Tullow Oil SK Limited

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Department of Energy & Climate Change Offshore Decommissioning Unit 3rd Floor Atholl House 86 -88 Guild Street Aberdeen AB11 6AR

F.A.O. Alex Mateo, Decommissioning Manager

October 2015

22 RE: WISSEY FIELD DECOMMISSIONING PROGRAMME

Dear Sir/Madam,

We acknowledge receipt of your letter dated 22 October 2015 with reference 12.04.06.08/56c.

We, Tullow Oil SK Limited, hereby submit the Final Decommissioning Programme for the Wissey Field dated 22 October 2015, as directed by the Secretary of State on 22 October 2015.

The Final Wissey Field Decommissioning Programme dated 22 October 2015, is submitted on behalf of Section 29 Notice Holders Tullow Oil SK Limited, Tullow Oil plc, First Oil Expro Limited and Faroe Petroleum (U.K.) Limited as requirement under section 29 of the Petroleum Act 1998.

Yours faithfully,

For and on behalf of Tullow Oil SK Limited

A. Colum Clark-

Title: Director

Registered in England: Number 5287330 Registered Office as above



PROJECT CODE: 02029

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Rev	Date	Reason for Issue	Prepared	Checked	Approved
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В	15/07/14	Issued to incorporate comments and for formal review	DS	IM	AE
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F	22/10/15	Final Issue for Secretary of State Approval	DS	IM	IM

02029-TLW-PM-PRG-0001

Contract Number	Area Code	System Code	Responsible Party
			Tullow Oil SK Ltd

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 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

 Page 2 of 39

REVISION CONTROL

Revision:	Para /Sect	Change Description

This sheet must be completed in detail, at each revision once this document has been approved. Details must include revision number, description and indication of which pages and paragraphs have been revised, date of revision approval and approval indication.

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

Page 3 of 39

	CONTENTS		
	Inst. = Installations. P/L = Pipelines	Inst.	P/L.
1 1.1 1.2 1.3 1.4 1.5 1.6 1.7	Executive Summary Combined Decommissioning Programmes Requirement for Decommissioning Programme(s) Introduction Overview of Installation(s)/Pipeline(s) Being Decommissioned Summary of Proposed Decommissioning Programme(s) Field Location/Layout and Adjacent Facilities Industrial Implications 6 8 10 11 12 11 11 11 11 11 11 11 11 11 11 11	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
2 2.1 2.2 2.3 2.4 2.5 2.6	Description of Items to be decommissioned17Surface Facilities (Topsides/Jacket(s)/FPSO etc.)17Subsea Installations and Stabilisation Features17Pipelines/Flowlines/Umbilicals18Wells20Drill Cuttings20Inventory Estimates21	\ \ \ \ \	√ √
3. 3.1 3.2 3.3 3.4 3.5 3.6 3.7	Removal and Disposal Methods22Topsides22Jacket(s)22Subsea Installations and Stabilisation Features22Pipelines/Flowlines/Umbilicals24Wells25Drill Cuttings25Waste Streams26	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	√ √
4 4.1 4.2	Environmental Statement/Environmental Impact Assessment27Environmental Sensitivities (Summary)27Potential Environmental Impacts and their Management30	√ √	√ √
5	Interested Party Consultations 35		
6 6.1 6.2 6.3 6.4 6.5 6.6	Programme Management36Project Management and Verification36Post-Decommissioning Debris Clearance and Verification36Schedule36Costs37Close Out37Post-Decommissioning Monitoring and Evaluation37	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
7	Supporting Documents 38		
8	Partners Letters of Support 39	√	√

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

 Page 4 of 39

TABLE OF TERMS AND ABBREVIATIONS

Abbreviation	Explanation	
CoP	Cessation of Production	
DECC	Department of Energy and Climate Change	
DPs	Decommissioning Programmes	
DSV	Diving Support Vessel	
ES	Environmental Statement	
ESDV	Emergency Shut Down Valve	
HLV	Heavy Lift Vessel	
LAT	Lowest Astronomical Tide	
m	Meters	
MEG	Monoethylene Glycol	
NUI	Normally Unattended Installation	
OGUK	Oil & Gas UK	
OPEP	Oil Pollution Emergency Plans	
ORSL	Oil Spill Response Ltd	
OSPAR	Oslo and Paris Convention	
Perenco	Perenco (UK) Ltd	
P & A	Plug and Abandonment	
PL	Pipe Line	
QRA	Quantitative Risk Assessment	
SLV	Sheer Leg Vessels	
SNS	Southern North Sea	
SWAT	Suspended Well Abandonment Tool	
UKCS	UK Continental Shelf	

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

 Page 5 of 39

A. TABLE OF FIGURES AND TABLES

Table	Description	Page
Number		
Table 1.1	Installation(s) Being Decommissioned	8
Table 1.2	Installation(s) Section 29 Notice Holders Details	8
Table 1.3	Pipeline(s) Being Decommissioned	9
Table 1.4	Pipeline(s) Section 29 Notice Holders Details	9
Table 1.5	Summary of Decommissioning Programmes	10
Table 1.6	List of Adjacent Facilities	14
Table 2.1	Surface Facilities Information	17
Table 2.2	Subsea Installations and Stabilisation Features	17
Table 2.3	Pipeline/Flowline/Umbilical Information	18
Table 2.4	Subsea Pipeline Stabilisation Features	19
Table 2.5 Well information		20
Table 3.1	Subsea Installation and Stabilisation Features Decommissioning	23
Table 3.2	Pipeline or Pipeline Groups Decommissioning	24
Table 3.3	Outcomes of Comparative Assessment	25
Table 3.4	Well Plug and Abandonment	25
Table 3.5	Waste Stream Management Methods	26
Table 3.6	Inventory Disposition	26
Table 4.1		
Table 4.2	Table 4.2 Environmental Impact Assessment	
Table 5.1	Summary of Consultee Comments	35
Table 6.1	Provisional Decommissioning Programme(s) Costs	37
Table 7.1	Supporting Documents	38

Figure	Description	Page
Number		
Figure 1.1	Field Location in UKCS	12
Figure 1.2	Field Layout	13
Figure 1.3	Adjacent Facilities and crossings	15
Figure 2.1	Pie Chart of Estimated Inventories (Installations)	21
Figure 2.2	Pie Chart of Estimated Inventories (Pipelines)	21
Figure 6.1	Gantt Chart of Project Plan	36

B. TABLE OF APPENDICES

Appendices Number	Description
None	

Doc No: 02029-TLW-PM-PRG-0001			
Rev: F	Date: 22/10/15		
Page 6 of 39			

1.0 EXECUTIVE SUMMARY

1.1 <u>Combined Decommissioning Programmes</u>

This document contains two Decommissioning Programmes (DPs). (1) A single Wissey subsea installation and (2) the Wissey pipelines (as described in Para 1.2). A separate programme for each set of associated notices under Section 29 of the Petroleum Act 1998 is incorporated within this document.

