

# BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES FOR FPSO AND FSO FLOAT OFF

P0009-CNR-EN-REP-00007

Final Decommissioning Programmes – May 2020

**APPROVALS**

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## TERMS AND ABBREVIATIONS

| Abbrev. | Definition  |
|---------|---|
| AHTV    | Anchor Handler Tug vessel   |
| bbbl    | Barrels   |
| CATS    | Central Area Transmission System  |
| CNRI    | CNR International (U.K.) Limited on behalf of Banff and Kyle co-venturers |
| CSV     | Construction Support Vessel   |
| DPN     | Disused Pipeline Notification   |
| DUTU    | Dynamic Umbilical Termination Unit  |
| EA      | Environmental Appraisal   |
| FPSO    | Floating Production, Storage and Offloading vessel                        |
| FSO     | Floating Storage and Offloading vessel                                    |
| Km      | Kilometre   |
| M       | Metre   |
| N/A     | Not Applicable  |
| NCMPA   | Nature Conservation Marine Protected Area                                 |
| OGA     | Oil and Gas Authority   |
| OGUK    | Oil and Gas UK  |
| OPRED   | Offshore Petroleum Regulator for Environment and Decommissioning          |
| PLANC   | Permits, Licences, Authorisations, Notifications and Consents             |
| PWA     | Pipeline Works Authorisation  |
| TUTU    | Topsides Umbilical Termination Unit                                       |
| Te      | Tonne   |
| UKCS    | UK Continental Shelf  |
| USS     | Ugland Stena Storage  |

## 1. EXECUTIVE SUMMARY

### 1.1 DECOMMISSIONING PROGRAMMES

This document contains the decommissioning programmes for the removal of the Petrojarl Banff Floating Production, Storage and Offloading vessel (FPSO) and the Apollo Spirit Floating Storage and Offloading vessel (FSO) and the associated risers and mooring systems from the Banff and Kyle Fields.

The remaining Banff and Kyle field infrastructure, which is detailed on the relevant Section 29 Notices, will be subject to separate Decommissioning Programmes to be submitted following the removal of the FPSO and FSO.

The Petrojarl Banff FPSO and Apollo Spirit FSO will be utilised for the initial decommissioning activities, namely the flushing / deoiling of the subsea infrastructure i.e. manifolds, risers, subsea pipelines and umbilicals, and to support with the implementation of isolations for the subsea wells. The FPSO and FSO will then not be required to perform any further decommissioning related activities and it is proposed that the vessels are removed from their current locations. Activities associated with the subsequent decommissioning stages of the subsea pipelines, umbilicals, risers and other subsea infrastructure will require the services provided by other specialist vessels.

The early removal of the FPSO and FSO will not prejudice any further decommissioning work in the Banff and Kyle fields.

### 1.2 REQUIREMENT FOR DECOMMISSIONING PROGRAMMES

#### **Installations:**

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the Petrojarl Banff FPSO and Apollo Spirit FSO (see Table 1.2) are applying to The Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) to obtain approval for the removal of the FPSO and FSO from the field following completion of contract at the Banff field.

#### **Pipelines:**

In accordance with the Petroleum Act 1998, the Section 29 notice holders of the relevant Banff and Kyle pipelines (see Table 1.4) are applying to OPRED to obtain approval for decommissioning the pipelines detailed in Section 2.3 of this document.

Section 29 notice holder's letters of support for both installation and pipeline decommissioning programmes are included in Appendix A.

### 1.3 INTRODUCTION

The Banff field is located in blocks 29/2a and 22/27a in the UK Sector of the Central North Sea some 200km due east of Aberdeen in approximately 95m water depth. The Kyle field is located in block 29/2c and 29/2h in the UK Sector of the Central North Sea some 200km due east of Aberdeen in approximately 90m water depth.

There is one drill centre for the Banff and two drill centres for the Kyle field – North Kyle and South Kyle. The Banff wells and manifolds are located approximately 1.6km southeast of the Petrojarl Banff FPSO. The Kyle wells and manifolds are located between 13km and 16km south of the Petrojarl Banff FPSO. There is approximately 3km between the North and South Kyle drill centres. The Banff and Kyle fields are tied back to the Petrojarl Banff FPSO. The Petrojarl Banff is a FPSO vessel developed from the Tentech Ramform B-380 design. The FPSO is turret-moored by a 10 leg mooring system with all risers hung off from the turret which is located at approximately mid-ship. The Banff flexible riser system comprises of one 12" oil export riser, two 10" production risers, one 8" gas injection riser, one 8" gas export riser and one control umbilical. The Kyle field was reconfigured as a tieback to the Banff FPSO in the period 2004 – 2005. The Kyle flexible riser system comprises of one 8" production riser and one control umbilical.

Produced gas is exported from the Petrojarl Banff via the Central Area Transmission System (CATS) pipeline to the CATS Terminal in Seal Sands, Teesmouth.

The Apollo Spirit is an FSO vessel, which is moored via a Submerged Turret Loading (STL) system. The vessel receives processed oil from the Petrojarl Banff via a 12" flexible riser. Oil is stored in the vessel's cargo tanks, and periodically offloaded to shuttle tankers. The Apollo Spirit has nine cargo tanks, with a total capacity of 910,000 bbl.

The previous oil export route for the FPSO was a Submerged Anchor Loading (SAL) system. The components of this system within the water column were removed during 2019 under a decommissioning programme approved in November 2019.

As production rates from both fields decline, continued production from both fields will become uneconomical during 2020. The field partners have investigated various alternative production strategies to further extend the life of the Banff and Kyle fields, but no viable alternative to decommissioning has been identified. Options considered by the Banff and Kyle partners to extend the life of both fields included:

- Near-field tie back opportunities
- De-bottlenecking of the Kyle field
- Development drilling

Currently, alternative production strategies have been found to be uneconomic. A Cessation of Production application for the field was submitted to the Oil and Gas Authority (OGA), with approval granted on 2<sup>nd</sup> March 2020.

These decommissioning programmes are submitted in compliance with national and international regulations and OPRED guidelines.

The removal of the FPSO and FSO is part of the wider Banff and Kyle field decommissioning. This will be carried out in three distinct phases executed over a five-year period:

Phase 1 - Removal of the FPSO and FSO vessels from the field

Phase 2 - Decommissioning of subsea installations and pipelines

Phase 3 - Well plug and abandonment

These decommissioning programmes address Phase 1 only, which is currently planned for summer 2020 and will involve:

- Flushing and cleaning of the subsea production system and FPSO and FSO
- Implementation of required isolations
- Removal of the FPSO and FSO vessels from the field
- Removal of buoyant flexible pipelines, and vessel mooring infrastructure.

Prior to FPSO and FSO removal, a risk-based assessment will be undertaken to determine suitable marking of the subsea infrastructure around the FPSO and FSO locations. Consideration will be given to providing a guard vessel and/or cardinal buoy system to warn of the presence of subsea infrastructure.

The remaining phases associated with the Banff and Kyle fields decommissioning will be covered by their own decommissioning programmes. Section 1.8 describes the boundaries of the Phase 1 decommissioning programmes in detail.

## 1.4 OVERVIEW OF THE INSTALLATIONS BEING DECOMMISSIONED

### 1.4.1 INSTALLATIONS

| Table 1.1: Installations Being Decommissioned |                      |   |                    |
|---|----------------------|---|--------------------|
| <b>Fields:</b>                                | Banff and Kyle       | <b>Production Type (Oil/Gas/Condensate)</b> | Oil and Gas        |
| <b>Water Depth (m)</b>                        | Approx. 90 m         | <b>UKCS block</b>                           | 29/2c & 22/27a     |
| Surface Installations                         |                      |   |                    |
| Number  | Type                 | Vessel Weight (Te)                          | Jacket Weight (Te) |
| 1   | Petrojarl Banff FPSO | Lightship weight 16,069 Te                  | N/A                |
| 2   | Apollo Spirit FSO    | Lightship weight 34,144 Te                  | N/A                |
| Distance to median                            |                      | Distance from nearest UK coastline          |                    |
| km  |                      | km  |                    |
| 63 km (Norway)                                |                      | 191 km (Peterhead)                          |                    |

| Table 1.2 Installation Section 29 Notice Holders Details * |   |                     |                     |
|--|---|---------------------|---------------------|
| Installation   | Section 29 Notice Holders                     | Registration Number | Equity Interest (%) |
| Petrojarl Banff FPSO                                       | Banff L.L.C.                                  | 962000              | 100% (FPSO)**       |
|  | Teekay Petrojarl Floating Production UK LTD   | 02436350            |                     |
|  | CNR International (U.K.) Developments Limited | 01021629            | 0%                  |
|  | CNR International (U.K.) Limited              | 00813187            | 0%                  |
|  | Chrysaor Production (U.K.) Limited            | 00524868            | 0%                  |
|  | Dana Petroleum (E&P) Limited                  | 02294746            | 0%                  |
|  | Teekay Petrojarl Production AS                | 939 545 832         | 0%                  |
| Apollo Spirit FSO  | Ugland Stena Storage AS                       | 882 048 152         | 100% (FSO)          |
|  | Chrysaor Production (U.K.) Limited            | 00524868            | 0%                  |
|  | CNR International (U.K.) Limited              | 00813187            | 0%                  |
|  | CNR International (U.K.) Developments Limited | 01021629            | 0%                  |
|  | Dana Petroleum (E&P) Limited                  | 02294746            | 0%                  |

\* Equity in this table is for vessels only and does not include the field equity split.

