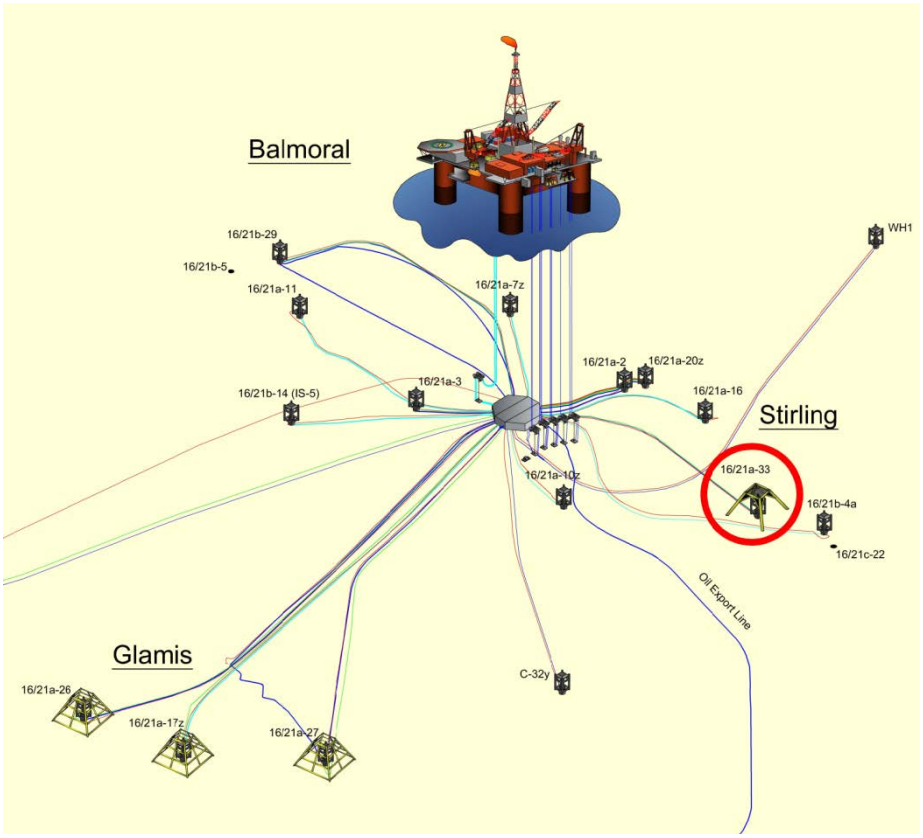

STIRLING 16/21a-33

Subsea Wellhead Protection Structure Decommissioning Programme (Non-Derogation)

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1.0	First draft		28 Mar 2018
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Contents

Terms and Abbreviations

Abbreviation	Explanation
BEIS	Department for Business, Energy and Industrial Strategy
BLLP	Balmoral Late Life Project
BOP	Blowout Preventer
CA	Comparative Assessment
DP	Dynamic Positioning
DSV	Dive Support Vessel
EIA	Environmental Impact Assessment
ES	Environmental Statement
EU	European Union
FPSO	Floating Production Storage & Offloading vessel
FPV	Floating Production Vessel
ICES	International Council for the Exploration of the Sea
JNCC	Joint Nature Conservation Committee (UK)
km	Kilometre
LWIV	Light Weight Intervention Vessel
m	Metre
m^2	Metre Squared
MAT	Master Application Template
MODU	Mobile Offshore Drilling Unit
MPAs	Marine Protected Areas
NCMPA	Nature Conservation Marine Protected Area
N/A	Not Applicable
NSP	Norwegian Boundary Sediment Plain
OPRED	Offshore Petroleum Regulator for Environment & Decommissioning
OSPAR	Oslo-Paris Convention: Convention for the Protection of the Marine Environment of the North-East Atlantic
P&A	Plug & Abandon
PL	Pipeline
PLU	Umbilical
SAC	Special Areas of Conservation
SFF	Scottish Fishermen's Federation
SIL	Subsea Intervention Lubricator
SPA	Special Protection Areas
Te	Tonne
UK	United Kingdom
UKCS	United Kingdom Continental Shelf
UTA	Umbilical Termination Assembly
WHPS	Wellhead Protection Structure

Figures and Tables

Appendices

1 EXECUTIVE SUMMARY

1.1 Decommissioning Programme

This document contains the decommissioning programme for the removal of the Stirling Field Subsea Wellhead Protection Structure (WHPS) on well 16/21a-33. Although the decommissioning of the WHPS is being treated as a standalone project, it is part of a wider campaign in the Greater Balmoral Area. The pipelines and stabilisation materials are not being decommissioned at this time.

1.2 Requirement for Decommissioning Programmes

Subsea Installation:
In accordance with the Petroleum Act 1998, Premier Oil E&P UK Limited (hereafter referred to as Premier), as operator of the Balmoral field, and on behalf of the Section 29 notice holders, is applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval to remove the Stirling A33 WHPS as detailed in Section 2 of this document (See also Section 8 - Partner Letters of Support).

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programme is submitted in compliance with national and international regulations and BEIS guidelines. The schedule outlined in this document is for a 10 days decommissioning project plan due to begin in April/May 2018.

1.3 Introduction

The Stirling subsea wells produce from a fractured Devonian sandstone reservoir, which underlies the Balmoral field and produce via the Balmoral Floating Production Vessel (FPV). One of the Stirling subsea wells (16/21a-33) currently has a WHPS in place. In order to facilitate well intervention activity the structure requires to be removed. Although the removal of the WHPS is being treated as a standalone project, it is part of a wider campaign in the Balmoral Area. The pipelines and stabilisation features are not being decommissioned at this time.

The 16/21a-33 WHPS removal activities are part of the 2018 Greater Balmoral Area DSV Campaign, scheduled for April/May 2018, which will be managed by Premier.

In order to make preparations for later well abandonment activities, Premier plan to install suspension barriers during an LWIV campaign in a number of the Balmoral satellite wells during 2nd and 3rd quarters of 2018. The well intervention activities themselves are not covered under this application, but some additional preparatory work will be required to the Stirling well 16/21a-33.

These operations will be carried out by a light well intervention vessel (LWIV) which, will require a Subsea Intervention Lubricator (SIL) to be connected to re-enter the well. The lower base section of the SIL consists of a series of hydraulically controlled valves and rams and acts as a blowout preventer (BOP).

The Stirling 16/21a-33 subsea well has a protective structure (WHPS) covering its wellhead. Access through the WHPS is too small for the SIL to pass through and allow connection to the tree. Therefore, it will be necessary to remove the WHPS ahead of the LWIV's arrival on site in 2nd and 3rd quarters of 2018.

The WHPS will be temporarily placed on a clear area of the seabed within the 500m safety zone already established around the well, avoiding heavy lifting over the Xmas tree and associated infrastructure. The WHPS is too large to be recovered to the DSV in one piece. It is planned, whilst temporarily on the seabed, to reconfigure the rigging and structure to safely recover and transport the WHPS to shore on the DSV.