1.2 Requirement for Decommissioning Programmes

Installation: In accordance with the Petroleum Act 1998, the Section 29 notice holders of Wissey field in 53/4d (see Table 1.2) are applying to the Department of Energy and Climate Change to obtain approval for decommissioning the installations detailed in Section 2 of this programme. (See also Section 8 - Partner(s) Letter(s) of Support).

Pipelines: In accordance with the Petroleum Act 1998, Tullow Oil SK Ltd (hereinafter referred to as Tullow Oil) as operator of the Wissey pipelines PL2491 and PLU2492 (see Table 1.4) and on behalf of the Section 29 notice holders are applying to DECC to obtain approval for decommissioning the pipelines 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 programmes are submitted in compliance with national and international regulations and DECC guidelines. The schedule outlined in this document is for a 48 month decommissioning project plan due to begin in Quarter 4 2014.

Doc No: 02029-TLW-PM-PRG-0001					
Rev: F Date: 22/10/15					
Page 7 of 20					

1.3 <u>Introduction</u>

The Wissey field is located in block 53/4d in the Southern North Sea approximately 100km off the coast of Norfolk, northeast of Bacton and 10km south east of the Horne and Wren NUI platform to which the Wissey pipeline delivers untreated wet gas for onward transmission to the Thames AW platform 25km to the North West. The Wissey field is produced by one subsea well.

The Wissey field was discovered in 1967 by Signal Oil & Gas the Wissey field reservoir holds and estimated GIIP resource of 28 BSc. Cumulative productions to date has totalled 18.2 BSc, yielding an estimated recovery rate of about 65%. Production from the Wissey field started in August 2008. The field was produced via a subsea development tied back the Horne and Wren platform. The Wissey field last produced in August 2012.

Wissey is a single subsea well tie-back to the Horne and Wren Platform with an integrated protection structure. The 8" flowline connecting the well back to Horne and Wren is buried for the majority of its length and covered with protective concrete mattresses where it sits on the surface of the seabed at the ends. Controls to Wissey are providing an umbilical from the Horne and Wren Platform.

As part of the COP (Approved by DECC 14/05.14) considerations, TOSK have explored all options for continuing production of Wissey but concluded none are viable, therefore the Wissey field is ready for decommissioning.

To optimise efficiency and realise synergies, the Wissey Decommissioning Programme activities will be integrated with the Thames Area that comprise the Arthur, Thames Complex (including Thurne), Horne and Wren, Orwell and Gawain fields. The operator for the Thames Complex, Arthur and Gawain is Perenco UK (PUK).

Similarly, each of the Thames Area fields have reached their end of economic production and due to the interdependencies of the subsea wells on the Thames platform it was agreed with DECC to submit joint single COP and EIA documents to capture all fields and further promote integration into a single project where practicable. However, it should be noted that each operator will submit individual DPs for each field that can be undertaken independently.

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

 Page 8 of 39

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

1.4.1 Installations

Table 1.1: Installation(s) Being Decommissioned						
Field Name	Wissey	Quad/Block	53/4d	Number of Platforms	None	
Distance from nearest UK coastline (km)	100	Distance to median (km)	245	Platform type	N/A	
Number of Subsea Installation(s)	1	Number of Drill Cuttings Pile(s):	None	Topsides Weight (Te): Jacket Weight (Te):	N/A	
Number of Wells: Platform: Subsea:	1 Subsea well	Production Type (Oil / Gas /Conde)	Gas	Water Depth (m)	N/A	

Table 1.2 Installation(s) Section 29 Notice Holders Details				
Section 29 Notice Holder(s) Registration Number Equit				
Tullow Oil SK Limited.	05287330	62.5		
Faroe Petroleum (U.K.) Limited	04848017	18.75		
First Oil Expro Limited	01021486	18.75		
Tullow Oil Plc.	03919249	0		

Doc No: 02029-TLW-PM-PRG-0001		
Rev: F	Date: 22/10/15	
Page 9 of 39		

1.4.2 Pipeline(s)

Table 1.3: Pipeline Being Decommissioned			
Number of Pipeline/ Umbilical	1/1	(See Table 2.3)	

Table 1.4: Pipeline Section 29 Notice Holders Details			
Section 29 Notice Holder(s)	Registration Number	Equity Interest (%)	
Tullow Oil SK Limited.	05287330	62.5	
Faroe Petroleum (U.K.) Limited	04848017	18.75	
First Oil Expro Limited	01021486	18.75	
Tullow Oil Plc.	03919249	0	

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

Page 10 of 39

1.5 <u>Summary of Proposed Decommissioning Programmes</u>

	Table 1.5: Summary of Dec	commissioning Programmes
Selected Option	Reason for Selection	Proposed Decommissioning Solution
1. Topsides		
N/A		
2. Jackets		
N/A		
3. Subsea Installation	on	
Wellhead protection frame will be removed by HLV or crane vessel	structures and leave a	Wellhead protection frame will be removed along with the top sections of piles. Piles will be severed 3m below the seabed level. To ensure that any remains are unlikely to become uncovered. A PETS DCA application will be prepared and a MCAA licence application submitted to cover to removal of the Wellhead Protection Frame.
4. Pipelines & Umb	pilical	
Flush and leave buried in situ	Minimal seabed disturbance, lower energy usage, reduced risk to personnel engaged in the activity; pipelines are sufficiently buried and are stable.	The pipeline (PL2491) and umbilical (PLU2492) will be left in situ, with the cut ends re-buried below the seabed level at such a depth to ensure that any remains are unlikely to become uncovered. Surveys indicate pipelines and umbilicals will remain buried once flooded. Degradation will occur over a long period within seabed sediment and are not expected to represent a hazard to other users of the sea. A PETS PLA application will be prepared and a MCAA licence application submitted to cover the proposed pipeline cutting and burial works. Chemical SATS and Oil Discharge SATs will be submitted as required in relation to the pipeline flushing operations.
5. Well Abandonm	ent Operations	
Abandoned in accordance with	Meets DECC regulatory requirements	A PETS WIA application will be prepared and a MCAA licence application