\*\* Teekay Petrojarl Floating Production UK LTD owns the Petrojarl Banff FPSO hull and subsea equipment. Banff LLC owns the topsides and turret mooring system.

**1.4.2 PIPELINES****Table 1.3: Pipelines Being Decommissioned**

|   |   |
|---|---|
| <b>Number of Pipeline(s) Details given in Table 2.3</b> | 8 |
|---|---|

**Table 1.4: Pipeline Section 29 Notice Holders Details**

| <b>Field</b>    | <b>Section 29 Notice Holders</b>            | <b>Registration Number</b> | <b>Equity Interest (%)</b> |
|-----------------|---|----------------------------|----------------------------|
| Banff Pipelines | Teekay Petrojarl Floating Production UK LTD | 02436350                   | 100%                       |
| Kyle Pipelines  | CNR International (UK) Developments Ltd     | 01021629                   | 20%                        |
|                 | CNR International (UK) Ltd                  | 00813187                   | 25.714286%                 |
|                 | Dana Petroleum (BVUK) Ltd                   | 03337437                   | 14.285714%                 |
|                 | Premier Oil Plc                             | SC234781                   | 0%                         |
|                 | Premier Oil UK Ltd                          | SC048705                   | 40%                        |

## 1.5 SUMMARY OF PROPOSED DECOMMISSIONING PROGRAMMES

| Table 1.5: Summary of Decommissioning Programmes   |   |  |
|--|---|--|
| Selected Option  | Reason for Selection  | Proposed Decommissioning Solution  |
| <b>1. Petrojarl Banff FPSO</b>   |   |  |
| Removal from field for redeployment or sale.   | Redeployment or sale opportunities are being actively sought for the Petrojarl Banff following completion of contract at the Banff field. | Following disconnection from risers and mooring lines, vessel will be towed from field.  |
| <b>2. Apollo Spirit FSO</b>  |   |  |
| Removal from field for redeployment or sale.   | Redeployment or sale opportunities are being actively sought for the Apollo Spirit following completion of contract at the Banff field.   | Following disconnection from STL buoy, vessel will be towed from field.  |
| <b>3. Moorings &amp; Anchors</b>   |   |  |
| Removal of mooring lines and anchors.<br>Removal of STL Buoy.  | To allow removal of FPSO and FSO.   | <p>FPSO Mooring lines will be removed by an Anchor Handler Tug Vessel (AHTV) and transported to shore for recycling. Mooring anchors will be removed from the seabed. Anchor(s) that cannot be removed during Phase 1 will be captured as part of the wider Banff and Kyle fields decommissioning program.</p> <p>The STL Buoy will be towed from the field by an AHTV for recycling onshore. STL Buoy mooring lines will be removed by AHTV and transported to shore for recycling. STL pile anchors will be left in place and captured as part of the wider Banff and Kyle fields decommissioning program.</p> |
| <b>4. Pipelines, Flowlines &amp; Umbilicals</b>  |   |  |
| Removal of risers and umbilicals within water column.  | To allow removal of FPSO and FSO.   | Risers and dynamic umbilicals will be recovered from the seabed by an AHTV or CSV. They will then be transported to shore for recycling.   |
| <b>5. Interdependencies</b>  |   |  |
| <p>FPSO mooring lines, risers and dynamic umbilicals must be disconnected from the FPSO and laid down on the seabed in order to allow the FPSO to be towed from the field. Mooring lines, risers and dynamic umbilicals will subsequently be recovered from the seabed.</p> <p>The STL riser must be lowered to the seabed and the STL buoy must be released from the FSO to allow the release for the FSO. The mooring lines will then be released from the STL buoy to allow it to be towed from the field. The mooring lines and the risers will subsequently be recovered from the seabed.</p> |   |  |

