



Offshore Petroleum Regulator  
for Environment & Decommissioning

*Replace with operator logo and picture of asset*

# **Standard Decommissioning Programme(s) Template**

## **(Non-Derogation)**

*Insert date  
Consultation/pre-draft*



**Document Control**

*Insert Tables of Document Revisions.*

**Approvals**

	<b>Name</b>	<b>Signature</b>	<b>Date</b>
Prepared by			
Reviewed by			
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**Revision Control**

<b>Revision No</b>	<b>Reference</b>	<b>Changes/Comments</b>	<b>Issue Date</b>

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### **Terms and Abbreviations**

Include a table of the terms and abbreviations used in the document (examples in blue below).

Abbreviation	Explanation
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
EA	Environmental Appraisal
CA	Comparative Assessment

### **Figures and Tables**

Include a table of Figures and Tables used in the document.

### **Appendices**

Include a table of the Appendices which are to be included as part of this document (example in blue below).

Appendix	Description	Page
1	Copy of Public Notice	

Note: The Environmental Appraisal (EA) and any Comparative Assessment (CA) for pipelines are separate, referenced documents in support of the decommissioning programme(s). They should not be included as an Appendix but listed in Section 7 (Supporting Documents).

A copy of the Public Notice should be attached as an appendix to the final version of the programme.



## 1 EXECUTIVE SUMMARY

### 1.1 Decommissioning Programme/Combined Decommissioning Programmes

This document contains \_\_\_\_\_ decommissioning programme(s) for \_\_\_\_\_ installation(s) and \_\_\_\_\_ pipeline(s).

*Combined Decommissioning Programmes: Please provide a clear statement confirming that there is a separate programme for each set of associated notices served under Section 29 of the Petroleum Act 1998.*

### 1.2 Requirement for Decommissioning Programme(s)

*Delete appropriate paragraph below if only one decommissioning programme.*

#### Installation(s):

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the \_\_\_\_\_ installation(s)/field (see Table 1.2) are applying to the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for decommissioning the installations detailed in Section 2.1 and 2.2 of this programme. (See also Section 8 - Partner Letter(s) of Support).

#### Pipeline(s):

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

In conjunction with public, stakeholder and regulatory consultation, the decommissioning programme(s) is/are submitted in compliance with national and international regulations and OPRED guidelines. The schedule outlined in this document is for a \_\_\_\_\_ year decommissioning project plan due to begin in \_\_\_\_\_.

### 1.3 Introduction

*Insert introductory paragraphs outlining the background of the decommissioning proposal with information on topsides, jacket and pipelines (where applicable). Freeform text as per example paragraphs below. (Suggested maximum of 250 words)*

The Welland Field is located in the Southern Basin of the UKCS in license block 53/4a. Welland was discovered in 1983 and consists of three gas reservoirs with condensate traces. It received Annex B approval in 1989 for a single platform remotely operated from Thames platform. The platform was installed, and production started in 1990. Production ceased in 2003 due to excessive water rates and equipment failures. Cessation of Production notification was submitted in 2004.

Welland Platform is a 1000 Te topside minimum facilities structure in 37m water depth. It was designed and operated as a normally unattended satellite installation. Gas was exported to the nearby Thames complex. Subsea tie-backs to 3 remote wells coming with production from the 2 platform wells.

Following public, stakeholder and regulatory consultation, the decommissioning programme(s) is/are submitted without derogation and in full compliance with OPRED guidelines. The decommissioning programme(s) explains the principles of the removal activities and is supported by an environmental appraisal (EA).



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

### 1.4.1 Installation(s)

Table 1.1: Installation(s) Being Decommissioned			
Field(s)		Production Type (Oil/Gas/Condensate)	
Water Depth (m)		UKCS block	
Distance to median (km)		Distance from nearest UK coastline (km)	
Surface Installation(s)			
Number	Type*	Topsides Weight (Te)	Jacket Weight (Te)
Subsea Installation(s)		Number of Wells	
Number	Type**	Platform	Subsea
Drill Cuttings pile(s)			
Number of Piles		Total Estimated volume (m <sup>3</sup> )	

\* fixed steel jacket/floating facility/FPSO/etc

\*\*template/manifold/WHPS etc

Table 1.2: Installation(s) Section 29 Notice Holders Details		
Section 29 Notice Holder(s)*	Registration Number	Equity Interest (%) <i>If zero show 0%</i>

Any companies which are Exited companies on the Section 29 Notice should also be listed here. Do not include withdrawn companies.

\*Please use full registered company names as recorded on Companies House.

### 1.4.2 Pipeline(s)

Table 1.3: Pipeline(s) Being Decommissioned	
Number of Pipeline(s) Details given in Table 2.3	

Table 1.4: Pipeline(s) Section 29 Notice Holders Details		
Section 29 Notice Holder(s)*	Registration Number	Equity Interest (%) <i>If zero show 0%</i>



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Any companies which are Exited companies on the Section 29 Notice should also be listed here. Do not include withdrawn companies.

\* Please use full registered company names as recorded on Companies House.

### 1.5 Summary of Proposed Decommissioning Programme(s)

Complete Table 1.5, as per examples in blue below.

Table 1.5: Summary of Decommissioning Programme(s)		
Selected Option	Reason for Selection	Proposed Decommissioning Solution
<b>1. Topsides</b>		
Complete removal and re-use <i>(or N/A if subsea installation(s) only or pipeline(s) only programme)</i>	Perenco subsidiary indicated that Welland installation suitable for development of new well outside UKCS waters.	Cleaned equipment refurbished for re-use where possible. Remove wholly by HLV. Equipment which cannot be re-used will be recycled or other disposal routes as appropriate.
<b>2. Substructures (Jackets/FPSO etc)</b>		
Complete removal and recycling <i>(or N/A if a subsea installation(s) only or pipeline(s) only programme)</i>	Leaves clean seabed, removes a potential obstruction to fishing operations and maximises recycling of materials	May need to be cut at the -11m level (26m above sea-bed) to allow re-use at proposed new location. Legs will be removed with piles and cut on vessel/ barge decks or at an onshore location. Lower 26M of the jacket and piles and subsea wellhead protection frames will be transported ashore for recycling.
<b>3. Subsea Installation(s)</b>		
Wellhead protection frames will be removed by HLV or crane vessel with crane <i>(or N/A if none present or pipeline(s) only programme)</i>	To remove all seabed structures and leave a clear seabed	Wellhead protection frames will be removed along with the top sections of piles. Piles for wellhead protection structures will be removed to -3 metres.
<b>4. Pipelines, Flowlines &amp; Umbilicals</b>		
Flush and leave buried in situ <i>(or N/A if an installation(s) only programme)</i>	Minimal seabed disturbance, lower energy usage, reduced risk to personnel	The 16 inch pipeline, 3inch piggy-back line, three 8 inch flowlines and three 4" umbilicals will be left in situ, with the cut ends re-buried as recommended by the Fishermen's Federation. Surveys indicate pipelines and umbilicals will remain buried with flooding. Degradation will occur over a long period within seabed sediment, not expected to represent a hazard to other users of the sea.
<b>5. Wells</b>		