 Doc No: 02029-TLW-PM-PRG-0001

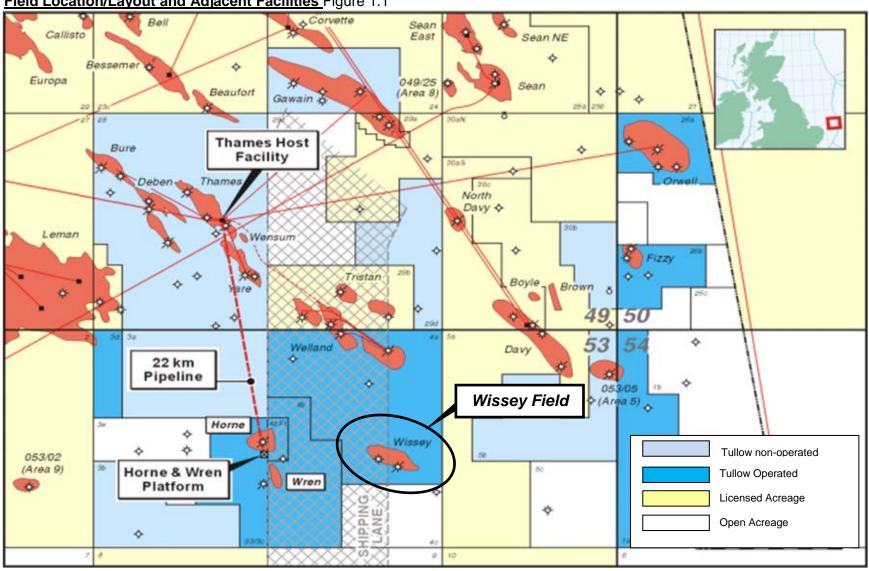
 Rev: F
 Date: 22/10/15

 Page 11 of 39

Table 1.5: Summary of Decommissioning Programmes			
Selected Option	Reason for Selection	Proposed Decommissioning Solution	
UKOG for the suspension and abandonment of wells		submitted to cover well abandonment and removal of the wellhead infrastructure.	
6. Drill Cuttings			
There are no drill cuttings associated with Wissey	Cuttings were widely dispersed and fall below OSPAR 2006/5 thresholds.	Not applicable	
7. Interdependences			
None			

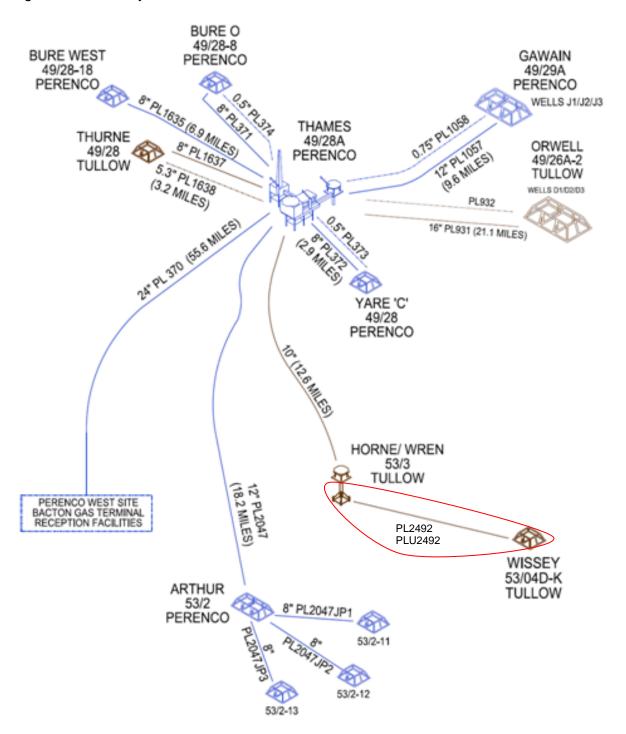
	Doc No: 02029-TLW-PM-PRG-0001	
TULLOW OIL SK LTD - WISSEY FIELD DECOMMISSIONING PROGRAMMES	Rev: F	Date: 22/10/15
	Page 12 of 39	

1.6 Field Location/Layout and Adjacent Facilities Figure 1.1



	Doc No: 02029-TLW-PM-PRG-0001	
TULLOW OIL SK LTD - WISSEY FIELD DECOMMISSIONING PROGRAMMES	Rev: F	Date: 22/10/15
	Page 13 of 39	

Figure 1.2: Field Layout



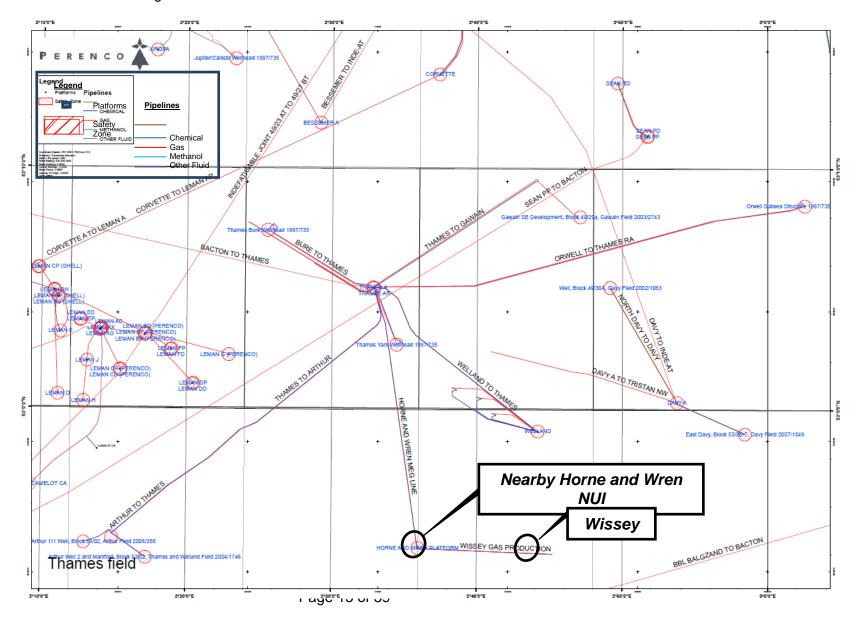
Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 14 of 39	

Table 1.6 List of Adjacent Facilities					
Owner	Name	Туре	Distance/Directi	Information	Status
Tullow Oil SK Ltd	Horne and Wren	NUI Platform	From Wissey well to Horne and Wren is 10km North East.	Gas production from Wissey subsea wells flows into Horne and Wren and	All wells shut in
Perenco	Davy	NUI platform	From Wissey 15km North West	Gas production	Operational
BBL Company	Balgzand to Bacton	Pipeline	Passes approx. 20km south of Wissey	Gas pipeline	Operational
Unknown	UK-NETHE RLANDS 14	Telecommunications cable	7 km south		Operational

NOTE: All Adjacent facilities will have no impact on the Decommissioning proposals.