## 1.6 FIELD LOCATION INCLUDING FIELD LAYOUT AND ADJACENT FACILITIES

Figure 1.1 Field Location on the UKCS

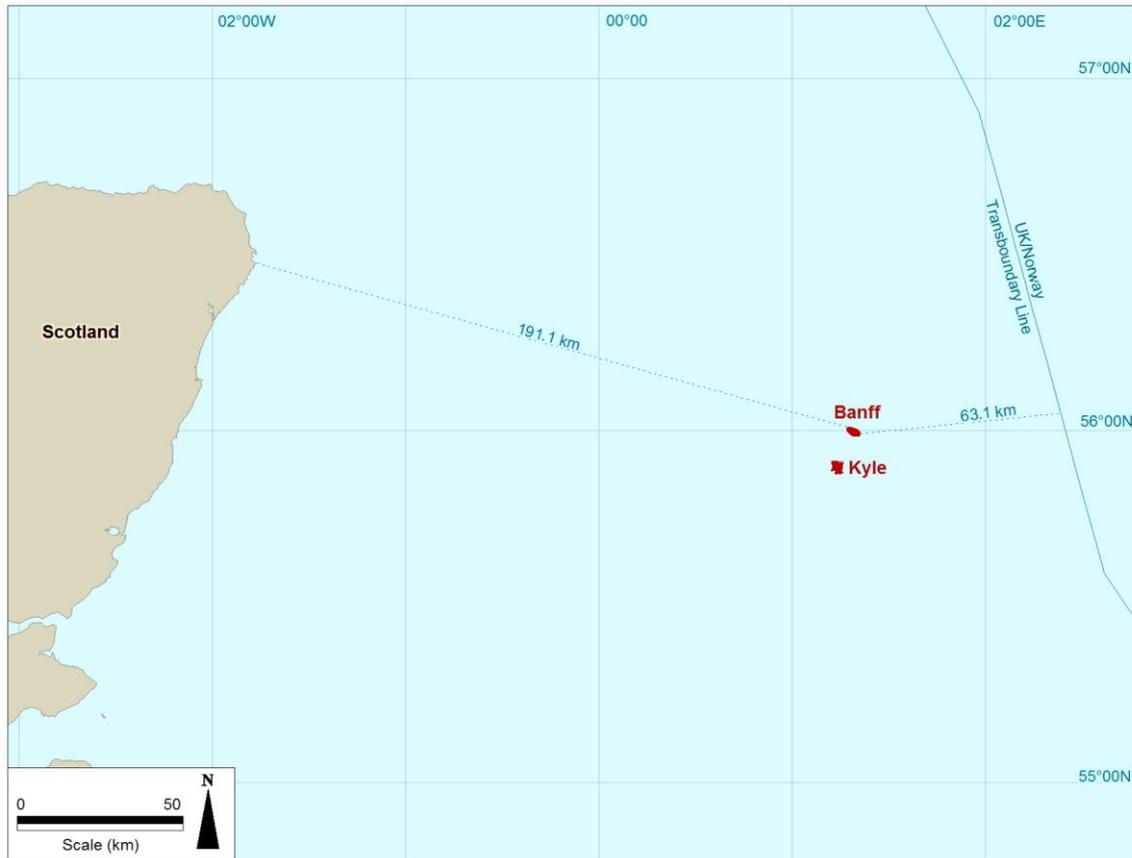


Figure 1.2: Current Field Layout

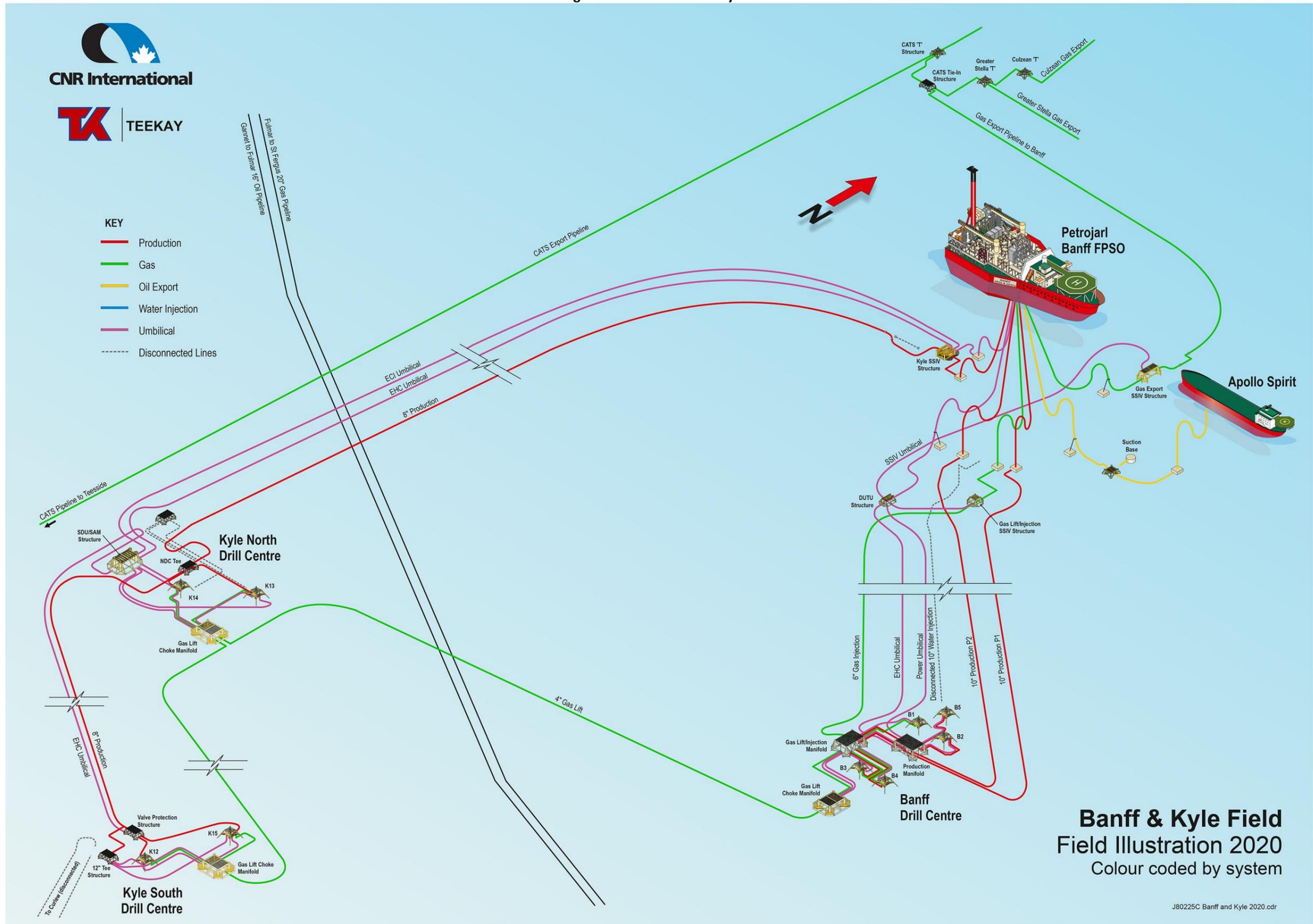


Figure 1.3 Field Layout Post FPSO & FSO Float Off Option 1 Cardinal Buoys

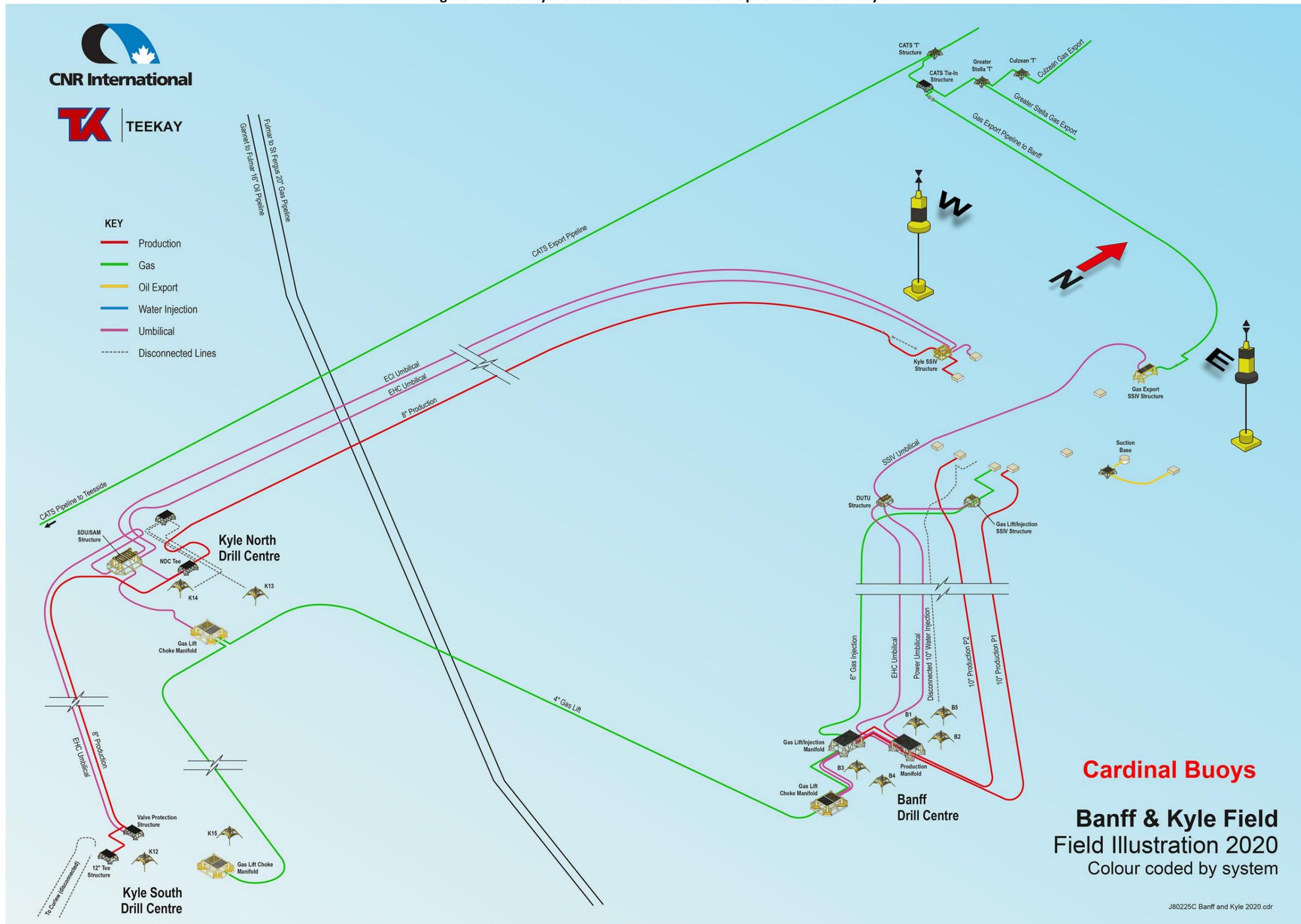
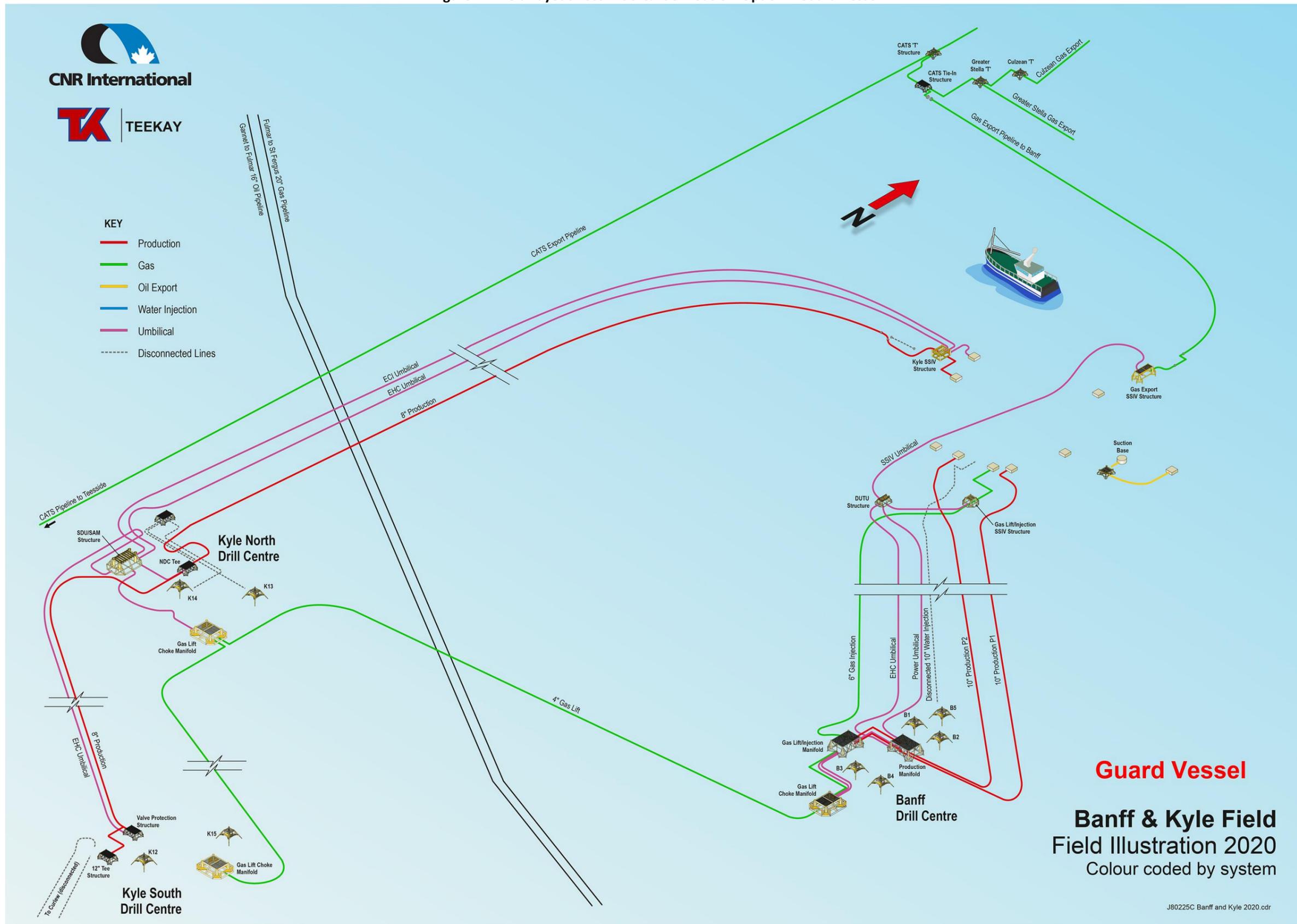