Eight new concrete mattresses (3 x 6 x 0.15 m and 4.7 tonnes each) will be placed on the seabed to form a 12 m by 12 m square. These mattresses will provide a safe firm foundation for the WHPS to sit on and to prevent it sinking into the soft muddy sediments in the area.

The WHPS and the concrete mattresses will be recovered to the surface during the April/May 2018 DSV campaign and appropriately disposed of onshore. This will then allow access for operation of intervention equipment on the well, planned to be carried out during 2nd and 3rd quarters of 2018.

This Decommissioning Programme explains the principles of the removal activities that will be undertaken, along with a summary of environmental impacts which have been included in the relevant permit applications.

1.4 Overview of Installation Being Decommissioned

Table 1.1: Installation Being Decommissioned – WHPS 16/21 a-33			
Field(s):	**Stirling**	**Production Type**	**Oil**
Water Depth (m)	***c.* 140m**	**UKCS block**	**16/21a-33**
Subsea Installation(s)		**Number of Wells**	
Number	**Type**	**Platform**	**Subsea**
1	WHPS	N/A	N/A

Table 1.2 Installation(s) Section 29 Notice Holders Details		
Section 29 Notice Holder(s)	**Registration Number**	**Equity Interest (%)**
Premier Oil E&P UK Limited	02761032	68.68%
Repsol Sinopec North Sea Limited	01061863	15.32%
Rockrose UKCS4 Limited	02552901	16.00%

1.5 Summary of Proposed Decommissioning Programme

Table 1.3: Summary of Decommissioning Programme	
Selected Option	**Reason for Selection**
1. Subsea Installation	
The Stirling 16/21a-33 WHPS and its integrated suction piles will be completely removed from the seabed. Permit applications required for the work associated with the removal of the subsea installation (MAT) have been submitted.	To comply with OSPAR requirements.
2. Pipelines, Flowlines & Umbilicals	
N/A	N/A
3. Pipeline Stabilisation Features	
N/A	N/A
4. Wells	
N/A	N/A
5. Drill Cuttings	
N/A	N/A
6. Interdependencies	
The whole of the Stirling 16/21a-33 WHPS complete with integrated suction piles will be completely removed. Small areas of seabed sediment local to piles may be temporarily displaced as the suction piles are extracted from the seabed. It is anticipated that localised impacts to the seabed and the associated animal communities have a good potential for recovery.	