	Doc No: 02029-TLW-PM-PRG-0001	
TULLOW OIL SK LTD - WISSEY FIELD DECOMMISSIONING PROGRAMMES	Rev: F	Date: 22/10/15
	Page 15 of 39	

Figure 1.3: Adjacent Facilities and Crossings



Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 16 of 39	

1.7 INDUSTRIAL IMPLICATIONS

The intent of this Decommissioning Program is to integrate the Wissey scope of work into the wider "Thames Area decommissioning project" which encompasses all fields that tie back to the Thames complex, into discrete manageable phases.

The phases are as follows;

- Surveys
- Pipeline cleaning (base case is to flush and clean from Thames complex back to individual fields. If this is not possible, the uncompleted scopes will be included in the DSV phase).
- DSV (pipeline severance and burial, removal of stabilisation materials).
- Well Plugging & Abandonment.
- Removal of platform

The above Phases will need to be planned carefully to recognise synergies and efficiencies, however the pre engineering will be completed to allow either individual projects to be completed or to fully integrate all work scopes.

Strategically, suppliers with working vessels and assets on the UKCS will be favoured. All contracts will be competitively tendered or novated to either party.

Current operational contracts for items such as environmental permitting, rig drilling management and logistic support will be implemented to support decommissioning activities

TULLOW OIL SK LTD - WISSEY FIE	LD
DECOMMISSIONING PROGRAMMES	S

Doc No: 02029-TLW-PM-PRG-0001				
Rev: F	Date: 22/10/15			
Page 17 of 39				

2 <u>DESCRIPTION OF ITEMS TO BE DECOMMISSIONED</u>

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

Table 2.1: Surface Facilities Information								
	Topsides/Facilities				Jacket (if applicable)			
Name	Facility Type	Weight		_	Number		Weight of	
		(Te)	modules	(Te)	of Legs	of piles	piles (Te)	
N/A								

2.2 <u>Subsea Installations and Stabilisation Features</u>

Table 2.2: Subsea Installations and Stabilisation Features					
Subsea installations and Stabilisation Features	Number	Size/Weight (Te)	Location(s)	Comments/ Status	
Wellhead 1 15		15	Wissey well 53/4d-11 (WGS84 - 52° 53' 58.1995 North 2° 45' 6.973 East)		
Manifolds(s)	0	NA	NA		
Template(s)	0	NA	NA		
Protection Frame(s)	1	85	Around well	Piled	
Concrete mattresses	52	250	Within 100m of Wissey well head and WPS.	from as built drawings	
Grout bags 100 A		Approx. 1m3 ~ 2t	Within 10m of well head.	from installed drawings	
Rock Dump	0	N/A	N/A		

TULLOW OIL SK LTD - WISSEY FIELD
DECOMMISSIONING PROGRAMMES

Doc No: 02029-TLW-PM-PRG-0001		
Rev: F	Date: 22/10/15	
Page 18 of 39		

2.3 **Pipelines/Flowlines/Umbilicals**

	Table 2.3: Pipeline/Flowline/Umbilical Information								
Description	Pipeline No. (as per PWA)	Diameter (inches)	Length (km)	Composition ¹	Contents ²	From – To End Points	Condition	Status ³	Contents ⁴
Wissey pipeline	PL2491	8	10	Steel with concrete coating	Gas	Wissey well to Horne and Wren NUI	Trenched and buried along length covered by mattresses at ends. Refer to table 2.2. There are no freespans.	Ceased production	Hydrocarbons
Wissey umbilical	PLU249 2	4	10	Bundle	Chemicals/ Hydraulic Fluids	Horne and Wren NUI to Wissey well	Trenched and buried along length covered by mattresses at ends. Refer to table 2.2. There are no freespans.	Ceased production	Hydraulic fluids/copper

e.g. Concrete; Steel; umbilical; Flexible; Bundle
 e.g. Oil; Gas; Water; Chemicals
 e.g. Operational; Out-of-use; Interim pipeline Regime

⁴ e.g. Cleaned; Flushed; Hydrocarbons and/or Chemicals in line

TULLOW OIL SK LTD - WISSEY FIELD
DECOMMISSIONING PROGRAMMES

Doc No: 02029-TLW-PM-PRG-0001

Rev: F Date: 22/10/15

Page 19 of 39

Table 2.4: Subsea Pipeline Stabilisation Features						
Stabilisation Feature	Number	Weight (Te)	Location(s)	Comments/ Status		
Concrete mattresses	8	24	Within 100m H&W NUI	From As built drawings		
Grout bags	40	1	Within 100m H&W NUI	From As built drawings		
Frond Mats	0		N/A			
Rock Dump	0	N/A	N/A			

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 20 of 39	

2.4 Wells

Table 2.5 Well Information				
Platform Wells	Designation 1	Status	Category of Well	
N/A				
Subsea Wells				
53/4d-11	Production	Shut in	3/3/1	

Category of well as per OGUK Guidelines for the suspension and abandonment of wells, Issue 4, July 2012.

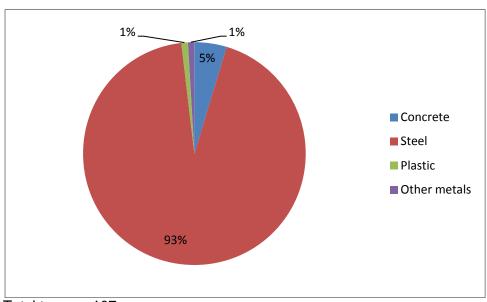
2.5 **Drill Cuttings**

There are no drill cuttings associated with the Wissey subsea well. Drill cuttings that were generated during drilling activity are considered to have been distributed widely during drilling due to the local currents. There was no evidence of drill cuttings in the immediate vicinity of the wells when surveys were conducted in Q3 2013.