Figure 1.4 Field Layout Post FPSO & FSO Float Off Option 2 Guard Vessel

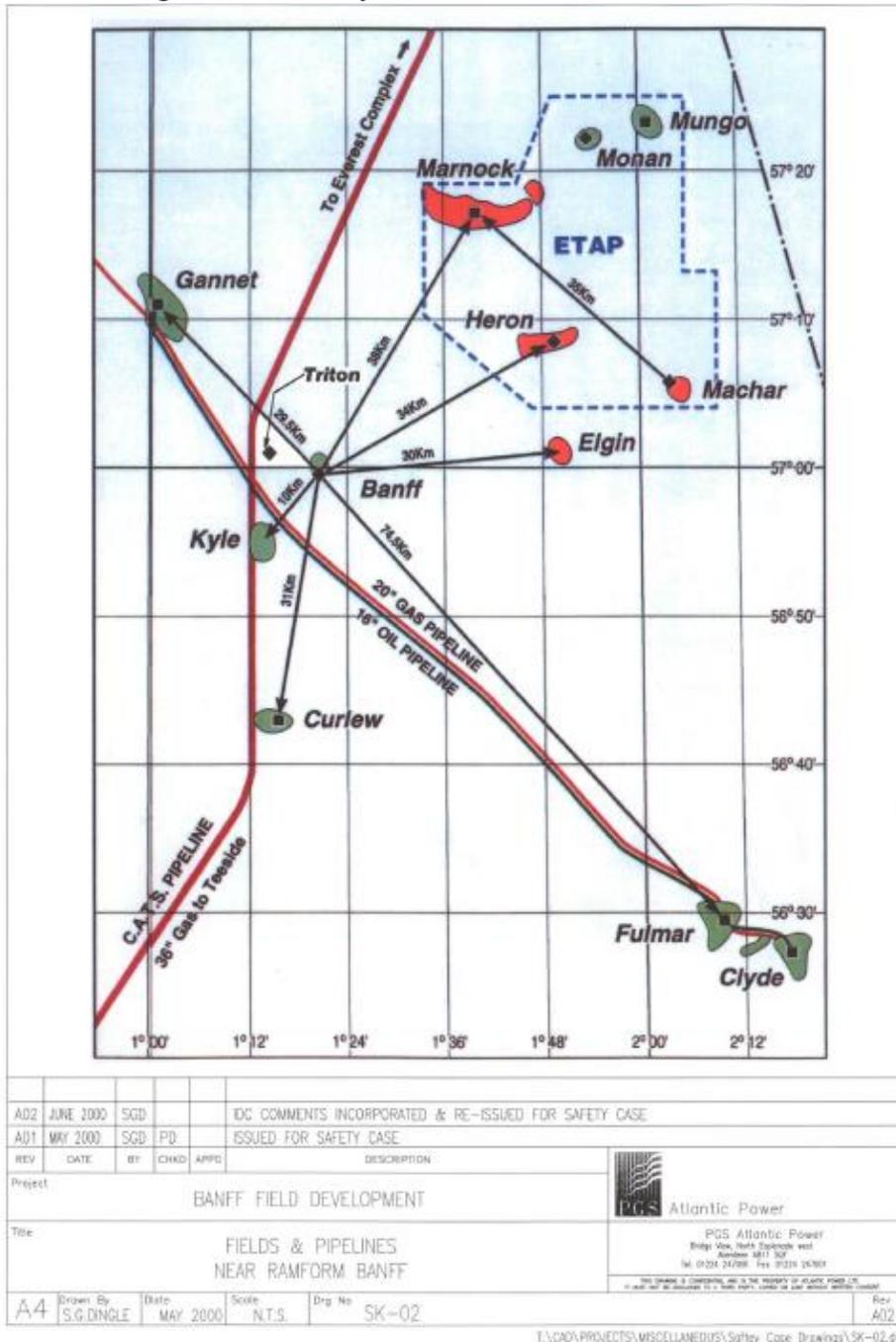


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## 1.7 ADJACENT FACILITIES

| Table 1.6 Adjacent Facilities   |                                      |                               |                                   |  |          |
|---|--------------------------------------|-------------------------------|-----------------------------------|--|----------|
| Operator  | Name                                 | Type                          | Distance/<br>Direction            | Information  | Status   |
| CATS North Sea Limited  | CATS 36" Export Pipeline             | Gas                           | 8 km NW of FPSO                   | Gas export tie in route for Banff FPSO                                     | Active   |
| Ithaca Energy   | Stella to CATS 10" Export Pipeline   | Gas                           | 8 km NW of FPSO                   | 3 <sup>rd</sup> party tie-in to Banff valve structure at CATS T5.          | Active   |
| Total E&P UK  | Culzean to CATS 22" Export Pipeline  | Gas                           | 8 km NW of FPSO                   | 3 <sup>rd</sup> party tie-in to Stella valve structure at CATS T5.         | Active   |
| Shell U.K. Ltd  | PL1800                               | Power and chemicals umbilical | 0.5 m SW                          | Umbilical to ex Curlew FPSO. 0.5 m from Kyle South Tee structure.          | Inactive |
| Shell U.K. Ltd  | PL1798                               | Oil, gas, water pipeline      | 0.5 m SW                          | Flowline to ex Curlew FPSO 0.5 m from Kyle South Tee structure.            | Inactive |
| Shell U.K. Ltd  | Fulmar to St Fergus 20" Gas Pipeline | Gas                           | 5km west of FPSO at closest point | Crossed by Kyle flowline, umbilicals, and the Banff to Kyle gas lift line. | Active   |
| Shell U.K. Ltd  | Gannet to Fulmar 16" Oil Pipeline    | Oil                           | 5km west of FPSO at closest point | Crossed by Kyle flowline, umbilicals, and the Banff to Kyle gas lift line. | Active   |
| Shell U.K. Ltd  | Gannet to Fulmar 16" Oil Pipeline    | Oil                           | 5km west of FPSO at closest point | Cut and disused.   | Inactive |
| Impacts of Decommissioning Proposals  |                                      |                               |                                   |  |          |
| There are no direct impacts on adjacent facilities from the decommissioning works associated with the Petrojarl Banff FPSO and Apollo Spirit FSO installations and pipelines. For the decommissioning of the Banff gas export system, CATS North Sea Limited will be informed as to the decommissioning plan. |                                      |                               |                                   |  |          |

Figure 1.5 Adjacent fields and facilities



**1.8 BOUNDARIES OF DECOMMISSIONING PLAN**

The Banff and Kyle fields Decommissioning Programmes for FPSO & FSO Float Off (Phase 1) will involve:

- Flushing and cleaning of the subsea production system and FPSO and FSO
- Implementation of required isolations
- Remove the FPSO and FSO vessels from the field (as detailed in Table 2.1)
- Removal of buoyant flexible pipelines, and vessel mooring infrastructure (as detailed in Tables 2.2, and 2.3).

All other infrastructure associated with the Banff and Kyle fields will remain in place and will be subsequently decommissioned at a later stage and will be covered by separate decommissioning programmes.

## 2. DESCRIPTION OF ITEMS TO BE DECOMMISSIONED

### 2.1 INSTALLATIONS: SURFACE FACILITIES – FPSO AND FSO

| Table 2.1: Surface Facilities Information |               |                      |                                      |                               |             |                   |                     |
|---|---------------|----------------------|--------------------------------------|-------------------------------|-------------|-------------------|---------------------|
| Name                                      | Facility Type | Location             |                                      | Topsides/Facilities           |             | Mooring System    |                     |
|   |               |                      |                                      | Weight (Te)                   | No. Modules | No. mooring lines | Weight (Te)         |
| Petrojarl Banff                           | FPSO          | WGS84 Decimal        | 57.001 N<br>1.292 E                  | Lightship weight<br>16,069 Te | 1           | 10                | Approx.<br>4,000 Te |
|   |               | WGS84 Decimal minute | 57° 00' 01.99" N<br>01° 17' 32.91" E |                               |             |                   |                     |
| Apollo Spirit                             | FSO           | WGS84 Decimal        | 57.0114 N<br>1.3261 E                | Lightship weight<br>34,144 Te | 1           | 8                 | Approx.<br>1,520 Te |
|   |               | WGS84 Decimal minute | 57° 00' 41.28" N<br>01° 19' 34.25" E |                               |             |                   |                     |

