)
Platform(s)/Jacket(s) - Preparation/Removal and Disposal	N/A
Pipeline(s) Decommissioning	Will be provided to OPRED ¹
Subsea Installation(s) and Stabilisation Feature(s)	Will be provided to OPRED ¹
Well Abandonment	Will be provided to OPRED ¹
Continuing Liability – Future Pipeline and Environmental Survey Requirements	Will be provided to OPRED ¹
TOTAL	Will be provided to OPRED ¹

¹ Estimated Costs are confidential and will be provided separately to OPRED

6.5 Close Out

A close out report will be submitted to OPRED within 12 months of the completion of decommissioning completion, including debris clearance and post-decommissioning surveys. The close out report will notify OPRED of any variances to outcomes that have been detailed in these DPs.

6.6 Post-Decommissioning Monitoring and Evaluation

A post decommissioning environmental seabed survey, covering pipeline routes and sites of wellheads and installations, will be carried out when decommissioning activity has been concluded. The survey will focus on chemical and physical disturbances due to the decommissioning and be compared with the pre-decommissioning survey. Results of the survey will be forwarded to OPRED to enable a post monitoring survey regime to be agreed by both parties.

7 SUPPORTING DOCUMENTS

Table 7-1: Supporting Documents	
Document Number	Title
RP-DTATAR001-GE-0096	Tartan Development Area Decommissioning Comparative Assessment Report
RP-DTATAR001-HS-0151	Subsea Environmental Appraisal Report

8 PARTNER LETTER(S) OF SUPPORT



CNOOC PETROLEUM EUROPE LIMITED
Prospect House 97 Oxford Road
Uxbridge UB8 1LU United Kingdom
T +44 (0) 1895 555 139 F +44 (0) 1895 555001
www.intl.cnoccltd.com
Email maurice.barcley@intl.cnoccltd.com

Offshore Petroleum Regulator for Environment and Decommissioning

Department for Business, Energy & Industrial Strategy

3rd Floor, Wing C

AB1 Building

Crimon Place

Aberdeen

AB10 1BJ

Your ref: 12.04.06.05/324C

DATE: 3/11/22

Dear Sir or Madam,

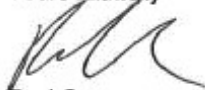
DUART FIELD DECOMMISSIONING PROGRAMMES PETROLEUM ACT 1998

We acknowledge receipt of your letter dated 05 October 2022.

We, CNOOC Petroleum Europe Limited (Company number 01051137), a company registered in England and Wales and having their registered office at Prospect House, 97 Oxford Road, Uxbridge UB8 1LU, as a holder of a Section 29 notice relative to the Duart field and in accordance with the Guidance Notes confirm that we authorise Repsol Sinopec LNS Limited (Company number 02483161) to submit on our behalf abandonment programmes relating to the Duart field pipelines as directed by the Secretary of State on 05 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS Limited to the Secretary of State, 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



Paul Gunn

Director

For and on behalf of **CNOOC Petroleum Europe Limited**

Registered in England No 1051137
Registered Office: Prospect House 97 Oxford Road Uxbridge UB8 1LU U.K.
VAT Registration No: 830 9476 15



CNOOC PETROLEUM EUROPE LIMITED
Prospect House 97 Oxford Road
Uxbridge UB8 1LU United Kingdom
T +44 (0) 1895 555 139 F +44 (0) 1895 555001
www.intl.cnooltd.com
Email maurice.bardley@intl.cnooltd.com

Offshore Petroleum Regulator for Environment and Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Your ref: 12.04.06.06/121C

DATE: 3/11/22

Dear Sir or Madam,

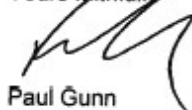
**DUART SUBSEA INSTALLATIONS DECOMMISSIONING PROGRAMMES
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 05 October 2022.