Abandoned in accordance with Oil & Gas UK Guidelines for the Suspension and abandonment of Wells.	Meets OGA and HSE regulatory requirements.	A PON5/ Portal Environmental Tracking System (PETS)/Marine Licence application under the relevant regulations will be submitted in support of works carried out.
<b>6. Drill Cuttings</b>		
Leave in place to degrade naturally.	Cuttings pile is small, thin and widely dispersed and falls below both of OSPAR 2006/5 thresholds	Left undisturbed on seabed.
<b>7. Interdependencies</b>		
<i>Provide (as appropriate) a comment on any interactions between the different elements of the decommissioning programme e.g. drill cuttings/drilling templates etc.</i>		
Whole of jacket can be removed; cuttings pile has little influence on jacket options. Jacket piles can be cut with minimal disturbance to the thin layer of cuttings around bottoms of legs. Small amounts of sediment and cuttings may have to be displaced to allow pile cutting.		

## 1.6 Field Location Including Field Layout and Adjacent Facilities

**Figure 1.1: Field Location in UKCS**

*Include a figure which shows the field location in UKCS (see example)*



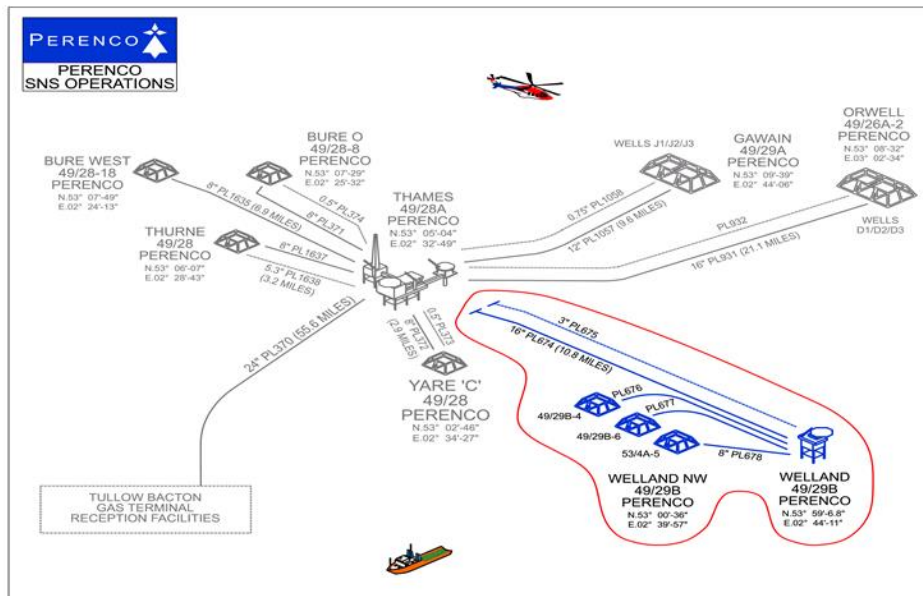


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Figure 1.2: Field Layout

*Insert a diagram to show the layout of the field, including subsea installation(s) (see example)*



Note: Adjacent facilities refer to those potentially impacted by this programme.



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Complete Table 1.6 (examples in blue below) listing any adjacent facilities (e.g. platforms, pipelines, pipeline crossings and telephone cables). Please use full company names and use pipeline numbers as per OGA PWA Consent.

Table 1.6: Adjacent Facilities					
Owner	Name	Type	Distance/Direction	Information	Status
Perenco UK Limited	Thames	Platform	17km North West	Gas/liquids processing, MEG and control system links for Welland, onward export to Bacton	<i>e.g. Operational; Out-of-use; Suspended</i>
Perenco UK Limited	PL674	16" Pipeline	From Welland to Thames (17km NW)	Crosses 2 disused cables and Sean 30" gas pipeline to Bacton	
Perenco UK Limited	Gawain	Subsea Well umbilical	500m	From Gawain to Thames, crosses over Welland/Thames pipeline	
Impacts of Decommissioning Proposals					
<p>If appropriate describe any impacts the adjacent facilities may have on the decommissioning proposals. <b>(Suggested maximum of 50 words)</b></p> <p>Include details in this section of decommissioning arrangements for any pipeline crossings that are impacted by the decommissioning activity.</p>					



Figure 1.3: Adjacent Facilities

Insert a diagram to show the specified adjacent facilities (see example)



## 1.7 Industrial Implications

Provide a summary describing how the contract/procurement strategy is to be undertaken. (Suggested maximum of 250 words)



## 2 DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

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

Complete Table 2.1 (example in blue below). Repeat for each installation in the programme. Insert N/A (not applicable) or N/D (no data) as appropriate.

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)
Welland South Platform	Small fixed steel	WGS84 Decimal	58.050772 0.351589	942	1	570	3	3	300
		WGS84 Decimal Minute	58° 3.046'N 0° 21.095'E						

\*fixed steel jacket/floating facility/FPSO etc.

\*\* Location to be given in both WGS84 decimal and WGS84 decimal of a minute (3 decimal places) formats.

### 2.2 Installation(s): Subsea including Stabilisation Features

Complete Table 2.2 Insert n/a if not applicable. See example in blue below.