### 2.2 INSTALLATIONS: SUBSEA INCLUDING STABILISATION FEATURES

| Table 2.2: Subsea Installations and Moorings |        |                  |                      |  |                        |
|--|--------|------------------|----------------------|--|------------------------|
| Subsea installations                         | Number | Size/Weight (Te) | Location             |  | Comments/ Status       |
| FPSO Mooring line and Anchor #1              | 1      | Approx. 400 Te   | WGS84 Decimal        | 57.0204 N<br>1.3057 E                  | Weight includes anchor |
|  |        |                  | WGS84 Decimal minute | 57° 01' 13.456" N<br>01° 18' 20.629" E |                        |
| FPSO Mooring line and Anchor #2              | 1      | Approx. 400 Te   | WGS84 Decimal        | 57.0189 N<br>1.3113 E                  | Weight includes anchor |
|  |        |                  | WGS84 Decimal minute | 57° 01' 8.154" N<br>01° 18' 40.903" E  |                        |
| FPSO Mooring line and Anchor #3              | 1      | Approx. 400 Te   | WGS84 Decimal        | 57.0014 N<br>1.3289 E                  | Weight includes anchor |
|  |        |                  | WGS84 Decimal minute | 57° 00' 05.118" N<br>01° 19' 44.058" E |                        |

| Subsea installations             | Number | Size/Weight (Te)    | Location   |  | Comments/ Status                              |
|----------------------------------|--------|---------------------|--|--|---|
| FPSO Mooring line and Anchor #4  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 56.9997 N<br>1.3292 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 56° 59' 58.957" N<br>01° 19' 45.342" E |   |
| FPSO Mooring line and Anchor #5  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 56.9807 N<br>1.2960 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 56° 58' 50.679" N<br>01° 17' 45.772" E |   |
| FPSO Mooring line and Anchor #6  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 56.9806 N<br>1.2929 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 56° 58' 50.493" N<br>01° 17' 34.466" E |   |
| FPSO Mooring line and Anchor #7  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 56.9898 N<br>1.2629 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 56° 59' 23.520" N<br>01° 15' 46.471" E |   |
| FPSO Mooring line and Anchor #8  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 56.9926 N<br>1.2591 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 56° 59' 33.584" N<br>01° 15' 32.846" E |   |
| FPSO Mooring line and Anchor #9  | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 57.0135 N<br>1.2625 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 57° 00' 48.795" N<br>01° 15' 45.092" E |   |
| FPSO Mooring line and Anchor #10 | 1      | Approx. 400 Te      | WGS84<br>Decimal   | 57.0161 N<br>1.2671 E                  | Weight includes anchor                        |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 57° 00' 58.311" N<br>01° 16' 1.579" E  |   |
| STL Buoy Mooring Lines           | 8      | Approx. 190 Te each | From STL buoy to mooring piles.<br>2 lines 1,200m long, 6 lines 1,020m long. |  | Mooring piles excluded from these programmes. |
| STL Buoy                         | 1      | Approx. 103 Te      | WGS84<br>Decimal   | 57.0114 N<br>1.3261 E                  |   |
|                                  |        |                     | WGS84<br>Decimal<br>minute   | 57° 00' 41.279" N<br>01° 19' 34.254" E |   |

## 2.3 PIPELINE(S) INCLUDING STABILISATION FEATURES

All relevant permit and consent applications will be submitted to the OGA and Health and Safety Executive (HSE) in a timely manner to gain approval prior to the removal of the pipelines listed below. As the pipelines are taken out of use, variations to the Pipeline Work Authorisations (PWA) will be submitted to the OGA, and Disused Pipeline Notification (DPN) forms may be submitted to OPRED if deemed appropriate. Please note that PLU3106 and PLU4522 are not included in Table 2.3 as these are static umbilicals. These umbilicals are not required to be handled to allow FPSO and FSU sail away and therefore will be included in the overall Banff and Kyle fields decommissioning programmes.

| Table 2.3: Pipeline/Flowline/Umbilical Information |  |   |             |                                |  |  |               |                 |  |
|--|--|---|-------------|--------------------------------|--|--|---------------|-----------------|--|
| Description  | Pipeline No. (as per PWA)  | Diameter (inches)   | Length (km) | Description of Component Parts | Product Conveyed                         | From – To End Points   | Burial Status | Pipeline Status | Current Content                        |
| Banff P1 Production Riser                          | PL1546 (Ident 8)   | 10"   | 0.236       | Dynamic riser                  | 3 Phase Well Fluid                       | Riser base elbow to topside tie in spool                             | Surface Laid  | Operational     | 3 Phase Well Fluid                     |
| Banff P2 Production Riser                          | PL1547 (Ident 6)   | 10"   | 0.236       | Dynamic riser                  | 3 Phase Well Fluid                       | Riser base elbow to topside tie in spool                             | Surface Laid  | Operational     | 3 Phase Well Fluid                     |
| Oil Export Riser                                   | PL1550 (Ident 3)   | 12"   | 0.358       | Dynamic riser                  | Processed Oil                            | Topsides tie in spool to subsea tie in spool                         | Surface Laid  | Operational     | Processed Oil                          |
| Gas Export Riser                                   | PL1549 (Ident 3)   | 6" (Outer diameter of riser component being removed is 12") | 0.276       | Dynamic riser                  | Processed Gas                            | Topsides tie in spool to API transition spool                        | Surface Laid  | Operational     | Processed Gas                          |
| Banff Dynamic Umbilical                            | PLU1552.1-<br>PLU1552.2 (Ident 1)<br>PLU1553 (Ident 1)<br>PLU1554.1-<br>PLU1554.7 (Ident1)<br>(Note 1) | 6"  | 0.365       | 16 Core Dynamic Umbilical      | Methanol, Scale Inhibitor, Wax Inhibitor | FPSO Umbilical hang off to Dynamic Umbilical Termination Unit (DUTU) | Surface Laid  | Operational     | Methanol Scale Inhibitor Wax Inhibitor |

| Description                    | Pipeline No. (as per PWA)              | Diameter (inches)   | Length (km) | Description of Component Parts | Product Conveyed  | From – To End Points                               | Burial Status | Pipeline Status | Current Content  |
|--------------------------------|--|---|-------------|--------------------------------|---|--|---------------|-----------------|--|
| Banff Gas Lift/Injection Riser | PL1548 (Ident 3)                       | 8" (Outer diameter of riser component being removed is 12")   | 0.276       | Dynamic riser                  | Processed Gas   | Topsides tie in spool to riser base elbow          | Surface Laid  | Operational     | Processed Gas  |
| Kyle Production Riser          | PL1660 (Ident 10)                      | 8" (Outer diameter of riser component being removed is 11.3") | 0.221       | Dynamic riser                  | 3 Phase Well Fluid  | Riser base elbow to hang off spool                 | Surface Laid  | Operational     | 3 Phase Well Fluid                                     |
| Kyle Dynamic Umbilical         | PL1661.1- PL1661.22 (Ident 2) (Note 2) | 6.65"   | 0.303       | 22 Core Dynamic Umbilical      | Methanol, Scale Inhibitor, Wax Inhibitor, Hydraulic Fluid | Topsides umbilical Termination Unit (TUTU) to DUTU | Surface Laid  | Operational     | Methanol Scale Inhibitor Wax Inhibitor Hydraulic Fluid |
| Apollo Spirit STL Riser        | PL1550 (Ident 10)                      | 12"   | 0.250       | Dynamic riser                  | Processed Oil   | 12" Flexible Flowline to STL Buoy Spool            | Surface Laid  | Operational     | Processed Oil  |

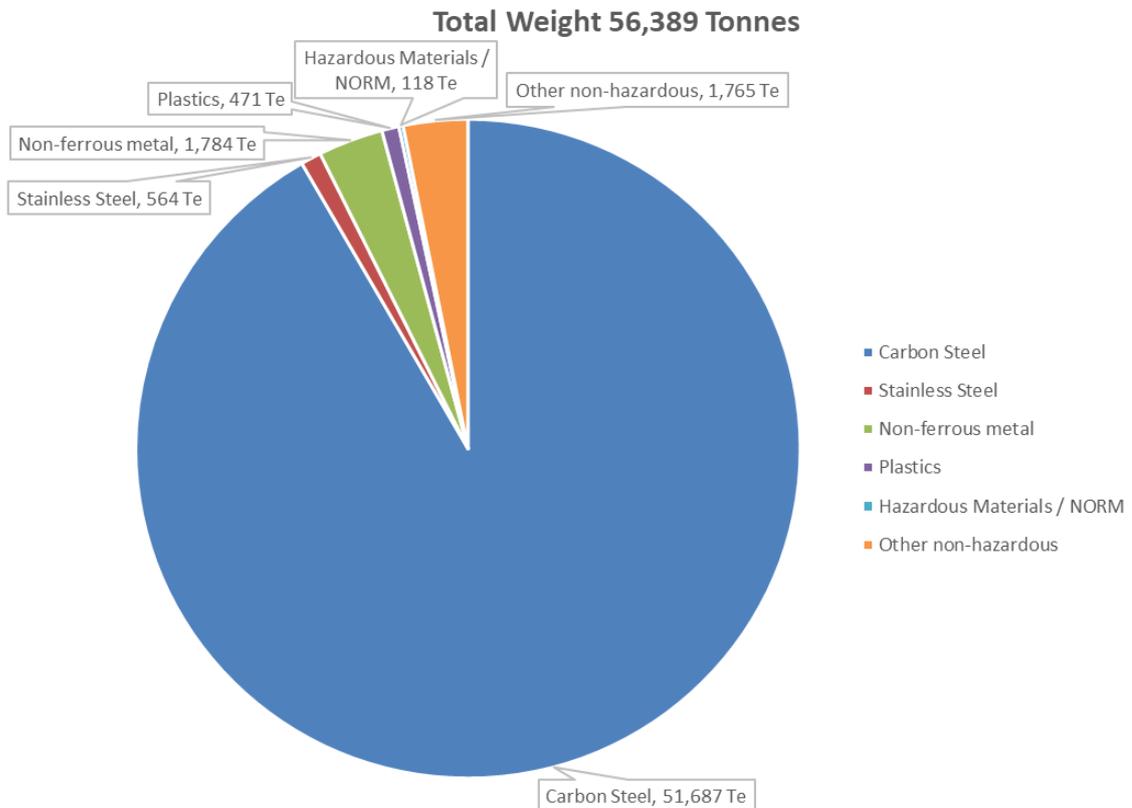
- Note 1 – 6" Umbilical contains multiple cores with different PWA numbers.
- Note 2 - 6.65" Umbilical contains multiple cores with different PWA numbers.