1.6 Field Location and Adjacent Facilities

Figure 1.1: Field Location in UKCS

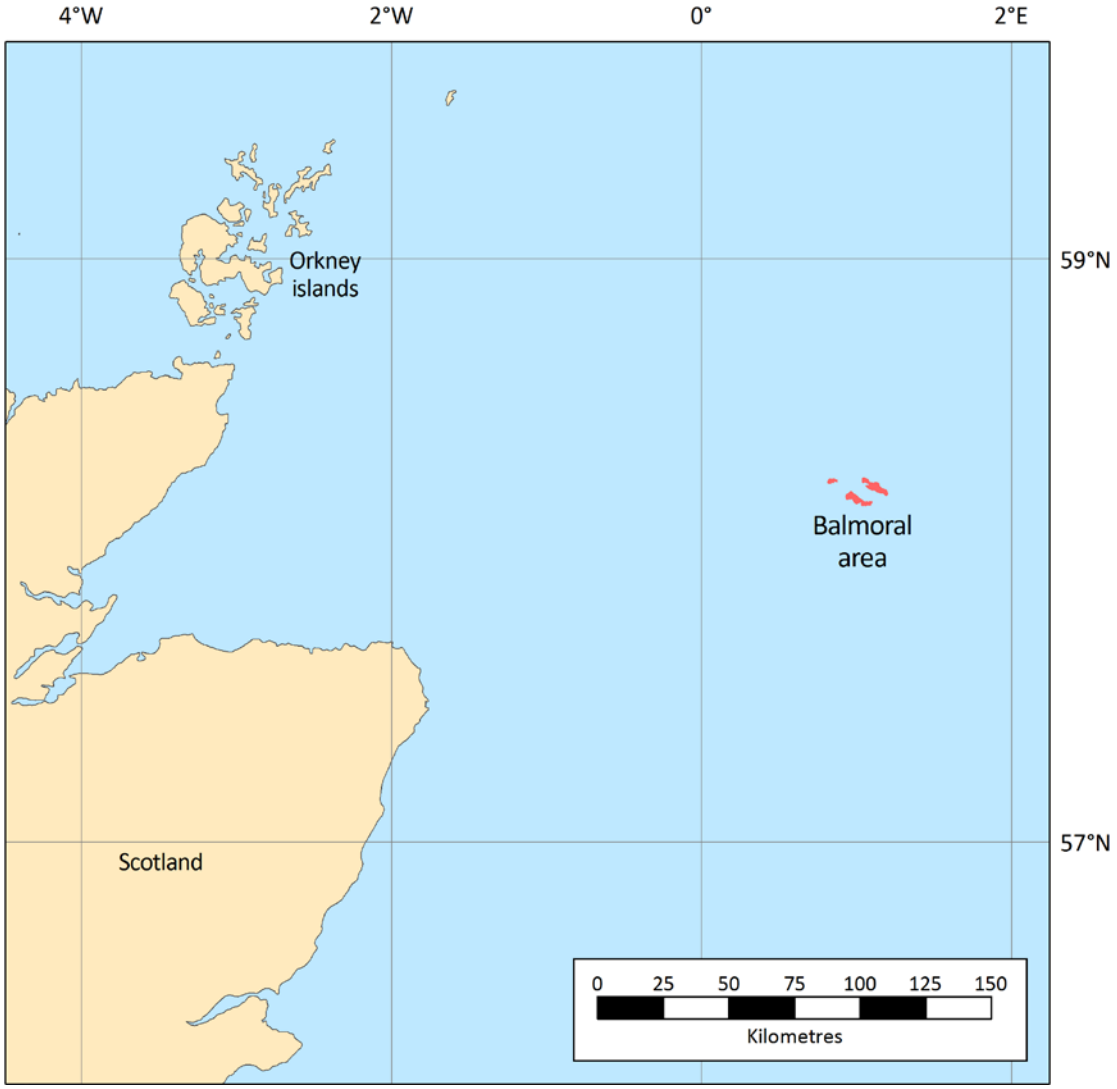


Figure 1.2: Adjacent Facilities

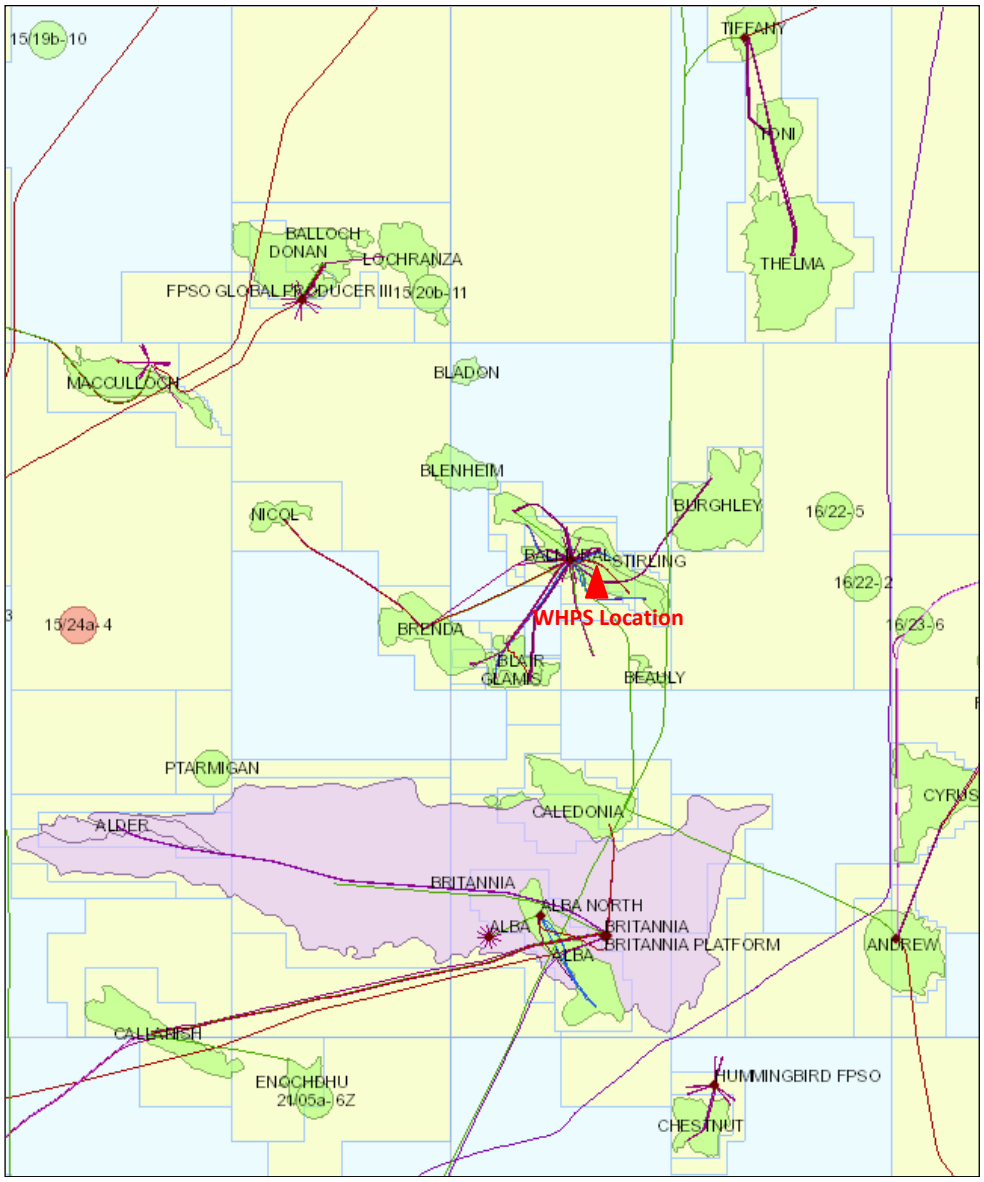


Figure 1.3: BLLP Subsea DSV Workscope 2018

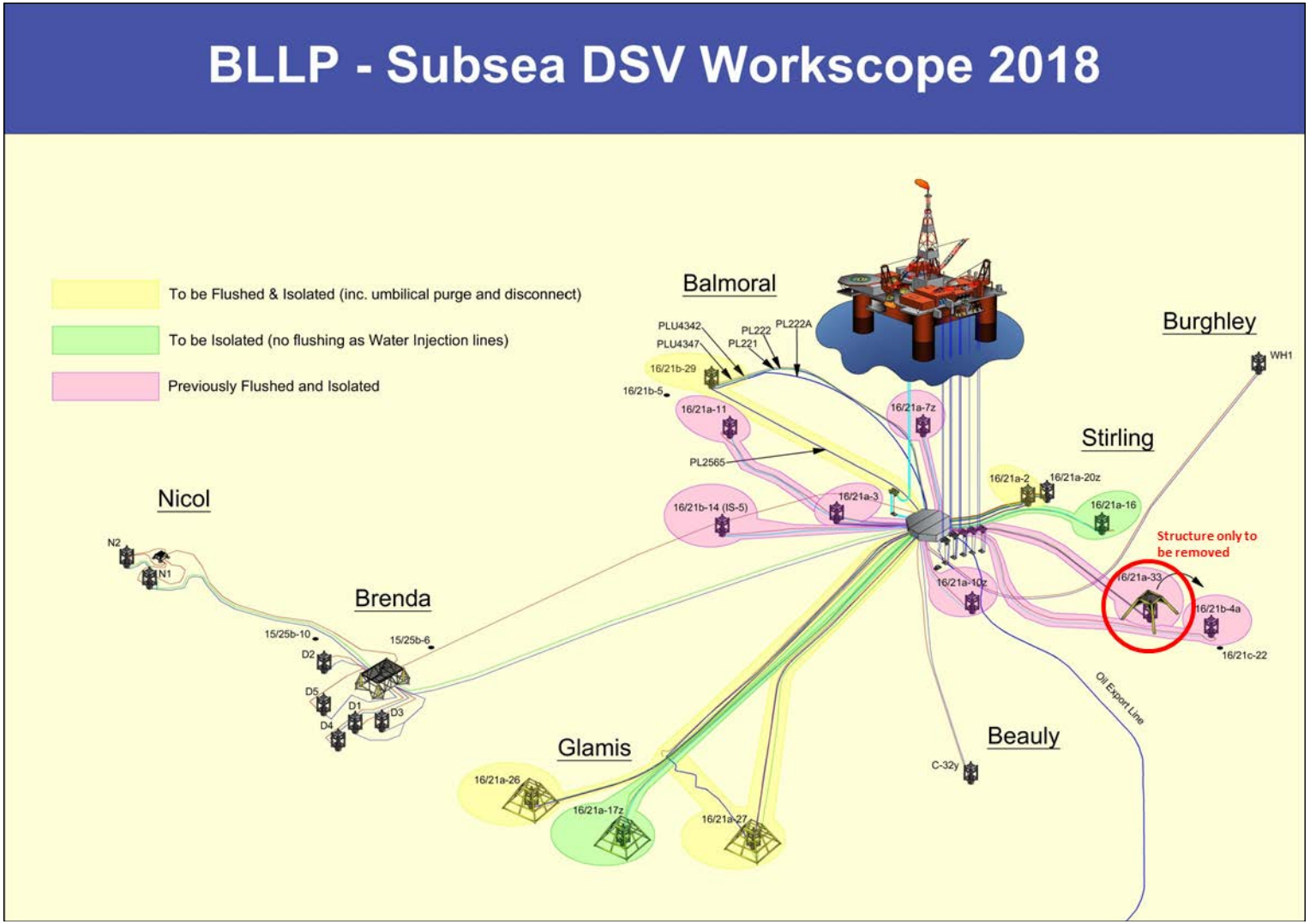


Figure 1.4: General Arrangement

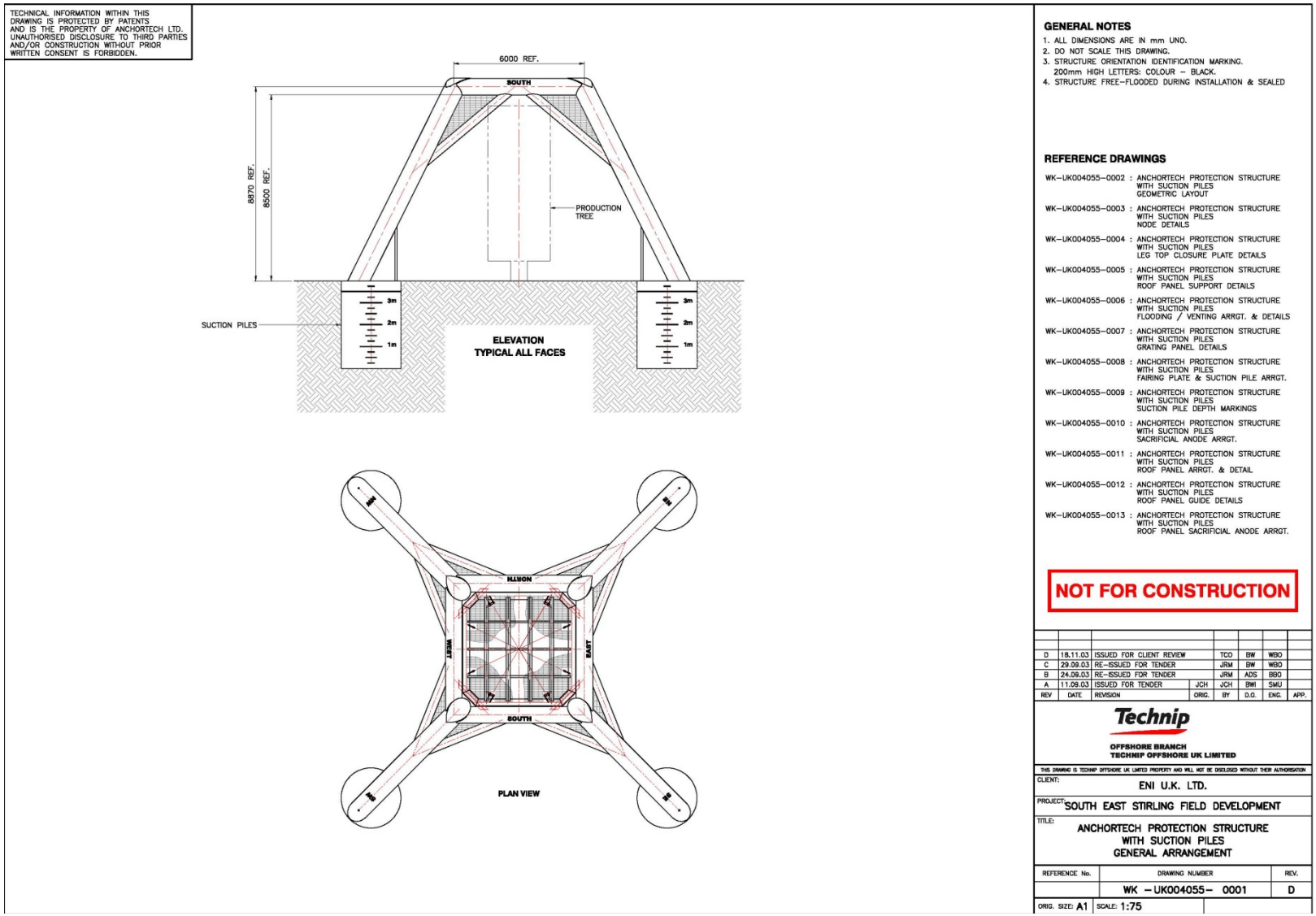


Figure 1.5: Well Approach

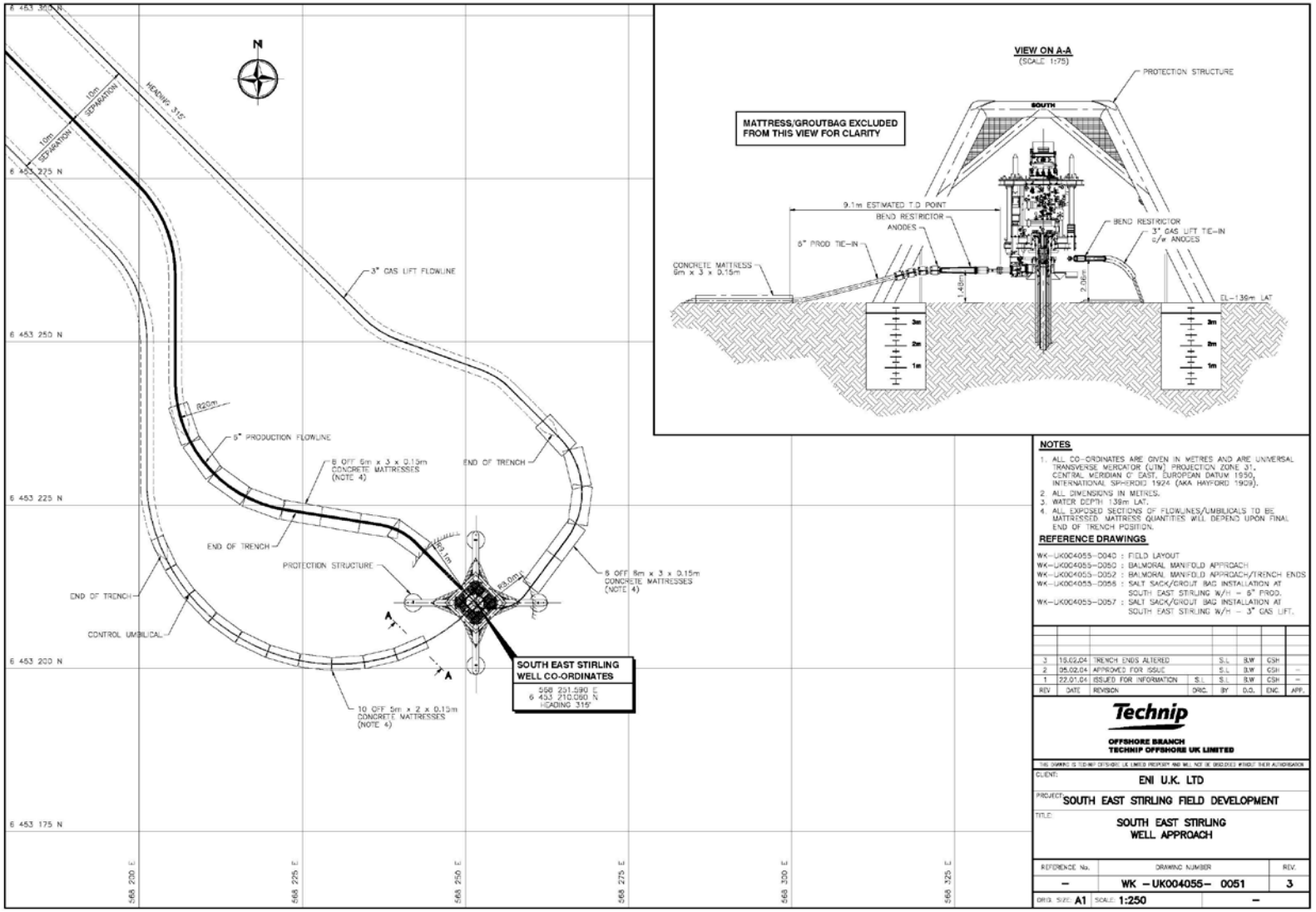


Table 1.4 Adjacent Facilities					
Operator	**Name**	**Type**	**Distance/ Direction**	**Information**	**Status**
Premier Oil E&P UK Limited	Nicol (UTA)	Subsea	18,890m, WNW, 284°	Oil & gas production co-mingled with Brenda	Operational
Premier Oil E&P UK Limited	Balmoral (Template)	Subsea	3,576m, WNW, 301°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Balmoral (Well 22)	Subsea	889m, ESE, 110°	Oil & gas production tied back to Balmoral FPV	Suspended
Premier Oil E&P UK Limited	Balmoral (Well 16)	Subsea	1,823m, NNW, 339°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Balmoral (Well 20z)	Subsea	2,744m, NW, 326°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Balmoral (Well 2)	Subsea	2,750m, NW, 326°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Glamis (Well 26)	Subsea	9,222m, WSW, 247°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Glamis (Well 17z)	Subsea	8,436m, WSW, 239°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Glamis (Well 27)	Subsea	7,006m, SW, 231°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Brenda (Manifold)	Subsea	11,221m, WSW, 262°	Oil & gas production tied back to Balmoral FPV	Operational
Premier Oil E&P UK Limited	Caledonia (Well)	Subsea	12,360m, S, 186°	Oil & gas production tied back to Britannia platform	Shut-In
Premier Oil E&P UK Limited	Caledonia (Manifold)	Subsea	12,387m S, 186°	Oil & gas production tied back to Britannia platform	Shut-In
Repsol Sinopec North Sea Limited	Bladon	Field	14,250m, NW, 324°	Former oil and gas field tied back to Petrojarl 1 FPSO at Blenheim. Decommissioned in 2000	Decommissioned
Repsol Sinopec North Sea Limited	Blenheim	Field	11,098m, WNW, 302°	Former oil and gas field tied back to Petrojarl 1 FPSO at Blenheim. Decommissioned in 2000	Decommissioned
Repsol Sinopec North Sea Limited	Beauly	Subsea	3,802m, SSW, 211°	Oil & gas production tied back to Balmoral FPV	Operational
Repsol Sinopec North Sea Limited	Burghley	Subsea	7,436m, NE, 37°	Oil & gas production tied back to Balmoral FPV	Operational
Impacts of Decommissioning Proposals					
There are no direct impacts on adjacent facilities from the decommissioning / removal of the 16/21 a-A33 WHPS. Short term environmental impacts associated with this activity are detailed in Section 4.					

1.7 Industrial Implications