Table 2.2: Subsea Installations and Stabilisation Features					
Subsea installations* including Stabilisation Features	Number	Size/Weight (Te)	Location**		Comments/Status***
Wellheads	2	1 x 31.96 tonnes	WGS84 Decimal	58.050772 0.351589	Both wells are suspended and will undergo plug and abandonment. Neither structure is piled to seabed
			WGS84 Decimal Minute	58° 3.046'N 0° 21.095'E	
		1 x 4.5 tonnes	WGS84 Decimal	58.049972 0.3495	
			WGS84 Decimal Minute	58° 2.998'N 0° 20.970'E	
Manifold	1	15m x 6m x 5m 105 tonnes	WGS84 Decimal	58.073333 0.436111	Structure is secured to the seabed by four steel piles.
			WGS84 Decimal Minute	58° 4.400'N 0° 26.166'E	
Wellhead	n/a				



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Protection Structure(s) (WHPS)					
Concrete mattresses	n/a				
Grout bags	n/a				
Formwork	n/a				
Froned Mats	n/a				
Rock Dump	n/a				
Other ( <i>describe briefly</i> )	n/a				

\*Template/manifold/WHPS/Manifold etc.

\*\* Location to be given in both WGS84 decimal and WGS84 decimal of a minute (3 decimal places) formats.

\*\*\*Indicate in comments/status if piled to seabed.



## 2.3 Pipelines Including Stabilisation Features

Complete Tables 2.3 and 2.4 with details of pipelines, flowlines and umbilicals. Please use pipeline details as per OGA PWA consent.

Note – Structures including SSIV’s, SDU’S and other similar subsea structures which have been captured in the relevant PWA documentation as components of the pipeline system should be listed in the relevant pipelines sections and tables of the decommissioning programme. As these are substantial structures full removal is required. For such structures please include a brief sentence or footnote to the Subsea Installation section of the DP i.e. Section 3.3 to note that X subsea structure associated with the X pipeline system will be fully removed to shore.

Table 2.3: Pipeline/Flowline/Umbilical Information									
Description	Pipeline Number (as per PWA)	Diameter (inches)	Length (km)	Description of Component Parts <sup>1</sup>	Product Conveyed <sup>2</sup>	From – To End Points	Burial Status <sup>3</sup>	Pipeline Status <sup>4</sup>	Current Content <sup>5</sup>
Export line	PL674	16"	17.5	Concrete coated steel	Gas	Welland South Platform – SSIV on Thames AW Platform	Trenched with 7m section exposed	Operational	Hydrocarbon
MEG line	PL675	3"	17.5	Composite Flexible	Chemicals	Thames AW Platform – Welland South Platform	Surface laid No free spans	Operational	Chemicals
Well 2 Subsea flowline	PL678	8"	4.2	Concrete coated steel	Gas	Well-53/04a- 5 – Welland South Platform	Trenched and buried	Operational	Hydrocarbon
Well 2 Subsea control umbilical & MEG line	PL681	4"/0.75"	4.2	Composite Flexible	Chemicals	Welland South Platform - Well-53/04a- 5	Trenched and buried	IPR	Chemicals
FTP	FEPA Exempt		0.17	Composite Flexible		DC1 – U61R		Out of Use	

<sup>1</sup> e.g. Concrete; Steel; Umbilical; Flexible; Bundle

<sup>2</sup> e.g. Oil; Gas; Water; Chemicals

<sup>3</sup> e.g. Laid on seabed; Trenched; Trenched and Buried; Spanning

<sup>4</sup> e.g. Operational; Out-of-use; Interim Pipeline Regime (IPR)

<sup>5</sup> e.g. Cleaned; Flushed; Hydrocarbons and/or Chemicals in line



Table 2.4: Subsea Pipeline Stabilisation Features

Stabilisation Feature	Total Number	Weight (Te)	Location(s)	Exposed/Buried/Condition
Concrete mattresses	5	6 tonnes each	At PL123 and PL456 crossing points.	Exposed  Can only be recovered when cross over lines are decommissioned
Grout bags	80	25kg each	Around the subsea tee piece	Exposed
Formwork	n/a			
FronD Mats	n/a			
Rock Dump	n/a	2000	2 Locations on PL674	
Other ( <i>describe briefly</i> )	n/a			



## 2.4 Wells

Complete Table 2.5 (examples in blue below)

Table 2.5: Well Information			
Platform Wells	Designation <sup>1</sup>	Status	Category of Well
16/03a-E18 (East)	Gas Condensate Producer	Suspended	PL 4-3-3
49/9b-W1	Gas Production	Shut-in	PL 2-1-1
211/19a-M56	Water Injection	Producing	PL 2-1-3
211/23-A34	Oil Producer	Phase 1 Abandoned	PL-0-4-3
Subsea Wells			
16/03b-08y (Braemar)	Gas Condensate Producer	Producing	SS 3-3-3
11/30a-C1	Water Injection	Abandoned	SS 3-4-3

<sup>1</sup> e.g. Production; Injection; Oil; Gas

For details of well categorisation see OGUK Guidelines for the Suspension or Abandonment of Wells. Issue 5, July 2015.

## 2.5 Drill Cuttings

(See Section 3.7 for further information)

Complete Table 2.6 for each cuttings pile (examples in blue below)

Table 2.6: Drill Cuttings Pile(s) Information		
Location of Pile Centre (Latitude/Longitude)	Seabed Area (m <sup>2</sup> )	Estimated volume of cuttings (m <sup>3</sup> )
Schiehallion Central	8371	11352
Schiehallion West	6731	7224
Schiehallion North	4476	1548
Loyal	5501	4128