## 2.4 INVENTORY ESTIMATES

| Table 2.4: Inventory of the material associated with surface installation decommissioning |               |                              |               |
|---|---------------|------------------------------|---------------|
| Petrojarl Banff FPSO  |               | Apollo Spirit FSO            |               |
| Material  | Mass (tonnes) | Material                     | Mass (tonnes) |
| Carbon Steel  | 13,418        | Steel                        | 32,431        |
| Stainless Steel   | 562           | Misc. Non Hazardous Material | 1,707         |
| Non-ferrous metal   | 1,768         | Hazardous Materials          | 6             |
| Plastics  | 161           |                              |               |
| Hazardous Materials / NORM  | 112           |                              |               |
| Other non-hazardous   | 58            |                              |               |
| <b>Total</b>  | <b>16,079</b> | <b>Total</b>                 | <b>34,144</b> |

| Table 2.5: Inventory of the material associated with subsea installation decommissioning |                               |
|--|-------------------------------|
| Material   | Dry unflooded weight (tonnes) |
| <b>Mooring lines and FPSO anchors</b>  |                               |
| Carbon Steel   | 5,468                         |
| Plastics   | 52                            |
| <b>STL Buoy</b>  |                               |
| Carbon Steel   | 101                           |
| Plastics   | 2                             |
| <b>Total</b>   | <b>5,623</b>                  |

| Table 2.6: Inventory of the material associated with pipeline decommissioning |                               |
|---|-------------------------------|
| Material  | Dry unflooded weight (tonnes) |
| Carbon Steel  | 269                           |
| Stainless Steel   | 2                             |
| Non Ferrous Metals  | 16                            |
| Plastics  | 256                           |
| <b>Total</b>  | <b>543</b>                    |

**Figure 2.1: Pie Chart of Estimated Inventories**

### 3. REMOVAL AND DISPOSAL METHODS

Article 4 of the EU Waste Framework Directive (Directive 2008/98/EC) sets out the five steps to manage waste ranked according to environmental impact (also known as the waste hierarchy). In line with the waste hierarchy, the re-use of an installation (or parts thereof) is first in the order of preferred decommissioning options. CNRI and Teekay will follow the principles of the waste hierarchy (Figure 3.1) in order to minimise waste production resulting from the removal of the Petrojarl Banff FPSO and Apollo Spirit FSO.

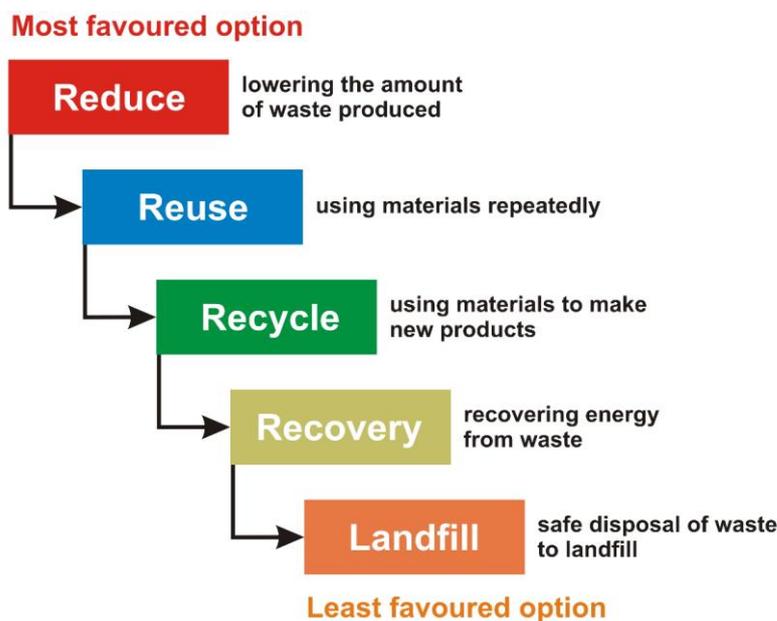
Recovered subsea infrastructure will be returned to shore and transferred to a suitably licensed waste treatment facility. Recovered infrastructure e.g. risers and mooring lines will be cleaned before being recycled.

An appropriately licensed waste management company and yard will be identified through a selection process that will ensure that the chosen facility demonstrates a proven record of waste stream management throughout the deconstruction process, the ability to deliver innovative reuse / recycling options, and ensure the aims of the waste hierarchy are achieved.

Geographic locations of potential disposal facilities may require the consideration of Trans Frontier Shipment of Waste (TFSW), including hazardous materials. Early engagement with the relevant waste regulatory authorities will ensure that any issues with TFSW are addressed before the shipment of any waste.

CNRI and Teekay will engage with other companies and industries to identify potential reuse opportunities. Both companies recognise that such opportunities are best achieved through the tendering and selection of a waste management contractor with expert knowledge and experience in this area.

**Figure 3.1: Waste Hierarchy**



### 3.1 PETROJARL BANFF FPSO

The Petrojarl Banff FPSO operates under a Lease and Operate Contract between CNRI and Teekay. After completion of operations at the Banff and Kyle fields, the FPSO unit is to be redeployed or sold.

In the event that no viable redeployment or sale opportunities are available, the vessel may be sent for recycling. Should this take place the vessel will be recycled at an EU approved ship-recycling yard, in compliance with all relevant legislation including The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

The Banff FPSO topsides process and cargo tanks will be flushed and cleaned prior to removal of the vessel from the field.

### 3.2 APOLLO SPIRIT FSO

The Apollo Spirit FSO operates under a Lease and Operate Contract between Teekay and Ugland Stena Storage (USS). After completion of operations at the Banff and Kyle fields, the FSO unit is to be redeployed or sold.

In the event that no viable redeployment or sale opportunities are available, the vessel may be sent for recycling. Should this take place the vessel will be recycled at an EU approved ship-recycling yard, in compliance with all relevant legislation including The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

The Apollo Spirit FSO cargo tanks will be flushed and cleaned prior to removal of the vessel from the field.

### 3.3 WASTE STREAMS

| Table 3.1: Waste Stream Management Methods |   |
|--|---|
| Waste Stream                               | Removal and Disposal method   |
| Bulk liquids                               | Bulk liquid waste will be produced during the flushing of the Banff and Kyle production systems and during the cleaning of the FPSO and FSO process equipment and storage tanks. Bulk liquids will be offloaded and transported to shore for treatment and disposal.  |
| Marine growth                              | Some marine growth may be removed offshore. Onshore disposal will be managed by the selected waste management contractor  |
| NORM/LSA Scale                             | NORM contaminated material may be removed and discharged offshore under the appropriate authorisation. Some material or contaminated equipment may be recovered to shore for disposal or decontamination, selected waste management contractor will have appropriate authorisation for the disposal/decontamination of NORM contaminated waste.   |
| Asbestos                                   | Asbestos has been identified in surveys of the Apollo Spirit. Additional surveys will be undertaken should the vessel be sent for recycling. Recycling yard will be informed of hazard and appropriate controls and disposal methods will be in place.  |
| Other hazardous wastes                     | Other hazardous wastes will be taken ashore and disposed of under an appropriate permit by the selected waste management contractor.  |
| Onshore Dismantling sites                  | An appropriately licenced site will be selected. CNRI and Teekay will ensure that the selected contractor(s) have a proven record in disposal and waste stream management throughout the deconstruction process and is able to demonstrate their ability to deliver innovative recycling options. Should vessels be sent for recycling they will be recycled at an EU approved ship-recycling yard, in compliance with all relevant legislation including The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships. |

## 4. ENVIRONMENTAL APPRAISAL

All operations described in these Decommissioning Programmes will be subject to the relevant environmental permits and approvals. All permit applications and reporting will be managed through a Permits, Licences, Authorisations, Notifications and Consents (PLANC) register jointly developed by CNRI and Teekay.

An Environmental Appraisal (EA) will be submitted with the full Banff and Kyle fields Decommissioning Programmes. A summary of the main impacts and associated management expected to be included in the EA is provided in Table 4.1 below. Within the EA, CNRI and Teekay will review the environmental sensitivities in the area of the proposed operations and the significance of the potential impacts resulting from the anticipated operations in more detail.