We, CNOOC Petroleum Europe Limited (Company number 01051137), a company registered in England and Wales and having their registered office at Prospect House, 97 Oxford Road, Uxbridge UB8 1LU, as a holder of a Section 29 notice relative to the Duart field and in accordance with the Guidance Notes confirm that we authorise Repsol Sinopec LNS Limited (Company number 02483161) to submit on our behalf abandonment programmes relating to the Duart Subsea Installations as directed by the Secretary of State on 05 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS Limited to the Secretary of State, 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



Paul Gunn
Director

For and on behalf of CNOOC Petroleum Europe Limited

Registered in England No 1051137
Registered Office: Prospect House 97 Oxford Road Uxbridge UB8 1LU U.K.
VAT Registration No: 930 9476 15



CNOOC PETROLEUM FARRAGON UK LIMITED
Prospect House 97 Oxford Road
Uxbridge UB8 1LU United Kingdom
T +44 (0) 1895 555 139 F +44 (0) 1895 555001
www.infl.cnoodtd.com
Email: maurice.barclay@infl.cnoodtd.com

Offshore Petroleum Regulator for Environment and Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Your ref: 12.04.06.05/324C

DATE: 3/11/22

Dear Sir or Madam,

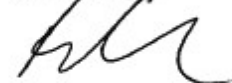
DUART FIELD DECOMMISSIONING PROGRAMMES PETROLEUM ACT 1998

We acknowledge receipt of your letter dated 05 October 2022.

We, CNOOC Petroleum Farragon UK Limited (Company number 05645503), a company registered in England and Wales and having their registered office at Prospect House, 97 Oxford Road, Uxbridge UB8 1LU, as a holder of a Section 29 notice relative to the Duart field and in accordance with the Guidance Notes confirm that we authorise Repsol Sinopec Resources UK Limited (Company number 02483161) to submit on our behalf abandonment programmes relating to the Duart field pipelines as directed by the Secretary of State on 05 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS Limited to the Secretary of State, 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



Paul Gunn
Director

For and on behalf of CNOOC Farragon UK Limited

Registered in England No 1051137
Registered Office: Prospect House 97 Oxford Road Uxbridge UB8 1LU U.K.
VAT Registration No: 830 9476 15



CNOOC PETROLEUM FARRAGON UK LIMITED
Prospect House 97 Oxford Road
Uxbridge UB8 1LU United Kingdom
T +44 (0) 1895 555 139 F +44 (0) 1895 555001
www.intl.cnoodtd.com
Email: maurice.barclay@intl.cnoodtd.com

Offshore Petroleum Regulator for Environment and Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Your ref: 12.04.06.06/121C

DATE: 3/11/22

Dear Sir or Madam,

**DUART SUBSEA INSTALLATIONS DECOMMISSIONING PROGRAMMES
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 05 October 2022.

We, CNOOC Petroleum Farragon UK Limited (Company number 05645503), a company registered in England and Wales and having their registered office at Prospect House, 97 Oxford Road, Uxbridge UB8 1LU, as a holder of a Section 29 notice relative to the Duart field and in accordance with the Guidance Notes confirm that we authorise Repsol Sinopec LNS Limited (Company number 02483161) to submit on our behalf abandonment programmes relating to the Duart Subsea Installations as directed by the Secretary of State on 05 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS Limited to the Secretary of State, 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



Paul Gunn
Director
For and on behalf of CNOOC Farragon UK Limited

Registered in England No 1051137
Registered Office: Prospect House 97 Oxford Road Uxbridge UB8 1LU U.K.
VAT Registration No: 830 9476 15



Offshore Petroleum Regulator for Environment and
Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Dear Sir or Madam

Duart Decommissioning Programmes

PETROLEUM ACT 1998

We acknowledge receipt of your letters dated 5th October 2022.

We, Repsol Sinopec LNS Limited confirm that we authorise Repsol Sinopec Resources UK Limited to submit on our behalf abandonment programmes relating to the Duart installations and pipelines as directed by the Secretary of State on 5th October 2022.

We confirm that we support the proposals detailed in the Duart Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec Resources UK 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 faithfully

For and on behalf of **Repsol Sinopec LNS Limited**



Director

REPSOL SINOPEC
LNS LIMITED

163 Holburn Street
Aberdeen
AB10 6BZ

T +44 (0)1224 352500
F +44 (0)1224 353400
W www.repsolsinopecuk.com

8 November 2022
Our Ref: 22GEN001/LC

LEADERSHIP • EXCELLENCE • ACCOUNTABILITY • POSITIVITY

Registered in England and Wales No. 2483161. Registered Office, Suite 1, 7th Floor, 50 Broadway, London, SW11 0BL



Offshore Petroleum Regulator for Environment and
Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Dear Sir or Madam

Duart Decommissioning Programmes

PETROLEUM ACT 1998

We acknowledge receipt of your letters dated 5th October 2022.