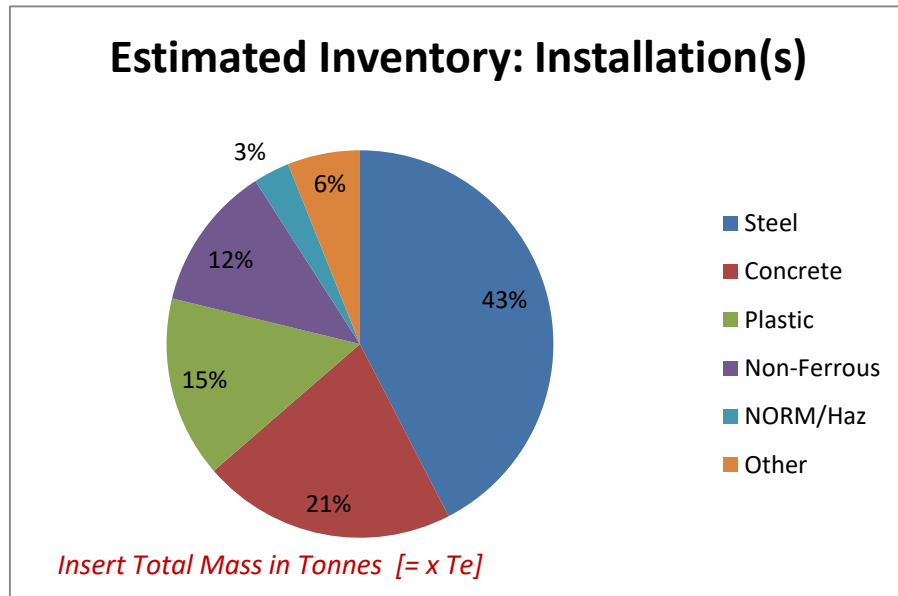




## 2.6 Inventory Estimates

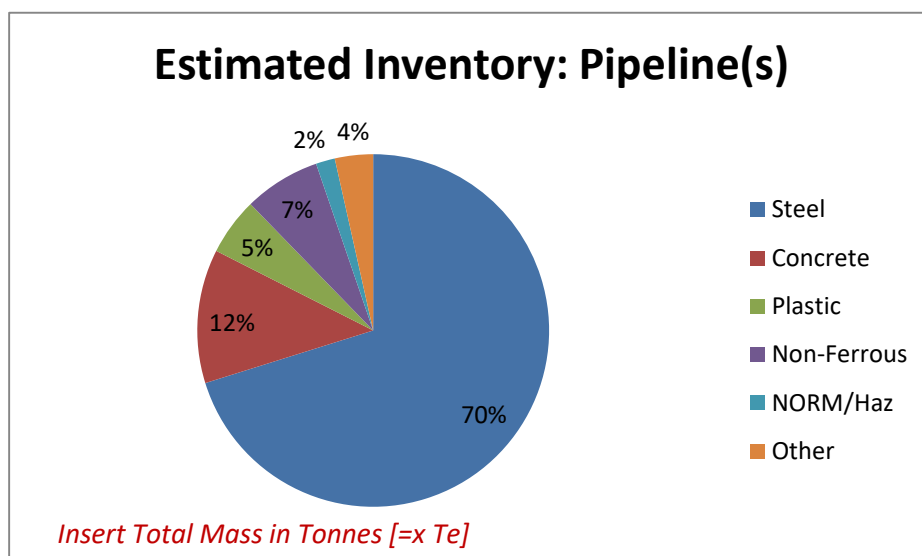
Provide a table or graph (see pie chart example shown) giving the inventory estimates for the decommissioning programme(s) contained in this document. Refer to tables or data in the supporting Environmental Appraisal. Please list the inventories in both tonnage and percentage.

Figure 2.1: Pie Chart of Estimated Inventories (Installations)



Reference the Environmental Statement for detailed data.  
NORM/Hazardous Waste - reference the supporting evidence in EA.

Figure 2.2: Pie Chart of Estimated Inventory (Pipelines)



Reference the Environmental Statement for detailed data  
NORM/Hazardous Waste – reference the supporting evidence in EA.



### 3 REMOVAL AND DISPOSAL METHODS

In line with the waste hierarchy, the re-use of an installation (or parts thereof) is first in the order of preferred decommissioning options. OPRED is keen to encourage the re-use of facilities wherever this is practical and will expect the decommissioning programme(s) to demonstrate that the potential for re-use has been examined fully.

The programme(s) should therefore include a statement of how the principles of the waste hierarchy will be met, including the extent to which the installation(s) (or parts thereof) will be reused, recycled or scrapped. (Suggested maximum 250 words)

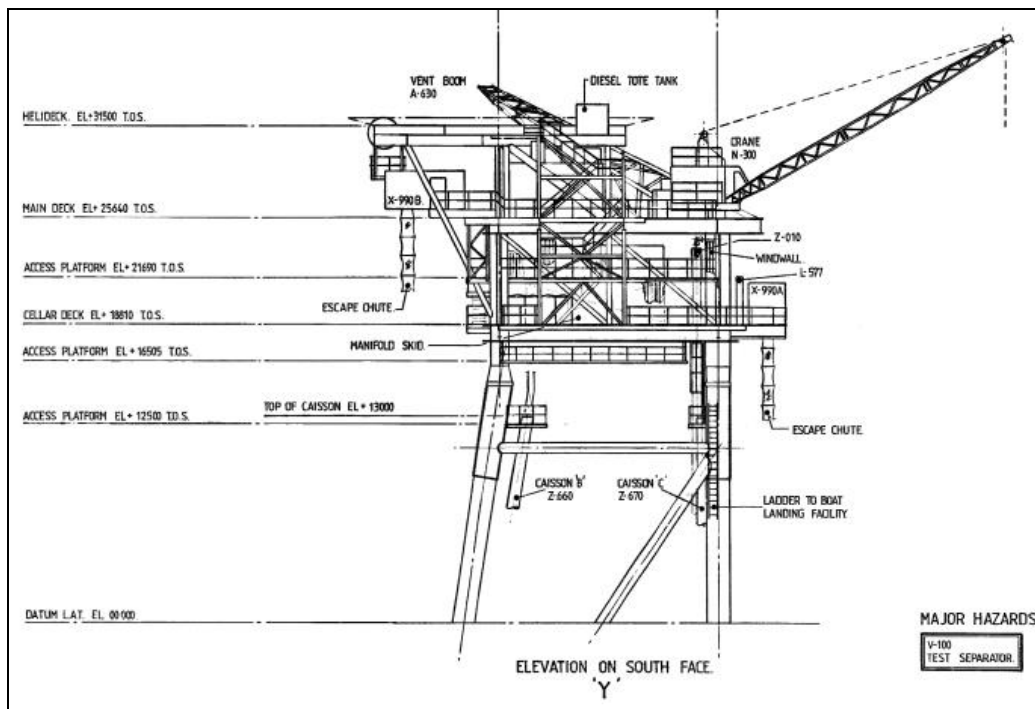
#### 3.1 Topsides

##### 3.1.1 Topsides Decommissioning Overview

Indicate N/A if no topsides. Briefly describe the topsides and decommissioning methodology (see example in blue below). Insert a diagram to illustrate. **Repeat for each topside in the programme(s)**. Note: For floating facilities, provide a brief description of the decommissioning method. **(Suggested maximum 150 words)**

**Topsides Description:** The Welland Topside Structure comprises three levels and weighs 942 Te. The lower level is the cellar deck with process, hydraulic pressure equipment and wells. The 20m x 14m main deck supports the control room, generation and temporary accommodation facilities with a pedestal crane and vent boom. The main deck is 25.6m above sea level. A helideck is located at the upper level.