**Table 4.1: Environmental Appraisal Impacts Summary**

| Activity   | Main Impacts   | Management  |
|--|--|---|
| Cut and laying down of risers, dynamic pipelines and vessel mooring infrastructure listed in Tables 2.1 to 2.3 and subsequent removal from the seabed. | Seabed disturbance will be caused by the laying down and removal of the risers, dynamic pipelines and vessel mooring infrastructure. This may incur a localised, temporary disturbance of an area of seabed, within The East of Gannet and Montrose Field Nature Conservation Marine Protected Area (NCMPA). | The lifting activity will be undertaken while vessel is on dynamic positioning, thus will be undertaken through controlled, precise manoeuvring. This will minimise any lateral movement which will ensure the area of seabed temporarily disturbed will be kept as low as possible. Any potential impacts will be addressed in the EA document submitted in conjunction with the relevant permits. |
| Disconnection of risers, dynamic pipelines listed in Table 2.3   | The potential for the discharge to sea of 200 m <sup>3</sup> of inhibited seawater from flushing activities is anticipated to have negligible environmental impact.  | Any discharges to sea associated with the decommissioning of the FPSO and FSO will be assessed as part of the EIA process and will be subject to the relevant permitting requirements and will be applied for via PETS.   |
| Vessel mobilisation  | Localised effects on air quality. Given the location of the FPSO and FSO (191 from the Scottish coast and 63 km from the Norwegian coast) it is not anticipated that there will be a significant impact on air quality on a wider scale.   | The proposed operations will be undertaken as efficiently as possible and the removal activity is expected to be complete within 4 months of the FPSO on location. The subsea construction vessel is estimated to take 25 days. Any impacts on localised air quality will be addressed in more detail in the Environmental Appraisal document submitted in conjunction with the relevant permits.   |
| Waste  | Onshore impacts including resource and energy use.   | Waste streams and dismantling site selection will be managed in line with the waste hierarchy (Figure 3.1) and in line with the removal and disposal methods outlines in Table 3.1.   |

## 5. INTERESTED PARTY CONSULTATIONS

### Consultations Summary:

The following key stakeholders have been identified with whom to engage regarding decommissioning activities and schedule relating to Petrojarl Banff FPSO and Apollo Spirit FSO removal:

- Banff Field Partners - CNRI, Dana Petroleum (E&P) Limited
- Kyle Field Partners - CNRI, Premier Oil UK Limited, Dana Petroleum (BVUK) Limited
- CATS system stakeholders – CATS North Sea Limited, Ithaca Energy, Total E&P UK
- Adjacent pipelines operator – Shell U.K. Limited
- OPRED Offshore Decommissioning Unit (ODU)
- OPRED Environmental Management Team (EMT)
- OPRED Offshore Environmental Inspectorate (OEI)
- United Kingdom Hydrographic Office (UKHO)
- Oil & Gas Authority (OGA)
- Health and Safety Executive (HSE)
- Scottish Fishermen’s Federation (SFF)
- Scottish Environment Protection Agency (SEPA)
- Global Marine Group (GMG)
- Maritime and Coastguard Agency (MCA)
- Northern Lighthouse Board (NLB)
- Joint Nature Conservation Committee (JNCC)
- Marine Scotland

Statutory and public consultations were carried out between 31<sup>st</sup> March and 14<sup>th</sup> April, 2020. Copies of the Decommissioning Programmes were made available on request and as a download from the BEIS website:

<https://www.gov.uk/guidance/oil-and-gas-decommissioning-of-offshore-installations-and-pipelines>

A public notice was published in The Times and Aberdeen Press and Journal newspapers on the 31<sup>st</sup> March, 2020. Please refer to Appendix B for a copy of the public notice. The public notice gave instructions for representations to be made in writing by Tuesday 14<sup>th</sup> April 2020. CNRI and Teekay received no comments or any written or verbal representation from the public in direct response to the public notice or during the public consultation period. Where stakeholder comments required a CNRI/ Teekay response, these are outlined in Table 5.1.

**Table 5.1: Summary of stakeholder comments**

| Stakeholder | Comment  | Response   |
|-------------|--|--|
| SFF         | The SFF have reservations regarding the suitability of a cardinal buoy system to warn of the presence of subsea infrastructure. There is potential for confusion /misinterpretation of what the buoys are being used to indicate. Danger that fisherman unfamiliar with such set ups, may think the buoys are marking a point directly below thus wrongly assuming that it is safe to fish between the buoys. Also buoys themselves become surface collision risks and their moorings subsea snagging hazards. | CNRI and Teekay will need to have navigational aids in place at all times as a safety mechanism to protect other users of the sea. Both cardinal buoy and guard vessel options are being considered for this. CNRI and Teekay take on board SFF’s reservations in working up the most appropriate marking for the FPSO 500m zone. We are also in discussions with the NLB who are able to provide guidance throughout on the management and monitoring of the cardinal buoys and who can provide comprehensive advice on the approach to navigation around them. If we proceed with the cardinal buoy option, they will be regularly monitored and will have AIS tracking capabilities. CNRI and Teekay will keep an open dialogue to keep the SFF fully informed of our actions and intentions with regards to appropriately marking the 500m zone. |

| Stakeholder | Comment   | Response |
|-------------|---|----------|
| GMG         | Coordinates have been reviewed and there is no nearby fibre optic/power cable infrastructure that would be influenced by the proposed operations. | -        |

CNRI and Teekay have and will continue to engage with the stakeholders regarding overall decommissioning plans and in particular, the removal plans for the FPSO and FSO under the Decommissioning Programme Arrangements.

## 6. PROGRAMME MANAGEMENT

### 6.1 PROGRAMME MANAGEMENT AND VERIFICATION

A joint CNRI and Teekay project management team has been appointed to manage the operations of competent contractors selected for the FPSO and FSO removal and scopes of work. Any changes to the decommissioning programmes will be discussed and agreed with OPRED.

### 6.2 POST DECOMMISSIONING DEBRIS CLEARANCE AND VERIFICATION

A full-scale post decommissioning environmental seabed and pipeline survey of the Banff and Kyle fields will be carried out following full decommissioning of the fields. Results of this survey will be available once the work is complete, with a copy forwarded to OPRED.

### 6.3 SCHEDULE

The high-level schedule Figure 6.1 provides the overall schedule for the Petrojarl Banff FPSO and Apollo Spirit FSO removal programme of decommissioning activities.

**Figure 6.1: Schedule of Project Plan\***

| Activity                                 | 2019 |    | 2020 |    |    |    | 2021 |    |
|--|------|----|------|----|----|----|------|----|
|  | H1   | H2 | Q1   | Q2 | Q3 | Q4 | H1   | H2 |
| Decommissioning Planning                 |      |    |      |    |    |    |      |    |
| COP Approval                             |      |    |      |    |    |    |      |    |
| Anticipated DP Approval                  |      |    |      |    |    |    |      |    |
| Cessation of Production                  |      |    |      |    |    |    |      |    |
| Pipeline Flushing / Isolations           |      |    |      |    |    |    |      |    |
| FPSO Make Safe / Disconnection / Removal |      |    |      |    |    |    |      |    |
| Riser removal                            |      |    |      |    |    |    |      |    |
| Mooring system removal                   |      |    |      |    |    |    |      |    |
| Close out reports                        |      |    |      |    |    |    |      |    |

\*Indicative windows for activity

### 6.4 MANAGEMENT OF RESIDUAL LIABILITY

Prior to FPSO and FSO removal, a risk-based assessment will be undertaken to determine suitable marking of the subsea infrastructure around the FPSO and FSO locations. Consideration will be given to providing a guard vessel and/or cardinal buoy system to warn of the presence of subsea infrastructure.

Banff and Kyle production wells will be shut in and positively isolated from the production flowline systems. CNRI has carried out an assessment of the integrity status of each well and the risk associated with leaving each well in a shut in state for up to three years before final plug and abandonment and have established that there is a low risk of a release from the wells to the marine environment. Subsea Fly-by inspections will be carried out after twelve months following the disconnection to monitor the wells status. Monitoring frequency to be defined based on the outcome of initial inspection. Once this has been determined this will be discussed and agreed with OPRED.

Subsea pipework will be flushed of hydrocarbons prior to disconnection. Combined with the positive isolation of the wells from production pipework this will mitigate the risk of hydrocarbon release from the subsea pipework following the removal of the FPSO and FSO. The gas export pipeline will be positively isolated from the CATS system.

## **6.5 COSTS**

An overall cost estimate following Oil and Gas UK (OGUK) Guidelines on Decommissioning Cost Estimates will be provided to OPRED.

## **6.6 CLOSE OUT**

In accordance with OPRED guidelines, a close out report will be submitted to OPRED following the removal of the FPSO and FSO explaining any variance from the Decommissioning Programmes.

## APPENDIX A: PARTNERS LETTERS OF SUPPORT



15 May 2020

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

FAO: Stewart Welsh

Dear Sir

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letters dated 14 May 2020.

We, CNR International (U.K.) Developments Limited confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FPSO and FSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully



Roy Aspden  
Decommissioning Projects Manager  
For and on behalf of CNR International Developments (U.K.) Limited

**CNR International (U.K.) Developments Limited**

Company Number 01021629 (England and Wales)

St Magnus House, Guild Street, Aberdeen, AB11 6NJ United Kingdom

Registered office: c/o Pinsent Masons LLP, 30 Crown Place, London, EC2A 4ES United Kingdom.

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BRINGING ENERGY TO THE WORLD

15 May 2020

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

Dear Sir or Madam

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Banff L.L.C confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff Field FPSO as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Anne Liversedge'.

Anne Liversedge, Director  
For and on behalf of Banff L.L.C

Banff L.L.C. tel: 1 441 298 2530 fax: 1 441 292 3931 www.teekay.com  
Trust Company Complex, Ajetake Road, Ajetake Island, Majuro, Marshall Islands, MH96960



BRINGING ENERGY TO THE WORLD

15 May 2020

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

Dear Sir or Madam

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998 (Banff Field FPSO and Banff Field Pipeline Riser Sections)**

We acknowledge receipt of your letters dated 14 May 2020.