Doc No: 02029-TLW-PM-PRG-0001				
Rev: F	Date: 22/10/15			
Page 21 of 39				

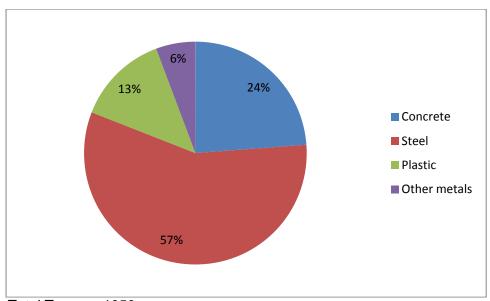
2.6 <u>Inventory Estimates</u>

Figure 2.1: Pie Chart of Estimated Inventories (Installations)



Total tonnes: 107

Figure 2.2: Pie Chart of Estimated Inventory (Pipelines)



Total Tonnes: 1050

Doc No: 02029-TLW-PM-PRG-0001	Doc No: 02029-TLW-PM-PRG-0001				
Rev: F	Date: 22/10/15				
Page 22 of 39					

3. REMOVAL AND DISPOSAL METHODS

Wastes generated during decommissioning will be segregated and recorded by type and periodically transported to shore in an auditable manner through licensed waste contractors. Steel

and other scrap metal are estimated to account for the greatest proportion of the materials inventory. The hierarchy for disposal will be:

- 1. Reuse
- 2. Reconditioning
- 3. Reconditioning of component parts
- 4. Recycling (partial or whole) components/materials
- 5. Disposal to landfill or other approved methods

The disposal routes for the subsea installations and pipeline infrastructure are shown in Tables 3.1 and 3.2.

Once the infrastructure is recovered to the vessels, it will be examined for the presence of NORM. If any contamination is found, the items will be sealed and delivered to specialist contractors for decontamination treatment and disposal. NORM contamination in Wissey infrastructure would require specialised waste transport and handling processes and is regulated under the Radioactive Substances Act 1993, however, the Wissey infrastructure is not expected to contain any NORM.

3.1 Topsides

N/A

3.2 <u>Jacket(s)</u>

N/A

3.3 Subsea Installations and Stabilisation Features

All subsea installations will be removed to shore for disposal. The pile cuts will be made below the seabed level (minimum 3m). The means of cutting will be diamond wire, high pressure water jet abrasive cutting or by explosives.

Table 3.1: Subsea Installation and Stabilisation Features Decommissioning		
Subsea installations and stabilisation features	Option	Disposal Route (if applicable)
Wellhead	Remove	Transport ashore for disposal
Protection Frame	Remove	Transport ashore for disposal
Concrete mattresses	It is intended that the mattresses should be recovered to shore, however in the event of practical difficulties DECC will be consulted and a Comparative Assessment submitted.	Transport ashore for disposal
Grout bags	Remove	Transport ashore for disposal
Formwork	Not applicable	Not applicable
Frond Mats	It is intended that the mattresses should be recovered to shore, however in the event of practical difficulties DECC will be consulted and a Comparative Assessment submitted.	Not applicable
Rock Dump	Not applicable	Not applicable

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 24 of 39	

3.4 <u>Pipelines/Flowlines/Umbilicals</u>

Decommissioning Options:

Table 3.2: Pipeline or Pipeline Groups/Decommissioning Options			
Pipeline or Group (as per PWA)	Status of the line or characteristics of the pipeline group	Decommissioning Options considered	Whole or part of pipeline/group being decommissioned
PL2491	Trenched, buried	1,2,3,4,5	Whole pipeline
PLU2492	Trenched, buried	1,2,3,4,5	Whole pipeline

^{*}Key to Options

- Completely remove the line(s);
- 2) Trench and bury the exposed / uncovered areas of the line(s);
- 3) Rock dump the line in specific areas where the line is uncovered;
- 4) Partial removal of uncovered sections of the line;
- 5) Leave in situ with periodic monitoring (frequency to be agreed with DECC).

Comparative Assessment Method:

The Comparative Assessment process involved a multi-disciplinary team participating in a Comparative Assessment workshop and a preliminary Quantitative Risk Assessment (QRA) of the available decommissioning options. At the Comparative Assessment workshop, each decommissioning option has been scored against a set of assessment criteria using categories derived from DECC guidance: 1. Safety; 2. Environmental; 3. Technical; 4. Societal; 5. Commercial. The Comparative Assessment can be found in Section 7, Supporting Documents, Document 2.

The Comparative Assessment concluded the pipelines and umbilicals will be left in situ due to difficulty and cost to remove. They are predominantly trenched and buried; the free spans are within acceptable parameters to leave. The pipelines will be periodically monitored (frequency to be agreed with DECC) and buried as required.

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 25 of 39	

Outcome of Comparative Assessment:

Table 3.3: Outcomes of Comparative Assessment		
Pipeline or Group	Recommended Option*	Justification
PL2491	Option 5	Line is buried and will be safe to leave in situ (5). End sections will be removed & exposures/spans rectified as required. Monitoring will be performed to confirm pipeline remains buried. The frequency of monitoring will be agreed with DECC.
PLU2492	Option 5	Line is buried and will be safe to leave in situ (5). End sections will be removed & exposures/spans rectified as required Monitoring will be performed to confirm pipeline remains buried. The frequency of monitoring will be agreed with DECC.

^{*}Key to Options

- 1) Completely remove the line(s);
- 2) Trench and bury the exposed / uncovered areas of the line(s);
- 3) Rock dump the line in specific areas where the line is uncovered;
- 4) Partial removal of uncovered sections of the line;
- 5) Leave in situ with continuous monitoring

3.5 Wells

Table 3.4: 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 PETS WIA application will be prepared and a MCAA licence application submitted to cover well abandonment and removal of the wellhead infrastructure.