Figure 3.1: Diagram of Topsides





**Preparation/Cleaning:** *Outline in Table 3.1 the methods that will be used to flush, purge or clean the topsides offshore, **prior to removal to shore**, (see examples in blue below).*

Table 3.1: Cleaning of Topsides for Removal		
Waste Type	Composition of Waste	Disposal Route
Onboard hydrocarbons	Process fluids, fuels and lubricants	Drained and transported ashore for re-use/disposal
Other hazardous materials	NORM, LSA Scale, any radioactive material, instruments containing heavy metals, batteries	Transported ashore for re-use/disposal by appropriate methods
Original paint coating	Lead-based paint	May give off toxic fumes / dust if flame-cutting or grinding/blasting is used so appropriate safety measures will be taken
Asbestos and Ceramic Fibre		Appropriate control and management will be enforced

**Removal Methods:** *Topsides must be completely removed and returned to shore. Possible methods should be outlined in Table 3.2 (see examples in blue below). Tick which methods you are considering for topsides decommissioning. Then briefly describe those applicable to your project.*

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 <i>(describe briefly)</i>	
Method	Description
Single lift removal by SLV/HLV	Removal of topsides as complete units and transportation to shore for re-use of selected equipment, recycling, break up, and/or disposal
Modular removal and re-use/recycle by HLV	Removal of parts/modules of Topsides for transportation and reuse in alternate location(s) and/or recycling/disposal
Offshore removal 'piece small' for onshore reuse/disposal	Removal of topsides by breaking up offshore and transporting to shore using work barge. Items will then be sorted for re-use, recycling or disposal
<b>Proposed removal method and disposal route (Make sure this section appears in BOLD font)</b>	<p><i>State the method you propose for removing and disposing of the topsides, recognising any potential issues regarding trans-frontier shipment of waste.</i></p> <p><i>Highlight if more than one option is being carried forward into competitive tendering. If applicable add the phrase – "A final decision on decommissioning method will be made following a commercial tendering process." (Suggested maximum of 50 words).</i></p>



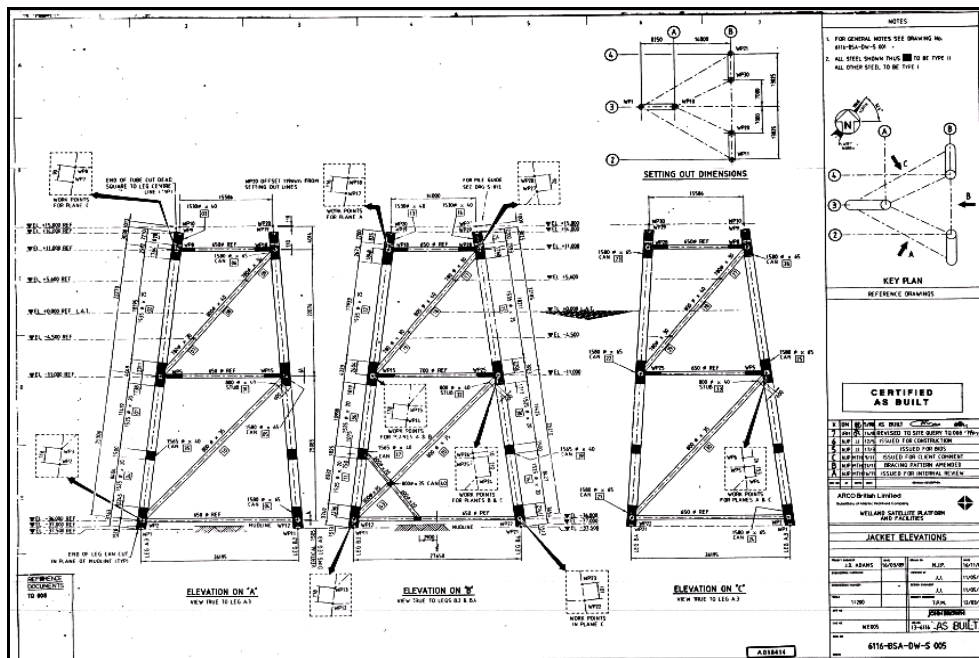
### 3.2 Jacket(s)

#### 3.2.1 Jacket Decommissioning Overview

*Indicate N/A if no Jacket. Provide an overview of the Jacket(s) Decommissioning methods. See example in blue below. Outline any special considerations affecting the options. Insert a diagram to illustrate. Repeat for each jacket in the programme(s). **(Suggested maximum 150 words)***

The jacket legs may need to be cut at the -11m level (26m above sea-bed) to allow re-use of the topsides by a Perenco subsidiary at a proposed new location. Although the full engineering process is not yet finalised, it is envisaged that the Legs will be removed with piles in completeness and then cut on the vessel/barge decks or at an onshore location to the required length. The lower 26m of the jacket and piles and the subsea wellhead protection frames will be transported ashore for recycling.