We, Repsol Sinopec Oil Trading Limited confirm that we authorise Repsol Sinopec Resources UK Limited to submit on our behalf abandonment programmes relating to the Duart installations and pipelines as directed by the Secretary of State on 5th October 2022.

We confirm that we support the proposals detailed in the Duart Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec Resources UK 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 faithfully

For and on behalf of **Repsol Sinopec Oil Trading Limited**



Director

REPSOL SINOPEC
OIL TRADING LIMITED

163 Holburn Street
Aberdeen
AB10 6BZ

T +44 (0)1224 352500
F +44 (0)1224 353400
W www.repsolsinopecuk.com
8 November 2022
Our Ref: 22GEN001/LC

LEADERSHIP • EXCELLENCE • ACCOUNTABILITY • POSITIVITY

Registered in England and Wales No. 02307374 - Registered Office, Suite 1, 7th Floor, 50 Broadway, London, SW1H 0BL



Offshore Petroleum Regulator for Environment and
Decommissioning
Department for Business, Energy & Industrial Strategy
3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

Dear Sir or Madam

**Tartan Topsides Decommissioning Programme, the Tartan Subsea – Tartan North Terrace
(TNT) & Tartan Satellite (TS) Decommissioning Programmes and the Duart Decommissioning
Programmes
PETROLEUM ACT 1998**

We acknowledge receipt of your letters dated 5th October 2022.

We, Repsol Sinopec Resources UK Limited, as operator on behalf of ourselves Repsol Sinopec North Sea Limited, Repsol Sinopec Alpha Limited, Repsol Sinopec LNS Limited, Repsol Sinopec Oil Trading Limited and Transworld Petroleum (U.K.) Limited hereby submit the Tartan Topsides Decommissioning Programme, the Tartan Subsea – Tartan North Terrace (TNT) & Tartan Satellite (TS) Decommissioning Programmes and the Duart Decommissioning Programmes dated October 2022 as directed by the Secretary of State on 5th October 2022.

The Tartan Topsides Decommissioning Programme, the Tartan Subsea – Tartan North Terrace (TNT) & Tartan Satellite (TS) Decommissioning Programmes and the Duart Decommissioning Programmes dated October 2022 are submitted by Repsol Sinopec Resources UK Limited on behalf of the Section 29 Notice Holders under section 29 of the Petroleum Act 1998.

Yours faithfully

For and on behalf of **Repsol Sinopec Resources UK Limited**



Director

REPSOL SINOPEC RESOURCES
UK LIMITED

163 Holburn Street
Aberdeen
AB10 6BZ

T +44 (0)1224 352500
F +44 (0)1224 353400
W www.repsolsinopecuk.com

8 November 2022
Our Ref: 22GEN001/LC



**Offshore Petroleum Regulator for Environment and Decommissioning
Department for Business, Energy & Industrial Strategy**

3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

08 November 2022

Dear Sir or Madam

Duart Field Decommissioning Programmes, Petroleum Act 1998

We, NEO Energy (SNS) Limited (Registered Number, SC291165), confirm that we authorise Repsol Sinopec LNS Limited, (Registered Number 02483161) to submit on our behalf abandonment programmes relating to the Duart Field installations and pipelines as directed by the Secretary of State on 5 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS 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 faithfully



Andrew Barker

Development and Technical Services Manager
For and on behalf of NEO Energy (SNS) Limited (Registered Number SC291165)

Level 32, The Gherkin
30 St Mary Axe
London EC3A 8BF

9th Floor, The Silver Fin Building
455 Union Street
Aberdeen AB11 6DB

+44 (0)203 357 9700
info@neweuropeanoffshore.com
www.neweuropeanoffshore.com



**Offshore Petroleum Regulator for Environment and Decommissioning
Department for Business, Energy & Industrial Strategy**

3rd Floor, Wing C
AB1 Building
Crimon Place
Aberdeen
AB10 1BJ

08 November 2022

Dear Sir or Madam

Duart Field Decommissioning Programmes, Petroleum Act 1998

We, NEO Energy (Production) Limited (Registered Number, 05896824), confirm that we authorise Repsol Sinopec LNS Limited, (Registered Number 02483161) to submit on our behalf abandonment programmes relating to the Duart Field subsea installations and pipelines as directed by the Secretary of State on 5 October 2022.