3.6 Drill Cuttings

Drill Cuttings Decommissioning Options: N/A

(Please refer to Section 2.5)

Comparative Assessment Method: N/A

Outcome of Comparative Assessment: N/A

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 26 of 39	

3.7 <u>Waste Streams</u>

Table 3.5: Waste Stream Management Methods		
Waste Stream	Removal and Disposal method	
Bulk liquids	Removed and discharged to disposal wells or sent to Bacton via the export line for disposal.	
Marine growth	Removed offshore / onshore. Disposed of according to the Tullow Thames Field Decommissioning Waste Management Plan, and in line with relevant legislation relating to the decommissioning of offshore structures, and the management of controlled waste.	
NORM/LSA Scale	Tests for NORM/LSA will occur offshore and will be dealt/disposed with according to guidelines and company policies.	
Asbestos	N/A	
Other hazardous wastes	Non identified	
Onshore Dismantling sites	Appropriate licensed sites will be selected. Chosen facility must demonstrate proven disposal track record and waste stream management throughout the deconstruction process and demonstrate their ability to deliver innovative recycling options.	

Table 3.6 Inventory Disposition			
Total Inventory Planned tonnage Planned left Tonnage to shore in situ			
Installations	70	60	10
Pipelines	600	50	550

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 27 of 39	

4 ENVIRONMENTAL IMPACT ASSESSMENT

4.1 Environmental Sensitivities

The main features in this section are extracts from the Thames Area decommissioning Environmental Impact Assessment that has been prepared for the entire Thames Area decommissioning and is submitted in support of this Decommissioning Programme approval.

	Table 4.1: Environmental Sensitivities
Environmental Receptor	Main Features
Conservation interests	Marine Protected Areas (MPAs): The Wissey infrastructure lies 26.5 kilometres south east of the nearest marine protected area; North Norfolk Sandbanks and Saturn Reef cSAC/SCI, and 30 kilometres east of the Haisborough, Hammond and Winterton cSAC/SCI. Annex I Habitats: Annex I shallow sandbanks and discrete populations of <i>S. spinulosa</i> were identified in the side scan sonar mosaic and using seabed imagery across the Thames Area. Overall the site survey identified some areas of 'low' to 'moderate reefiness' but no areas of high reefiness which has previously been found at the Saturn Reef to the north west of the Wissey field (outside of the current working area). Given the distance of the Wissey infrastructure from the North Norfolk Sandbanks and Saturn Reef cSAC/SCI, it is unlikely that Annex I <i>S. spinulosa</i> reefs will be present. Annex II Species: The Annex II species that could be present in the vicinity of the Thames Decommissioning Area include: Harbour porpoise (<i>Phocoena phocoena</i>); Grey seal (<i>Halichoerus grypus</i>); The harbour (or common) seal (<i>Phoca vitulina</i>).

Table 4.1: Environmental Sensitivities		
Environmental Receptor	Main Features	
	Seabed imagery found that much of the surveyed area comprised bare sand with some areas of gravel and shell fragments (<i>CMACS</i> , 2013). Side scan sonar data demonstrated that sand waves across large areas of the seabed. This indicates strong seabed and water column currents, and subsequently highly mobile sediments (<i>CMACS</i> , 2013) which is consistent with the southern North Sea in general.	
Seabed	The results of the chemical testing indicate that the concentrations of the individual PAH compounds all fall below the laboratory detection limits. Similarly, the aliphatic and aromatic total petroleum hydrocarbon (TPH) compounds also fall beneath lab detection limits, along with the other organic compounds and phenols listed. The organic content of sediments was generally low, ranging from 0.47 per cent to 1.54 per cent, with no discernible trend across the survey area (<i>CMACS</i> , 2013).	
	Of all the metal contaminants, only arsenic was present above Level 1 threshold (Cefas L1 threshold is 20 ppm) at the majority of stations. Elevated levels of arsenic can occur following geological inputs and/or industrial discharge (<i>CMACS</i> , 2013). Cadmium was the only other metal found at concentration above the Level 1 threshold with 0.4 ppm. Barium was detectable at all stations sampled with levels of between 6 and 36 ppm across the sites and no evidence of any 'hotspots' of barium concentration (<i>CMACS</i> , 2013).	
	There are potential fish spawning areas in Block 53/04 for mackerel (Scomber scombrus), plaice (Pleuronectes platessa), sandeel (Ammodytes marinus), sprat (Sprattus sprattus) and whiting (Merlangius Merlangus).	
Fish	In addition, the waters of Block 53/04 also act as nursery areas for mackerel, sole (Solea solea), sandeel, cod (Gadus morhua), spurdog (Squalus acanthias) and tope shark (Galeorhinus galeus) (Coull et al., 1998; Ellis et al., 2012).	
Fisheries	Specific fishing effort and landings data for ICES Rectangles 34F2 indicated that annual fish landings were greatest in 2011 (411.1 tonnes). Conversely, annual fishing catches by tonnage were lowest during 2008 in ICES Rectangles 34F2 (35.4 tonnes) (<i>Marine Scotland</i> , 2014).	
	Generally, fishing activity is low throughout the year in ICES rectangle 34F2. When averaged, catches by weight (tonnes) between 2009 and 2013 were highest during December. Sprat was the most commonly caught species during 2013 in ICES Rectangle 34F2.	

	Table 4.1: Environmental Sensitivities	
Environmental Receptor	Main Features	
Marine Mammals	According to Reid et al. (2003) three species have been previously been sighted in the area around Block 53/04. Harbour porpoise (Annex II species), White-beaked dolphins, and minke whale. In addition, there is the potential that harbour seals (Annex II species) and grey seals (Annex II species) may be present in the vicinity of the Wissey infrastructure.	
Birds	Within Block 53/04, seabird vulnerability peaks to high (2 out of 4 on the JNCC scale) during February, March and December.	
Onshore Communities	All waste produced during the Thames Area Decommissioning will be transferred to an onshore decommissioning and waste facility for processing. Tullow Oil will ensure the chosen facility is fully regulated and licensed with current legislation.	
Other Users of the Sea	Shipping: Shipping movements within Block 53/04 are regarded as 'High' throughout the year. Block 53/04 is located adjacent to an International Maritime Organisation (IMO) two- way deep water routeing measure that controls and monitors the navigation of vessels in the area. Oil & Gas: In the area surrounding the Wissey infrastructure (Block 53/04); there are nine wells which have been P&A, one suspended well, and one completed well. Military Activity: Block 53/04 does not lie within any marine military exercise areas. Dredging and Dumping Activity: No commercial or capital dredging is undertaken, nor are there sites licensed for disposal of dredged material within Block 53/04. Wind Farms: There are no active wind farms within Block 53/04, however it falls within the East Anglia round three search area, and the south eastern corner of Block 53/04 lies in the East Anglia Four Offshore wind development site was awarded in the round 3 offshore wind licensing round to East Anglia Four Ltd (The Crown Estate, 2014) Archaeology: No chartered wrecks are located in the vicinity of Block 53/04 (Hydrographer of the Navy, 2006).	
Atmosphere	Atmospherics emissions will be generated during the Wissey Field Decommissioning operations. However, it is expected that the emissions will be localised to the area of release.	