Figure 3.2: Jacket Elevation





### 3.2.2 Jacket Removal Methods

*Tick the different methods that you are considering for the removal and disposal of the jacket. Complete Table 3.3 (examples in blue below) to describe how the jacket would be removed completely and returned to shore. Any piles should be severed below the natural seabed level at such a depth to ensure that any remains are unlikely to become uncovered. Operators should aim to achieve a cut depth of 3m below the natural seabed level, however consideration will be given to the prevailing seabed conditions which should be detailed below.*

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 <i>(describe briefly)</i>	
Method	Description
Single lift removal by SLV/HLV	Removal of topsides as complete units and transportation to shore for re-use of selected equipment, recycling, break up, and/or disposal
Modular removal and re-use/recycle by HLV	Removal of parts/modules of Topsides for transportation and reuse in alternate location(s) and/or recycling/disposal
Offshore removal 'piece small' for onshore reuse/disposal	Removal of topsides by breaking up offshore and transporting to shore using work barge. Items will then be sorted for re-use, recycling or disposal
<b>Proposed removal method and disposal route (Make sure this section appears in BOLD font)</b>	<p><i>State the method you propose for removing and disposing of the topsides, recognising any potential issues regarding trans-frontier shipment of waste. E.g. All necessary permits and consents required for trans-frontier shipments of waste will be in place prior to leaving UK waters.</i></p> <p><i>Highlight if more than one option is being carried forward into competitive tendering. If applicable add the phrase – "A final decision on decommissioning method will be made following a commercial tendering process." (Suggested maximum of 50 words).</i></p>

### 3.3 Subsea Installation(s) and Stabilisation Feature(s)

*Outline in Table 3.4 how the items will be decommissioned (examples in blue below). If mattresses are buried to a minimum depth of 0.6m below the seabed, OPRED would consider a proposal in the form of a comparative assessment to leave the mattresses in situ (robust evidence of the mattress burial status should be submitted with the comparative assessment). It is expected that mattresses buried to less than 0.6m below the seabed are recovered to shore.*

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)



Wellhead(s)	2	Full recovery as part of MODU campaign to P&A wells	Return to shore for reuse or recycling
Manifold(s)	1	Full recovery	Return to shore for reuse or recycling
Template(s)			
Protection Frame(s)			
Concrete mattresses	200 20	Full recovery 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.	Recover to shore  Transport ashore for disposal
Grout bags			
Formwork			
FronD Mats			
Rock Dump			
Other <i>(describe briefly)</i>			

### 3.4 Pipelines

**Decommissioning Options:** *In Table 3.5 summarise the pipeline(s) or pipeline groups that fall within the decommissioning programme. (See examples in blue below). Include a cross reference to Table 2.3. Remedial rock-dump is not OPRED's preferred decommissioning solution and should only be selected following discussion with OPRED and if a comparative assessment shows this is the best outcome and other options are not feasible.*

\*Key to Options:

- |                             |                           |                    |
|-----------------------------|---------------------------|--------------------|
| 1) Remove - reverse reeling | 2) Remove - Reverse S lay | 3) Trench and bury |
| 4) Remedial removal         | 5) Remedial trenching     | 6) Partial Removal |

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
PLX	Untrenched	Part. Section within 500m zone of the Thames AW platform will be decommissioned at a later date	Show which options are being considered by inserting relevant number(s) from the list above i.e. 1,3,6
PLXX, PLXXX	Trenched, buried	Whole of pipelines	2,5,9



**Comparative Assessment Method:** *Briefly outline the method used to undertake a Comparative Assessment in line with the requirements of OPRED Guidelines. Cross reference to Comparative Assessment document. (Suggested maximum of 100 words)*

**Outcome of Comparative Assessment:** *Produce a table similar to example in Table 3.6 below for each pipeline or pipeline group, summarising the outcome of the Comparative Assessment. Identify the recommended option, and briefly present your justification for this recommendation. Cross-reference any separate Comparative Assessment document. Repeat for each pipeline/pipeline group*

Table 3.6: Outcome of Comparative Assessment		
Pipeline or Group (as per PWA)	Recommended Option*	Justification
PLX	Option 3	Line condition made lifting impractical; burial will remove snagging risk for fishermen
PLXX, PLXXX	Option 9	Already trenched and buried to 0.7m, stable, no snagging hazards

### 3.5 Pipeline Stabilisation Feature(s)

*Outline in Table 3.7 how the items will be decommissioned (examples in blue below). If mattresses are buried to a minimum depth of 0.6m below the seabed, OPRED would consider a proposal in the form of a comparative assessment to leave the mattresses in situ (robust evidence of the mattress burial status should be submitted with the comparative assessment). It is expected that mattresses buried to less than 0.6m below the seabed are recovered to shore.*

Table 3.7: Pipeline Stabilisation Feature(s)			
Stabilisation feature(s)	Number	Option	Disposal Route (if applicable)
Concrete mattresses	200	Full recovery	Recover to shore
	5	To remain in situ until pipeline crossings decommissioned	n/a
	20	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.	Transport ashore for disposal
Grout bags	80	Full recovery	To shore for disposal in landfill
Formwork			
FronD Mats			
Rock Dump (Te)	2000Te	To remain in place	n/a



### 3.6 Wells

*Provide a short statement, similar to the example in blue below, to indicate your approach to well plug and abandonment. **(Suggested maximum of 150 words)***

**Table 3.8: Well Plug and Abandonment**

The wells which remain to be abandoned, as listed in Section 2.4 (Table 2.5) will be plugged and abandoned in accordance with Oil and Gas UK Guidelines for the suspension and abandonment of wells. A PON5/Portal Environmental Tracking System (PETS)/Marine Licence application will be submitted in support of any such work that is to be carried out.





### 3.7 Drill Cuttings

**Drill Cuttings Decommissioning Options:** *OSPAR recommendation 2006/5 has indicated that if the oil release rate from a cuttings pile is less than 10Te/yr and the area persistence is less than 500 km<sup>2</sup>years then the best environmental option for the management of the pile is to leave it in place undisturbed to degrade naturally. Complete Table 3.9 to give details of each of the drill cuttings pile(s). Repeat for each pile and delete or add extra columns as appropriate. Note any interactions between the cuttings pile(s) and jacket removal.*

Table 3.9: Drill Cuttings Decommissioning Options				
How many drill cuttings piles are present?				
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 ( <i>describe briefly</i> )				
Review of Pile characteristics	Pile 1	Pile 2	Pile 3	Pile 4
How has the cuttings pile been screened? (desktop exercise/actual samples taken) – <i>delete as necessary</i>	Y/N	Y/N	Y/N	Y/N
Dates of sampling (if applicable)				
Sampling to be included in pre-decommissioning survey?	Y/N	Y/N	Y/N	Y/N
Does it fall below both OSPAR thresholds?	Y/N	Y/N	Y/N	Y/N
Will the drill cuttings pile have to be displaced in order to remove the jacket?	Y/N	Y/N	Y/N	Y/N
What quantity (m <sup>3</sup> ) would have to be displaced/removed?				
Will the drill cuttings pile have to be displaced in order to remove any pipelines?	Y/N	Y/N	Y/N	Y/N
What quantity (m <sup>3</sup> ) would have to be displaced/removed?				
Have you carried out a Comparative Assessment of options for the Cuttings Pile?	Y/N	Y/N	Y/N	Y/N