The 16/21a-33 WHPS removal activities are part of the 2018 Greater Balmoral Area DSV Campaign which will be managed by Premier. The DSV has been contracted to undertake this work scope under an existing service framework agreement.

The protective structure will be recovered to the surface and appropriately disposed of onshore. It is planned that the Stirling WHPS will be recycled. The eight mattresses used for this operation will also be recovered from the seabed during this campaign. The plan is to send the structure for recycling using a currently contracted recycling contractor.

2 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

2.1 Installation: Subsea including Stabilisation Features

Table 2.1: Subsea Installations and Stabilisation Features					
Subsea installations including Stabilisation Features	**Number**	**Size/Weight (Te)**	**Location**		**Comments/Status**
Wellhead Protection Structure	1	16.3x 16.3 x 15m 83Te	WGS84 Decimal	58.21285° N 01.59993° E	The 16/21a-33 well is shut in and the protection structure is suction piled
			WGS84 Decimal Minute	58°12.771' N 01° 09.596' E	

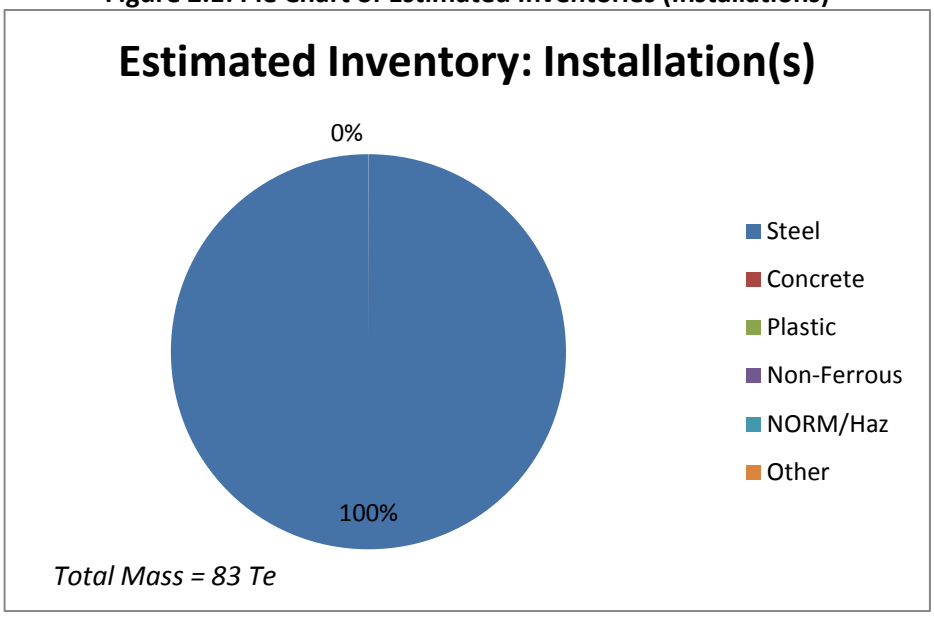
2.2 Wells

Table 2.2 Well Information			
Well Identification	**Designation**	**Status**	**Category of Well**
16/21a-33	Oil Production	Shut in	SS-4-4-2

2.3 Inventory Estimates

The WHPS is constructed entirely of carbon steel and has a total mass of 83 Te.