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 30 of 39	·

4.2 <u>Potential Environmental Impacts and their Management</u>

Environmental Impact Assessment Summary:

Decommissioning project activities with the potential to cause environmental impacts were identified from discussions with the Tullow project team, a scoping exercise with key stakeholders and from the EIA team's previous oil and gas EIA project experience.

Impacts associated with the Wissey field which is included in the Thames Area Decommissioning project have been grouped within the EIA under the following headings:

- Physical Presence;
- Seabed Impacts;
- Noise:
- Atmospheric Emissions;
- Marine Discharges;
- Unplanned Releases;
- Solid Wastes;
- Trans boundary Impacts;
- Cumulative Impacts.

Any relevant social-economic issues have been assessed within these sections.

In summary, all residual impacts are considered to be of minor significance, provided the proposed mitigation and management measures, as identified within the ES, are implemented during the Thames Area Decommissioning.

The exception to this is in the event of an accidental spill, where there would be a release of condensate from the pipeline or diesel fuel loss from the drilling rig / SLV; here the residual impact has been assessed as moderate. In addition, the assessment of potential cumulative impacts indicated that there would be no significant impacts and no significant transboundary impacts are expected to occur as a result of the decommissioning operations.'

TULLOW OIL SK LTD - WISSEY FIELD
DECOMMISSIONING PROGRAMMES

 Doc No: 02029-TLW-PM-PRG-0001

 Rev: F
 Date: 22/10/15

 Page 31 of 39
 22/10/15

Table 4.2 Environmental Impact Assessment Summary			
Activity	Main Impacts	Management	
Topsides Removal	Not applicable	Not applicable	
Jackets Removal	Not applicable	Not applicable	

Doc No: 02029-TLW-PM-PRG-0001

Rev: F Date: 22/10/15

Page 32 of 39

Doc No: 02029-TLW-PM-PRG-0001

Rev: F Date: 22/10/15

Page 33 of 39

	Table 4.2 E	nvironmental Impact Assessment Summary
Activity	Main Impacts	Management
Decommissioning Pipelines (left in situ)	Energy use and atmospheric Emissions Underwater noise Damage or loss of fishing gear Disturbance to Seabed Dropped object Accidental hydrocarbon release	Pipelines have been pre-flushed with seawater and risk assessments will indicate the potential for any environmental impact. Pipeline ends and exposed areas will be buried in situ preventing the release of pipeline contents into the marine environment Rock placement will be deposited from a dedicated rock placement vessel. This will be applied for under a DEPCON application. Tullow Oil will prepare an MCAA licence application to cover the proposed deposits, removal works, and potential disturbance of the seabed. Tullow Oil will ensure that disturbance is kept to a minimum during the operations. A post decommissioning debris survey will be conducted and any debris recovered. Underwater cutting could be a potential source of sound, the operation of well-maintained equipment during decommissioning will ensure noise of operating machinery is kept as low as possible. If applicable MMO will be onboard the vessel during cutting and/or explosive operation. UK Hydrographical Office and Kingfisher will be informed of all activities. Tullow Oil will establish lines of communication to inform other sea users, including fishermen, of vessel operations during decommissioning. Any dropped objects will be reported to DECC OGED using the PON2 reporting form.

Doc No: 02029-TLW-PM-PRG-0001

Rev: F Date: 22/10/15

Page 34 of 39

Table 4.2 Environmental Impact Assessment Summary		
Activity	Main Impacts	Management
Decommissioning Stabilisation Features	Energy use and atmospheric Emissions Underwater noise Damage or loss of fishing gear Disturbance to Seabed Dropped object	It is intended that the mattresses and grout bags should be recovered to shore, however in the event of practical difficulties DECC will be consulted and a Comparative Assessment submitted (as per Para 3.3 Table 3.4). Tullow Oil will prepare an MCAA licence application to cover the removal of mattresses and grout bags from the seabed. Any dropped objects will be reported to DECC OGED using the PON2 reporting form.
	Accidental hydrocarbon release	
Decommissioning Drill Cuttings	Long-term presence of hydrocarbons in sediments Leaching of	There are no drill cuttings associated with the Wissey installation in the area. Should any evidence of drill cuttings be discovered, Tullow Oil will contact DECC to review findings and extent and agree any necessary remedial actions.
	hydrocarbons into the surrounding sediments and water column	Any dropped objects will be reported to DECC OGED using the PON2 reporting form.

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 35 of 39	

5 <u>INTERESTED PARTY CONSULTATIONS</u>

Consultations Summary:

	Table 5.1 Summary of Consultee Co	mments
Who	Comment	Response
INFORMAL	CONSULTATIONS	
ТВА	None	
ТВА	None	
ТВА	None	
STATUTORY	CONSULTATIONS	
NFFO	None received	
SFF	None received	
NIFPO	None received	
Global Marine Systems	None received	

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 36 of 39	

6 PROGRAMME MANAGEMENT

6.1 Project Management and Verification

A Tullow Oil Project Management team will be appointed to manage suitable sub-contractors for the removal of the Wissey installation and execution of the Decommissioning Programme work scopes. Tullow Oil 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. Tullow Oil 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 with DECC.

6.2 Post-Decommissioning Debris Clearance and Verification

A post decommissioning site survey will be carried out around 500m radius of the Wissey installation, and a 200m corridor along each existing pipeline route. Oil and gas seabed debris 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 and pipeline areas. This will be followed by a statement of clearance to all relevant governmental departments and non-governmental organisations.

6.3 Schedule

Project Plan:

The Tullow Oil plan for decommissioning Wissey and its other two operated installations in the Thames area Horne and Wren and Orwell is expected to be 48 months duration.