**Comparative Assessment Method:** *Briefly outline the method used to undertake a Comparative Assessment in line with requirements of OSPAR recommendation 2006/5 (if applicable). Cross reference to the Comparative Assessment document. **(Suggested maximum of 100 words)***

**Outcome of Comparative Assessment:** *Provide a brief summary of the outcome of the Comparative Assessment for each cuttings pile and of the proposed action to deal with the pile. **(Suggested maximum of 100 words for each pile)***



### 3.8 Waste Streams

*Provide a summary in Table 3.10 (similar to example in blue below) describing how the main waste streams arising from the proposed programme(s) would be managed. If applicable, recognise any potential issues regarding the trans-frontier shipment of waste. Also, complete Table 3.11 detailing the planned final disposition of the inventories from the installation(s) and pipeline(s).*

Table 3.10: Waste Stream Management Methods	
Waste Stream	Removal and Disposal method
Bulk liquids	Removed from vessels and transported to shore. Vessels, pipework and sumps will be drained prior to removal to shore and shipped in accordance with maritime transportation guidelines. Further cleaning and decontamination will take place onshore prior to recycling / re-use.
Marine growth	Removed onshore. Disposed of according to guidelines.
NORM/LSA Scale	NORM may be partially removed offshore under appropriate permit.
Asbestos	Will be contained and taken onshore for disposal.
Other hazardous wastes	Will be recovered to shore and disposed of under appropriate permit.
Onshore Dismantling sites	Appropriate licenced sites will be selected. Facility chosen by removal contractor must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver innovative recycling options.

Table 3.11: Inventory Disposition			
	Total Inventory Tonnage	Planned tonnage to shore	Planned left <i>in situ</i>
Installations			
Pipelines			

*Include a statement/graph/table giving your aspirations for the percentages of materials recovered to shore that will be reused, recycled or disposed of to landfill. Refer to the appropriate sections of the EA to provide additional detail. **(Suggested maximum of 100 words)***



## 4 ENVIRONMENTAL APPRAISAL OVERVIEW

### 4.1 Environmental Sensitivities (Summary)

*Complete Table 4.1 to describe the important/sensitive features of the receiving environment(s) in the area(s) in which the decommissioning activities will take place. Reference details in the EA, which should be cited as a supporting document. (Discuss with OPRED whether an area- or a field-specific EA is required). **(Suggested maximum of 100 words for each section)***

Table 4.1: Environmental Sensitivities	
Environmental Receptor	Main Features
Conservation interests	
Seabed	
Fish	
Fisheries	
Marine Mammals	
Birds	
Onshore Communities	
Other Users of the Sea	
Atmosphere	



## 4.2 Potential Environmental Impacts and their Management

### Environmental Impact Assessment Summary:

*Provide a summary of the main impacts identified in the EA, taking into account feedback from consultees - see example in blue below. **(Suggested maximum of 250 words)***

**Overview:** Although there is expected to be some environmental impact during the decommissioning of the Welland infrastructure (53/4a, 49/28a and 49/29b), long term environmental impacts from the decommissioning operations are expected to be negligible. In addition, incremental cumulative impacts and trans-boundary effects associated with the planned decommissioning operations are expected to be negligible. There will be no planned use of explosives during these activities. We acknowledge that there will be a requirement for an environmental protection plan to be produced and submitted to OPRED should this plan change.

*Complete Table 4.2 identifying the main environmental impacts associated with decommissioning each of the facilities and summarising how these impacts will be managed. **(Suggested maximum of 100 words for each section)***

Table 4.2: Environmental Impact Management		
Activity	Main Impacts	Management
Topsides Removal		
Jacket(s)/Floating Facility Removal		
Subsea Installation(s) Removal		
Decommissioning Pipelines		
Decommissioning Stabilisation Features		
Decommissioning Drill Cuttings		



## 5 INTERESTED PARTY CONSULTATIONS

**Consultations Summary:** *(This section should be updated when the statutory consultation phase is completed)*

- 1) *Informal Stakeholder Consultations – Include a brief summaries of other consultations you have undertaken to date and reference any supporting documents. Under “Response” indicate how stakeholder concerns have been addressed and/or influenced your decision-making process. Updates should be provided to OPRED as consultations progress.*
- 2) *Statutory Consultations – To be completed after public consultation. - Summarise key comments received to date from statutory consultees (similar to example in blue below). Provide copies of the public notice and correspondence from statutory consultees as an Appendix.*

Table 5.1: Summary of Stakeholder Comments		
Who	Comment	Response
<b>Informal Stakeholder Consultations</b>		
<b>Statutory Consultations</b>		
National Federation of Fishermen’s Organisations	“Dismantling process ... presents an ongoing danger to fishermen ... Perenco must ensure arrangement in place ... which updates risk assessment”	Regular risk assessments to be agreed and discussed with NFFO
Scottish Fishermen’s Federation		
Northern Ireland Fish Producers Organisation		
Global Marine Systems Limited		
Public		



## **6 PROGRAMME MANAGEMENT**

### **6.1 Project Management and Verification**

*Provide a summary of the project management/verification which will be undertaken, similar to the example in blue below. **(Suggested maximum of 100 words)***

*A Project Management team will be appointed to manage suitable sub-contractors for the removal of the installation. Standard procedures for operational control and hazard identification and management will be used. Where possible the work will be coordinated with other decommissioning operations in the SNS. 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**

*This should detail proposals for identification and removal of oil and gas debris following decommissioning works. Include a statement similar to the example in blue below. See OPRED Guidance Notes for further details on post-decommissioning requirements. **(Suggested maximum of 100 words)***

*A post decommissioning site survey will be carried out around a 500m radius of installation sites and a 100m corridor (50m either side) along each existing pipeline route to identify any debris. Any seabed debris related to offshore oil and gas activities will be recovered for onshore disposal or recycling in line with existing disposal methods. Independent verification of seabed state will be obtained by trawling the installation sites and pipeline corridors. This will be followed by a statement of clearance to all relevant governmental departments and non-governmental organisations.*