Figure 2.1: Pie Chart of Estimated Inventories (Installations)



3. REMOVAL AND DISPOSAL METHODS

Waste will be dealt with in accordance with the Waste Framework Directive. Although the re-use of an installation (or parts thereof) is first in the order of preferred waste management options, on this occasion, re-use of this structure has been deemed unfeasible.

The WHPS as described previously is constructed entirely of carbon steel, a recyclable metal, and therefore the current plan is to send the structure for recycling using a currently contracted, appropriately licenced recycling contractor.

3.1 Subsea Installation(s) and Stabilisation Feature

Table 3.1: Subsea Installation and Stabilisation Feature			
Subsea installation(s) and stabilisation feature(s)	**Number**	**Option**	**Disposal Route (if applicable)**
Wellhead Protection Structure	1	Complete removal	Return to shore for recycling

3.2 Waste Streams

Table 3.2: Waste Stream Management Methods	
Waste Stream	**Removal and Disposal method**
Bulk liquids	N/A
Marine growth	Removed onshore and disposed of according to guidelines.
NORM/LSA Scale	N/A
Asbestos	N/A
Other hazardous wastes	N/A
Onshore Dismantling sites	The WHPS will be sent ashore for recycling, to a currently contracted appropriately licenced recycling contractor.

Table 3.3 Inventory Disposition			
	Total Inventory Tonnage	Planned tonnage to shore	Planned left *in situ*
Installation	83	83	0

Table 3.4 Re-use, Recycle & Disposal Aspirations for Recovered Material			
	Re-use	Recycle	Disposal
Installation	N/A	100%	N/A

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Environmental Sensitivities (Summary)

Table 4.1: Environmental Sensitivities	
Receptor	**Main Features**
Conservation interests	The nearest offshore protected site to the Stirling (Balmoral) development is the Scanner Pockmark Special Area of Conservation (SAC) situated approximately 10 km to the west. This site is designated for the presence of submarine structures formed from leaking gases within the relevant pockmarks. The microbial breakdown of leaking gases overtime has created carbonate structures which provide a substrate for diverse and unusual animal communities not encountered in the surrounding sedimentary areas. Investigation of pockmarks encountered in the area around the A33 well indicates that they do not support any methane derived authigenic carbonate structures. The sediments and animal communities present within the pockmarks are consistent with those encountered on the surrounding seabed. The Norwegian boundary sediment plain (NSP) NCMPA is located approximately 40 km southeast of the Balmoral development. This is designated for the presence of aggregations of the declining ocean quahog mollusc and its supporting sand and gravel habitats which are notably coarser than the sediments encountered at Stirling.
Seabed	Environmental surveys indicated that seabed sediments in the Balmoral (Stirling) area consist of fine muddy sands. The seabed in the area is characterised by numerous depressions interpreted as “pockmarks” up to 150 m long and five metres in depth. Investigation of the pockmarks indicates that they do not support any methane derived authigenic carbonate structures. The sediments and animal communities present within the pockmarks are consistent with those encountered on the surrounding seabed. Analysis of infauna in samples from this area have observed that the most dominant species present were polychaete worms, *Paramphinome jeffreysii* and *Levinsenia gracilis*, consistent with the assemblage of characterising species described for the wider region. Video and stills imagery of the seabed observed fine muddy sand habitats with a generally sparse epifauna including seapens and evidence of burrowing megafauna such as the Norwegian lobster, *Nephrops.* Other epifauna observed included commonplace species of seapen, anemones and small crustaceans.

Receptor	Main Features
Fish	Although the distribution of adult fish populations is highly fluid, based on fisheries data, adult populations of demersal species such as haddock, cod and saithe are relatively abundant in this area. Some monkfish landings are also made, this species is one of the most commercially important for the Scottish fishing fleet in general. Pelagic fish populations in the area are of relatively low abundance, apart from herring. The Stirling field is also located in spawning areas for Norway pout and *Nephrops* and cod. also located within year round nursery grounds for Norway pout, Nephrops, haddock, whiting, hake, monkfish, blue whiting, herring, cod, ling, sandeels, mackerel, spotted ray and spurdog. Low densities of juvenile whiting, cod, Norway pout, saithe, ling, monkfish, sandeels, herring and spurdog are also present.
Fisheries	One of the most important fisheries in the central North Sea is the mixed demersal fishery that targets cod, haddock and whiting. Monkfish landings are also of significant economic importance. ICES rectangle based landings, value and effort data suggest that this area is of low to moderate relative importance; these are notably higher for fishing grounds further north and around Shetland to the northwest Overall, low landings of pelagic species have been recorded from this area in recent years. The Stirling field is located within the Fladen ground. The muddy sediments present here support dense populations of the commercially significant crustacean *Nephrops.* Fisheries data suggest that shellfish trawling for *Nephrops* is one of the most prevalent forms of fishing in the area. However, the actual landings and value are relatively low. On a more localised scale, communication with the Scottish Fisheries Federation (SFF) indicates that trawling is very active on a local scale around Balmoral development including the A33 well but this activity is chiefly concentrated to the south and west of the greater development area.
Marine Mammals	The A33 well is in an area of the North Sea which supports relatively few species of cetaceans and those present are found in relatively low numbers. The three most commonly observed species in this area are the minke whale, white beaked dolphin and harbour porpoise. Peak sightings in this area are recorded May to September encompassing the proposed operations. Two species of seal, the grey and common seal, are also resident in the North Sea. Both grey and common seal foraging and movement between haul out sites is generally restricted to relatively shallow waters within approximately 40 to 50 km of land. It is unlikely that they would be found in significant numbers as far offshore as Stirling.