We confirm that we support the proposals detailed in the Repsol Sinopec LNS Limited Decommissioning Programmes dated October 2022, which is to be submitted by Repsol Sinopec LNS 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 faithfully



Andrew Barker

Development and Technical Services Manager

For and on behalf of NEO Energy (Production) Limited (Registered Number 05896824)

Level 32, The Gherkin
30 St Mary Axe
London EC3A 8BF

9th Floor, The Silver Fin Building
455 Union Street
Aberdeen AB11 6DB

+44 (0)203 357 9700
info@neweuropeanoffshore.com
www.neweuropeanoffshore.com

9 APPENDIX A – PUBLIC NOTICE

Public Notices

PUBLIC NOTICE
The Petroleum Act 1998

Tartan Area fields Decommissioning

Repsol Sinopec Resources UK Limited has submitted, for the consideration of the Secretary of State for Business, Energy and Industrial Strategy, a number of draft Decommissioning Programmes (DPs) for the installations and pipelines associated with the Tartan Area field infrastructure in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals. The items/facilities covered by the Decommissioning Programme(s) are:

- Tartan Alpha production platform (topsides) including platform wells;
- Tartan Subsea wells, including TNT, TS and all related subsea infrastructure;
- Duart Subsea wells and all related subsea infrastructure and;

Wells: all wells will be plugged and abandoned to Repsol Sinopec Resources UK Limited standards which comply with "Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996" and align with Oil & Gas UK Well Decommissioning Guidelines.

Repsol Sinopec Resources UK Limited hereby gives notice that a summary of the Tartan Area Decommissioning Programmes can be viewed at the internet website address: www.repsolsinopecuk.com

Alternatively, a hard copy of the respective Tartan Area Decommissioning Programmes can be requested via email or phone call:

Phone: 01224352973
Email: TARAREADECOM@repsolsinopecuk.com

Representations regarding the Tartan Areas Decommissioning Programmes should be submitted in writing to Repsol Sinopec Resources UK Limited, 163 Holburn Street, Aberdeen AB10 6BZ where they should be received by 17th May 2022 and should state the grounds upon which any representations are being made.

Teresa Munro
Decommissioning Manager

Date: 5th April 2022
Repsol Sinopec Resources UK Limited
Company Address
163 Holburn Street
Aberdeen
AB10 6BZ

Figure 9-1: Public Notice – The Press and Journal, 5th April 2022

Public Notices

PUBLIC NOTICE

The Petroleum Act 1998

Tartan Area fields Decommissioning

Repsol Sinopec Resources UK Limited has submitted, for the consideration of the Secretary of State for Business, Energy and Industrial Strategy, a number of draft Decommissioning Programmes (DPs) for the installations and pipelines associated with the Tartan Area field infrastructure in accordance with the provisions of the Petroleum Act 1998. It is a requirement of the Act that interested parties be consulted on such decommissioning proposals. The items/facilities covered by the Decommissioning Programme(s) are:

- Tartan Alpha production platform (topsides) including platform wells;
- Tartan Subsea wells, including TNT, TS and all related subsea infrastructure;
- Duart Subsea wells and all related subsea infrastructure and.

Wells: all wells will be plugged and abandoned to Repsol Sinopec Resources UK Limited standards which comply with "Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996" and align with Oil & Gas UK Well Decommissioning Guidelines.

Repsol Sinopec Resources UK Limited hereby gives notice that a summary of the Tartan Area Decommissioning Programmes can be viewed at the internet website address:

www.repsolsinopecuk.com

Alternatively, a hard copy of the respective Tartan Area Decommissioning Programmes can be requested via email or phone call:

Phone: 01224352973

Email: TARAREADECOM@repsolsinopecuk.com

Representations regarding the Tartan Areas Decommissioning Programmes should be submitted in writing to Repsol Sinopec Resources UK Limited, 163 Holburn Street, Aberdeen AB10 6BZ where they should be received by 17 th May 2022 and should state the grounds upon which any representations are being made.

Date: 5 th April 2022

Repsol Sinopec Resources UK Limited Teresa Munro
Company Address Decommissioning Manager
163 Holburn Street
Aberdeen
AB10 6BZ

Figure 9-2: Public Notice – The Daily Telegraph, 5th April 2022