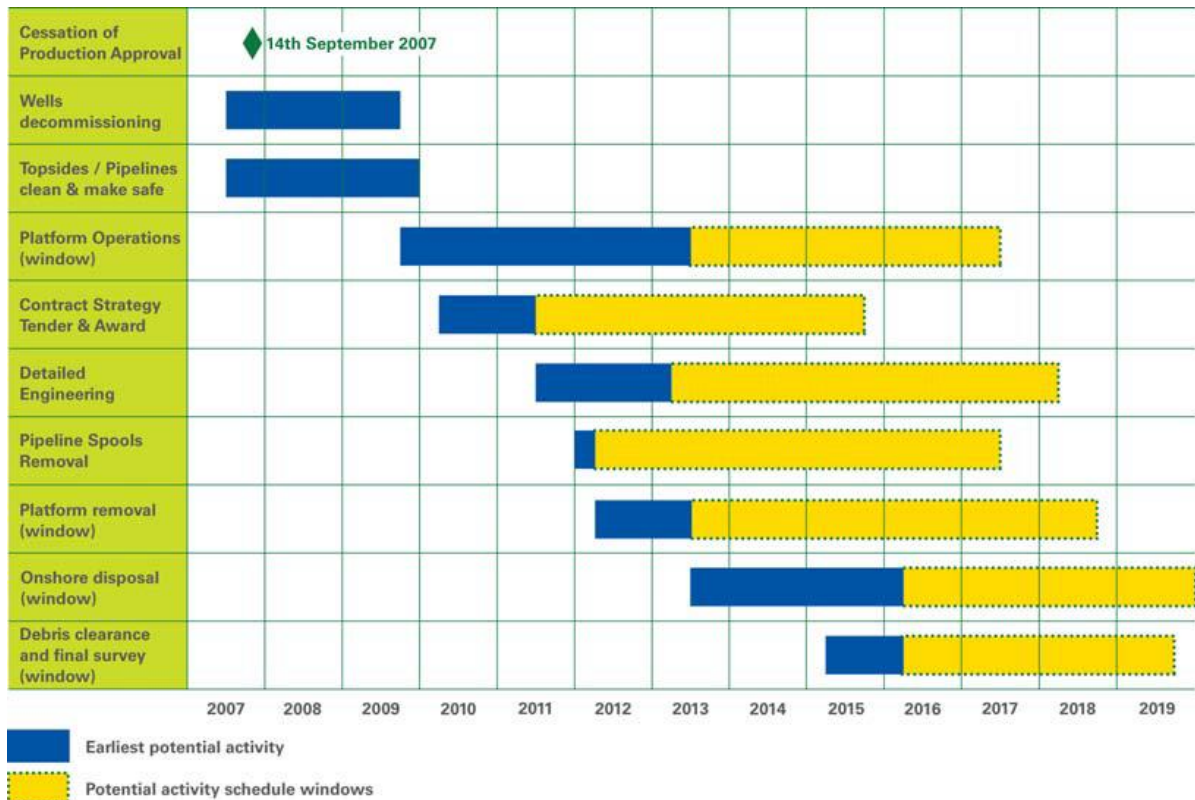
*Please make reference to any existing PON2 submissions if applicable.*



### 6.3 Schedule

**Project Plan:** *Insert a Gantt chart version of the simplified project plan, with key dates and defined milestones, as per example below.*

**Figure 6.1: Gantt Chart of Project Plan**



### 6.4 Costs

This should include an overall cost estimate in GBP sterling of the preferred decommissioning option. The estimate should be broken down to reflect the different activities, preferably in accordance with the ‘Element Level’ of the Oil & Gas UK Decommissioning Cost Estimating Guidelines, work breakdown structure. Cost detail will be kept confidential with a separate programme including costs provide to OPRED.

Table 6.1: Provisional Decommissioning Programme(s) costs	
Item	Estimated Cost (£m)
Platform(s)/Jacket(s) - Preparation/Removal and Disposal	Provided to OPRED
Pipeline(s) Decommissioning	Provided to OPRED
Subsea Installation(s) and Stabilisation Feature(s)	Provided to OPRED
Well Abandonment	Provided to OPRED
Continuing Liability – Future Pipeline and Environmental Survey Requirements	Provided to OPRED
<b>TOTAL</b>	Provided to OPRED



## 6.5 Close Out

*Include a statement similar to the example in blue below. **(Suggested maximum of 100 words)***

In accordance with the OPRED Guidelines, a close out report will be submitted to OPRED within 1 year of the completion of the offshore decommissioning scope including debris clearance, verification of seabed clearance and the first post-decommissioning environmental survey. The report will detail the outcomes of surveys as well as explain any major variances from the programme.

## 6.6 Post-Decommissioning Monitoring and Evaluation

*Provide a statement, similar to the example in blue below, which details your proposed monitoring and evaluation programme. See OPRED Guidance Notes for further details. **(Suggested maximum of 100 words)***

A post decommissioning environmental seabed survey, centred around sites of the wellheads and installations, will be carried out. The survey will focus on chemical and physical disturbances of the decommissioning and be compared with the pre decommissioning survey. Results of this survey will be available once the work is complete, with a copy forwarded to OPRED. All pipeline routes and installation sites will be the subject of surveys when decommissioning activity has concluded. After the surveys have been sent to OPRED and reviewed, a risk based post monitoring survey regime will be agreed by both parties. Typically, a minimum of two post decommissioning environmental surveys and structural pipeline surveys are expected.





## 7 SUPPORTING DOCUMENTS

*Provide a list of supporting documents (and supporting diagrams, graphics or other material) that you have referenced in the programme(s) which are not presented in the Appendices. See examples in blue below.*

<i>Table 7.1: Supporting Documents</i>	
<i>Document Number</i>	<i>Title</i>
<i>1</i>	<i>Environmental Appraisal</i>
<i>2</i>	<i>Comparative Assessment</i>

*For latest document versions provide a web link for all stakeholder/interested parties (or access to other document control mechanism).*



Offshore Petroleum Regulator  
for Environment & Decommissioning

## **8 PARTNER LETTER(S) OF SUPPORT**

*Copies of letter(s) of support from current equity holders in the field should be provided here. Originals should be submitted with final version of the Programme(s).*