Receptor	Main Features
Birds	Seabirds are known to be present all year round in the offshore waters of the central North Sea, however, abundance reduces and distribution becomes increasingly patchy with increasing distance from shore. During the proposed period of operations, fulmar, European storm petrel, gannet, arctic skua, great skua, kittiwake, common gull, guillemot, razorbill and puffin are anticipated to be found in this area, mostly in low densities. Seabird abundance and species diversity in this area is generally higher during the autumn and winter months, post the proposed operations.
Onshore Communities	The well location is situated over 180 km from the nearest landfall, Peterhead on the northeast coast of Scotland. Much of the northeast coastline between Peterhead and Arbroath consists of a mosaic of sea cliffs, rock platforms, boulders and other loose rock material. However, there is a significant stretch of sandy foreshore between Cruden Bay and Aberdeen including the mouth of the Ythan estuary from which the Sands of Forvie, an extensive complex system of sand dunes is formed. Sandy beaches are also present in association with the Montrose tidal basin further south and some other sandy embayment's along the coast around Arbroath. There are a number of sites along the northeast coast of Scotland identified as EU Special Protection Areas (SPA) for either their significance as seabird breeding colonies or as major breeding, staging and overwintering sites for wading and wildfowl species. A series of SAC designated to protect species (other than birds) and habitats important at a European level have also been designated along nearest coastline. These include areas of sea cliffs, common seal colonies and bottlenose dolphin populations. A number of these sites have now been further designated as nature conservation MPAs under the Marine (Scotland) Act.
Other Users of the Sea	Shipping intensity within the North Sea region is at its highest around major ports e.g. Aberdeen, which supplies the offshore oil and gas industry. Intensity is much lower in areas further offshore, around Stirling, with general shipping traffic levels equivalent to around 1,000 vessels per annum. Beyond the features of the greater Balmoral development area which includes the A33 well, the development itself is surrounded by numerous other installations, flowlines and supporting seabed infrastructure. The Maersk Global Producer FPSO is situated less than 20 km to the northwest. There are relatively few active mariculture sites situated along the mainland UK coastline nearest to the Stirling (Balmoral) location. Recorded sites are located near Aberdeen and within the Cromarty and Beauly Firths. Mariculture is of much greater significance further north on Shetland where numerous sites are located.
Atmosphere	Although offshore winds can blow from any direction, winds from southerly directions are most common in this area. Speeds throughout the year equate to moderate to strong breezes (up to 25 knots) on average. Given the remote offshore location and dispersive wind conditions, the local levels of atmospheric pollutants are anticipated to be low.

4.2 Potential Environmental Impacts and their Management

Overview:

The following overview of potential impacts focusses solely on issues related to the recovery of the wellhead protective structure from the A33 well. The potential environmental impacts related to the future wider decommissioning of the entire Balmoral development area will be addressed in detail in an Environment Statement supporting the related Decommissioning Programme for those operations.

The recovery of the wellhead structure will be undertaken as a supporting activity attached to the proposed diving support vessel based campaign of flowline flushing operations to be undertaken at Balmoral in 2018. The potential environmental impacts of these operations in general and the particular issues related to the recovery operations have been assessed in the MAT EIA attachment provided in support of the suite of permitting applications for those operations (PLA/524). A summary of the impacts and environmental control measures identified is provided here, considering the particular context of the protective structure recovery operations. It should be noted that recovery of the wellhead protective structure will not require any use or discharge of chemicals or result in oil bearing discharges to sea.

Table 4.2: Environmental Impact Management related to the Recovery of the A33 wellhead protective structure

Main Impacts	Management
Other users of the sea Although the Balmoral development is located within a region of heavy oil and gas development, there should be sufficient sea room for other vessels to alter their routes around the vessel location if required. Given the level of development, it is anticipated that many of the commercial vessels following consistent routes in the area will be offshore support vessels familiar with the type of operations involved and well versed in making necessary changes to their routes. Given the short-term nature of the operations, including removal and recovery of the wellhead protective structure, the physical presence of the DSV undertaking the operations is not expected to have any significant effect on other users.	Although no consent to locate application is required, the presence of the vessel and associated operations will be communicated to other sea users through standard notification processes, including the fortnightly Kingfisher bulletin.
With regard to the recovery of the Well 16/21a-33 wellhead protection structure and the placement and subsequent recovery of supporting mattresses, these activities will also take place well within the existing 500 m safety zone for the well, so can have no additional effects beyond the existing presence of that zone. Once the protection structure is removed, the exposed xmas tree could theoretically pose an increased snagging risk for fishing gear. However, the well will still be within the 500 m exclusion zone, preventing any potential interactions with fishing gear. Communication with SFF also indicates that trawling activity in the area is concentrated to the south and west of Balmoral, well removed from the Well 16/21a-33 location. This well and its 500 m zone are already marked on navigational charts, ensuring that its presence and location is understood. Fishing vessels in the area use predominantly bottom trawling gear, so will already be actively avoiding seabed infrastructure across the Balmoral field	Premier will ensure the Kingfisher service is made aware both of the operations being undertaken and the change to the structure associated with Well 16/21a-33. Prior to the DSV leaving location and the Well having been left unprotected, consultations will be carried out with the SFF to ascertain whether there are any significant concerns or if additional notifications should be made. It should be highlighted that SFF were consulted with regards to the Marine Licence submitted in association with this operation and it is Premiers

development. Thus, they are unlikely to be affected by this change. The Balmoral field infrastructure is also included in the 'FishSafe' database, ensuring a basic understanding of the structures present.	understanding that they have responded to say they have no concerns provided the activities are to take place within a 500 m zone.
Atmospheric emissions Atmospheric emissions generated by the operations will represent only 0.004% of the predicted emissions for vessels at sea in the UK in 2020. In this context, it is concluded that the overall atmospheric emissions generated by the proposed operations are minor and their cumulative contribution to wide scale environmental issues will also be small.	The vessel will be oriented in alignment with prevailing wind and weather conditions when on location, which will reduce the reliance on the DP system and amount of fuel required to keep it in position. All equipment on board the vessel will be well maintained according to a strict maintenance regime so it operates at optimum efficiency, thus minimising the overall fuel consumption.
Underwater noise The primary source of underwater noise during the operations will be the diving support vessel, in particular the thrusters of the DP system which will be used when on location. Based on these worst case sound levels, the noise generated by the vessel is not expect to incur actual injury in any marine mammals present, as the worst case level is below precautionary sound levels established for auditory injury. Noise generated is also expected to attenuate quickly within a relatively short distance of the thruster source. It is concluded that these operations will not have any significant impacts with respect to noise generation.	Equipment on board the vessel will be well maintained according to a strict maintenance regime so it operates at optimum efficiency, helping to reduce the level of noise generated during operations. Alignment of the vessel with prevailing weather conditions will allow a slight reduction in the DP system use, thus also reducing noise from the thrusters.
Seabed impacts The removal and recovery of the structure will not significantly influence the above issues, given that the flushing operations will be undertaken regardless and they will only add a short period of time (a matter of a few days) onto the existing programme of activities. However, it will specifically require the placement of mattresses on the seabed to support the structure once removed from the well, creating an interaction with the environment which would not otherwise occur as part of the general flowline flushing operations being undertaken by the DSV. To support the structure, concrete mattresses (3 x 6 x 0.15 m and 4.7 tonnes each) will be placed on the seabed forming a square covering an area of 144 m^2. Given the weight of these items, this may lead to the damage or loss of animal communities directly beneath them. The seabed in the local area consists mostly of fine muds, supporting primarily burrowing infaunal species with only sparse epifauna. There are no species or habitats of conservation concern expected. As the animal communities present are mostly found beneath the sediment surface, it is anticipated that placement of items on the seabed will have less direct physical impact than if there were an abundance of attached, upright epifauna present. The area over which this will	The number of mattresses required for supporting the structure has been planned to be a small as technically possible. Mattresses will be laid down as carefully as possible for safety reasons, reducing the force of impact on the seabed and sediment disturbance. They will also be removed immediately after the protective structure is lifted to the vessel, allowing recovery to commence straight away.