The plan below takes into account regulatory approvals and time to procure long lead items and equipment. Economic and operational benefits identified in detailed engineering through integration with the Perenco UK Ltd decommissioning of the Thames Area installations may require some future adjustment to the Tullow Oil planning. The market availability of key vessels including a heavy lift vessel for removing structures and rigs for wells plugging and abandonment will ultimately drive the dates for completion.

Note that Horne and Wren will require remedial works in order to facilitate the programme. This activity is shown as H&W Enabling in the level 0 Gant Chart.

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 37 of 39	

6.4 Costs

Table 6.1 – Provisional Decommissioning Programme(s) costs		
Item	Estimated Cost (£m)	
Platform(s) /Jacket(s) - Preparation / Removal and Disposal	NA	
Pipeline(s) and Umbilical(s) Infrastructure Decommissioning	Inc. in subsea	
Subsea Installation(s) and Stabilisation Feature(s)	3.0	
Well Abandonment	5.0	
Continuing Liability – Future Pipeline and Environmental Survey Requirements	0.5	
TOTAL	8.5	

6.5 Close Out

In accordance with the DECC Guidelines, a close out report will be submitted to DECC explaining any variations, from the Decommissioning Programme (normally within 4 months of the completion of the offshore decommissioning scope) including debris removal and independent verification of seabed clearance and the first post-decommissioning environmental survey.

6.6 Post-Decommissioning Monitoring and Evaluation

A post decommissioning environmental seabed survey, centred around sites of the Wissey subsea installation, will be carried out. The survey will focus on chemical and physical disturbances of the decommissioning and compared with the pre-decommissioning survey, conducted by OSIRIS Ltd in Q3 2013 (Osiris 02029-OSI-PL-RPT-001). Results of this survey will be available once the work is complete, with a copy forward to DECC. All pipeline routes and structure sites will be the subject of surveys when decommissioning activity has concluded. The survey will include the 200 metre corridor along the pipeline routes and 500 metre radius around the installation. After the surveys have been sent to DECC and reviewed, the post-decommissioning monitoring regime to be discussed and agreed with DECC.

TULLOW OIL SK LTD - WISSEY FIELD
DECOMMISSIONING PROGRAMMES

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 38 of 39	

7 SUPPORTING DOCUMENTS

Table 7.1: Supporting Documents		
Document Number	Title	
PER-SNS-DECOM-THA-005	Environmental Impact Assessment	
PER-SNS-DECOM-THA-001	Comparative Assessment	
02029-OSI-PL-RPT-001	Environmental Survey	
02029-XOD-SU-RPT-RPT001	Xodus report – Facilities and pipeline removal conceptual report	
02029-INR-EG-RPT-0001	Interact report – Wells plug and abandonment conceptual report	

TULLOW OIL SK LTD - WISSEY FIELD	
DECOMMISSIONING PROGRAMMES	

Doc No: 02029-TLW-PM-PRG-0001	
Rev: F	Date: 22/10/15
Page 39 of 39	

8. PARTNERS LETTERS OF SUPPORT

Tullow Oil plc

9, Chiswick Park, 566 Chiswick High Road, London, W4 5XT Tel: +44 (0)203 249 9000 Fax: +44 (0)203 249 8801



Department of Energy & Climate Change Offshore Decommissioning Unit 3rd Floor Atholl House 86 -88 Guild Street Aberdeen AB11 6AR

F.A.O. Alex Mateo, Decommissioning Manager

22 October 2015

RE: WISSEY FIELD DECOMMISSIONING PROGRAMME

Dear Sir/Madam,

We acknowledge receipt of your letter dated 22 October 2015 with reference 12.04.06.08/56c.

We, Tullow Oil plc, confirm that we authorise Tullow Oil SK Limited to submit on our behalf the Final Decommissioning Programme for the Wissey Field dated 22 October 2015, as directed by the Secretary of State on 22 October 2015.

We confirm that we support the proposals detailed in the Final Wissey Field Decommissioning Programme dated 22 October 2015, which will be submitted by Tullow Oil SK Limited as required by section 29 of the Petroleum Act 1998.

Yours faithfully,

At Colon Park

For and on behalf of Tullow Oil plc

Signed......Name: AL AN GRAHAM WARTIN

Title: DIRECTOR.



1 Queens Terrace Aberdeen AB10 1XL

Tel: 01224 624666 Fax: 01224 624880

Email: info@firstoilexpro.com

Department of Energy & Climate Change Offshore Decommissioning Unit 3rd Floor Atholl House 86 -88 Guild Street Aberdeen AB11 6AR

F.A.O. Alex Mateo, Decommissioning Manager

23rd October 2015

RE: WISSEY FIELD DECOMMISSIONING PROGRAMME

Dear Sir/Madam,

We acknowledge receipt of your letter dated 22nd October 2015 with reference 12.04.06.08/56c.

We, First Oil Expro Limited, confirm that we authorise Tullow Oil SK Limited to submit on our behalf the Final Decommissioning Programme for the Wissey Field dated 22nd October 2015, as directed by the Secretary of State on 22nd October 2015.

We confirm that we support the proposals detailed in the Final Wissey Field Decommissioning Programme dated 22nd October 2015, which will be submitted by Tullow Oil SK Limited as required by section 29 of the Petroleum Act 1998.

Yours faithfully,

For and on behalf of First Oil Expro Limited

Name: STEVEN D. BOWYER

Title:

MANAGING DIRECTOR.



Department of Energy & Climate Change Offshore Decommissioning Unit 3rd Floor Atholl House 86 -88 Guild Street Aberdeen AB11 6AR

F.A.O. Alex Mateo, Decommissioning Manager

22 October 2015

RE: WISSEY FIELD DECOMMISSIONING PROGRAMME

Dear Sir/Madam,

We acknowledge receipt of your letter dated 22 October 2015 with reference 12.04.06.08/56c.

We, Faroe Petroleum (U.K.) Limited, confirm that we authorise Tullow Oil SK Limited to submit on our behalf the Final Decommissioning Programme for the Wissey Field dated 22 October 2015, as directed by the Secretary of State on 22 October 2015.

We confirm that we support the proposals detailed in the Final Wissey Field Decommissioning Programme dated 22 October 2015, which will be submitted by Tullow Oil SK Limited as required by section 29 of the Petroleum Act 1998.

Yours faithfully
For and on behalf of
Farge Petroleum (U.K.) Limited

Julian Riddick Director