We, Teekay Petrojarl Floating Production UK LTD confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes for the Banff Field FPSO and Banff Field Pipeline Riser Sections relating to the Banff and Kyle Fields as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Anne Liversedge'.

Anne Liversedge, Director  
For and on behalf of Teekay Petrojarl Floating Production UK Ltd.



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

15 May 2020

Att: Stuart Welsh, Senior Decommissioning Manager

Dear Sirs,

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Altera Infrastructure FPSO AS confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FPSO and FSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

**For and on behalf of Altera Infrastructure FPSO AS**

A handwritten signature in blue ink, appearing to read "Chris Brett".

Chris Brett  
President

[alterainfra.com](http://alterainfra.com)



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 Department for Business, Energy and Industrial Strategy (BEIS)  
 3<sup>rd</sup> Floor, Wing C  
 AB1 Building  
 Crimon Place  
 Aberdeen  
 AB10 1BJ

Date: 15<sup>th</sup> May 2020

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES FOR FPSO AND FSO FLOAT OFF  
 P0009-CNR-EN-REP-00007**

**PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Dana Petroleum (E&P) Limited (company number 02294746), as a holder of section 29 notice relative to the Banff field confirm that we hereby authorise CNR International (U.K) Limited (company number 00813187), to submit on our behalf abandonment programmes relating to the Banff and Kyle fields and FPSO and FSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the Banff and Kyle Fields Decommissioning Programmes for FPSO and FSO Float Off, dated 14 May 2020, which has been submitted by CNR International (U.K) Limited in so far as they relate to those facilities in respect of which we are required to submit abandonment programmes under section 29 of the Petroleum Act 1998.

Yours faithfully,

  
 Mr L. Hutchison  
 Digitally signed by Laura Hutchison  
 DN: cn=Laura Hutchison,  
 ou=Dana Petroleum, o=Dana Petroleum,  
 email=Laura.Hutchison@dana-petroleum.com, c=GB  
 Date: 2020.05.15 09:36:01  
 +0100

Laura Hutchison  
 Chief Financial Officer

For and on behalf of Dana Petroleum (E&P) Limited (company number 02294746)

Registered in England No. 02294746  
 Registered Office: 78 Cannon Street London EC6N 6AF



Dana Petroleum (BVUK) Limited  
 King's Close  
 62 Huntly Street  
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Offshore Petroleum Regulator for Environment & Decommissioning  
 Department for Business, Energy and Industrial Strategy (BEIS)  
 3<sup>rd</sup> Floor, Wing C  
 AB1 Building  
 Crimon Place  
 Aberdeen  
 AB10 1BJ

Date: 15<sup>th</sup> May 2020

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES FOR FPSO AND FSO FLOAT OFF –  
 P0009-CNR-EN-REP-00007**

**PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Dana Petroleum (BVUK) Limited (company number 03337437), as a holder of section 29 notice relative to the Kyle field confirm that we hereby authorise CNR International (U.K) Limited (company number 00813187), to submit on our behalf abandonment programmes relating to the Banff and Kyle fields and FPSO and FSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the Banff and Kyle Fields Decommissioning Programmes for FPSO and FSO Float Off, dated 14 May 2020, which has been submitted by CNR International (U.K) Limited in so far as they relate to those facilities in respect of which we are required to submit abandonment programmes under section 29 of the Petroleum Act 1998.

Yours faithfully,

Digitally signed by Laura  
 Hutchison  
 DN: cn=Laura Hutchison, o=Dana  
 Petroleum, ou,  
 email=Dana.Petroleum@bp.com,  
 postal=Dana, ou=UK,  
 Date: 2020.05.15 09:00:00 +0100

Laura Hutchison  
 Chief Financial Officer

For and on behalf of Dana Petroleum (BVUK) Limited (company number 03337437)

Registered in England and Wales, Company No. 03337437  
 Registered Office: 78 Cannon Street, London EC4N 6AF



**Premier Oil UK Limited**  
Upper Denburn House  
Prime Four Business Park  
Kingswells Causeway  
Kingswells  
Aberdeen AB15 8PU

**Telephone** +44 (0)1224 618 900  
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**Email** [premier@premier-oil.com](mailto:premier@premier-oil.com)  
**Website** [www.premier-oil.com](http://www.premier-oil.com)

15<sup>th</sup> May 2020

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

FAO: Stewart Welsh, Senior Decommissioning Manager

Dear Sir

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14<sup>th</sup> May 2020.

We, Premier Oil UK Limited confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FPSO and FSO float off as directed by the Secretary of State on 14<sup>th</sup> May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14<sup>th</sup> May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

Phil McIntyre  
For and on behalf of Premier Oil UK Limited



**Premier Oil plc**  
Upper Denburn House  
Prime Four Business Park  
Kingswells Causeway  
Kingswells  
Aberdeen AB15 8PU

**Telephone** +44(0)1224 618 900  
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**Email** [premier@premier-oil.com](mailto:premier@premier-oil.com)  
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15<sup>th</sup> May 2020

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

FAO: Stewart Welsh, Senior Decommissioning Manager

Dear Sir

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMME FOR FPSO AND FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14<sup>th</sup> May 2020.

We, Premier Oil plc confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FPSO and FSO float off as directed by the Secretary of State on 14<sup>th</sup> May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14<sup>th</sup> May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

Phil McIntyre  
For and on behalf of Premier Oil plc



Chrysaor Production (U.K.) Limited  
Rubislaw House  
Anderson Drive  
Aberdeen  
AB15 6FZ

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

19 May 2020

FAO: Mr S Welsh - Senior Decommissioning Manager

Dear Sir

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES FOR FPSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Chrysaor Production (U.K.) Limited, confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FPSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

Richard Tocher

SVP Decommissioning & Major Projects

For and on behalf of Chrysaor Production (U.K.) Limited



Chrysaor Production (U.K.) Limited  
Rubislaw House  
Anderson Drive  
Aberdeen  
AB15 6FZ

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

19 May 2020

FAO: Mr S Welsh - Senior Decommissioning Manager

Dear Sir

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES FOR FSO FLOAT OFF  
PETROLEUM ACT 1998**

We acknowledge receipt of your letter dated 14 May 2020.

We, Chrysaor Production (U.K.) Limited, confirm that we authorise CNR International (U.K.) Limited to submit on our behalf abandonment programmes relating to the Banff and Kyle Fields for FSO float off as directed by the Secretary of State on 14 May 2020.

We confirm that we support the proposals detailed in the CNR International (U.K.) Limited Decommissioning Programme dated 14 May 2020, which is to be submitted by CNR International (U.K.) Limited in so far as they relate to those facilities in respect of which we are required to submit an abandonment programme under section 29 of the Petroleum Act 1998.

Yours faithfully

Richard Tocher

SVP Decommissioning & Major Projects

For and on behalf of Chrysaor Production (U.K.) Limited

**APPENDIX B: PUBLIC NOTICE****PUBLIC NOTICE**

Petroleum Act 1998

**BANFF AND KYLE FIELDS DECOMMISSIONING PROGRAMMES  
FOR FPSO AND FSO FLOAT OFF**

CNR International (U.K.) Limited and Teekay Petrojarl Floating Production UK Limited have submitted, for the consideration of the Secretary of State for Business, Energy and Industrial Strategy, draft Decommissioning Programmes for the Banff and Kyle Fields Floating Production, Storage and Offloading (FPSO) and Floating Storage and Offloading (FSO) Vessel Float Off, in accordance with the provisions of the Petroleum Act 1998. It is requirement of the Act that interested parties be consulted on such decommissioning proposals.

The facilities covered by the Decommissioning Programmes are the Petrojarl Banff FPSO and the Apollo Spirit FSO and their riser and mooring systems. The Banff and Kyle Fields are located approximately 200 km east of Aberdeen in UK Blocks 29/2a, 22/27a, 29/2c and 29/2h. The Petrojarl Banff FPSO is located at 57° 00' 01.99" N; 01° 17' 32.91" E and the Apollo Spirit FSO is located at 57° 00' 41.28" N; 01° 19' 34.25" E.

CNR International (U.K.) Limited and Teekay Petrojarl Floating Production UK Limited hereby gives notice that the Banff and Kyle Fields Decommissioning Programmes for FPSO and FSO Float Off can be viewed online at <https://www.gov.uk/guidance/oil-and-gas-decommissioning-of-offshore-installations-and-pipelines>.

Alternatively, a digital copy of the Decommissioning Programmes can be requested. Please contact: [BanffKyleDecom@cnrl.com](mailto:BanffKyleDecom@cnrl.com).

Interested parties are kindly requested to submit any representations in writing or electronically to the following address for the attention of Deborah Morgan or Cameron McBain by the consultation closing date, 14 April 2020, including the rationale upon which any representations are being made.

**CNR International (U.K) Limited**  
St Magnus House  
Guild Street  
Aberdeen, AB11 6NJ  
Tel: 01224 303 600  
e-mail: [BanffKyleDecom@cnrl.com](mailto:BanffKyleDecom@cnrl.com)



**Teekay Petrojarl Floating Production UK Limited**  
Teekay House  
Unit 3 Prospect Park  
Prospect Road  
Amhall Business Park  
Westhill, AB32 6FJ