impact is minimal. It is anticipated that the mattresses will be recovered at the time of this campaign in April / May 2018, following recovery of the WHPS. Biological recovery should begin relatively quickly once they are removed, as the consistency in communities and habitat types established over this region of the North suggest recolonisation potential through larval recruitment from surrounding areas should be high. Therefore, it is not felt that this activity will have a significant impact on the seabed. In addition to the mattresses, seabed sediments immediately around the piles which currently secure the structure will be disturbed. However, as they will be removed by pumping water into the pile cans, increasing the pressure on the sediments below the cans and pushing them out, the effects are expected to be extremely localised. As the cans are currently filled will sediment, it is expected that a small mound will be left at each of the previous pile locations rather than a depression.	
Accidental events The worst case accidental event related to recovery operations is a loss of well control for the A33 well. This is very unlikely but could occur if the xmas tree was somehow damaged during removal of the structure or from a dropped object during recovery. It should be noted that this well is not normally capable of flow without artificial gas lift. Oil spill modelling for the worst case blowout rate from all wells in the Balmoral development show that the Shetland Islands may be at moderate risk of oil beaching in such an event. Spilled oil can have significant impacts on shoreline communities as well as seabirds and fisheries. However, given the very low probability of a large oil spill occurring, the preventative measures in place to reduce the likelihood of a spill, and the response resources and procedures set out in the event of a spill, the overall residual environmental risks posed by the proposed operations are deemed to have been reduced to an acceptable level.	Removal and heavy lifting procedures will be followed throughout operations to manage the recovery of the protective structure. The vessel will be able to carefully control its movements through its DP system to maintain its position away from the well. Moving the structure to one side before removal will reduce the risk of any possible dropped objects or other physical interactions with the well itself during these operations. A range of oil spill response resources are in place to support immediate and appropriate action taken in the event of any hydrocarbon spillage, thus minimising any impact to the marine environment.

5 INTERESTED PARTY CONSULTATIONS

Statutory consultees have been given the opportunity to review this decommissioning plan activity i.e. removal of the WHPS, during their review of the associated MAT EIA attachment provided in support of the suite of permitting applications for these operations (PLA/524).

Table 5.1 Summary of Stakeholder Comments		
Who	**Comment**	**Response**
Informal Consultations		
SFF	Premier has contacted SFF in relation to these proposed operations and is awaiting a response.	Although response is awaited, Premier are aware that SFF were consulted with regards to the Marine Licence submitted for this operation and it is our understanding that they have responded to advise they have no concerns provided the activities are to take place within a 500 m zone.
Statutory Consultations		

6 PROGRAMME MANAGEMENT

6.1 Project Management and Verification

A Project Management team is in place that will manage and supervise the DSV contractor for the engineering and removal of the WHPS. Procedures for operational control and hazard identification and management will be used. Where possible the work will be coordinated with other decommissioning pipeline flushing & tree isolation operations in the Balmoral Field in the same campaign. 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.

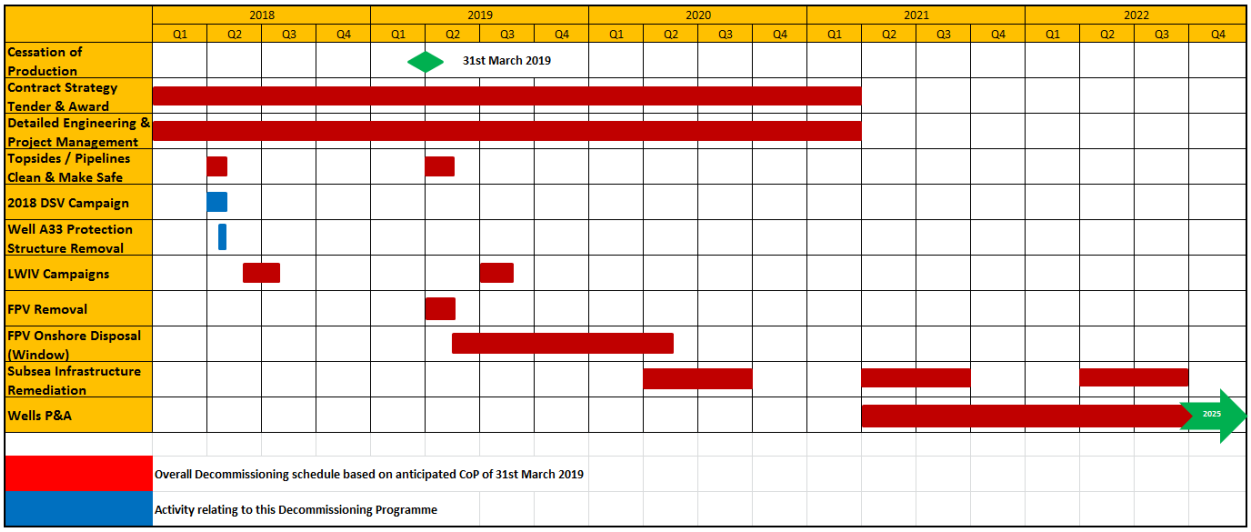
6.2 Post-Decommissioning Debris Clearance and Verification

On completion of the removal of the WHPS, the DSV will complete a departure survey. On completion of the Greater Balmoral Area decommissioning programme, a full decommissioning site survey will be carried out. It is anticipated that this will take place *c.* 2022.

6.3 Schedule

A proposed schedule for the full Greater Balmoral Area decommissioning programme is provided below. The activity associated with the WHPS removal is anticipated to take place and be completed during April/May 2018 as indicated in Figure 6.1.

Figure 6.1: Gantt Chart of Project Plan



6.4 Costs

Decommissioning costs will be provided separately to OPRED and OGA.

6.5 Close Out

Due to the limited nature of this activity, no specific close out report will be issued. Any variation from the activities as described in this programme, will however be notified to OPRED.

6.6 Post-Decommissioning Monitoring and Evaluation

A proposed schedule for the full Greater Balmoral Area decommissioning programme is provided above in Figure 6.1. The activity associated with the WHPS removal is anticipated to take place and be completed during Q2 2018 as indicated in Figure 6.1.

7 SUPPORTING DOCUMENTS

Table 7.1: Supporting Documents	
Document Number	**Title**
1	Marine Licence (ML/1322) and supporting Environmental Assessment (PLA/524) refer.

8 PARTNER LETTER(S) OF SUPPORT

Correspondence from partners supporting this decommissioning programme has been obtained and will be sent to relevant parties in OPRED separately.