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UKPU Liverpool Bay Closure Plan

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Brief Description:	The Petroleum Closure Plan provides information to satisfy GLD.035 on Closure Plans for all operational sites, plant, infrastructure, properties and/or facilities for which the Asset has closure obligations or liabilities as part of the LoA Optimised Base Plan. It outlines the activities and associated costs for closure of the Asset at the end of its economic life as well as on an ongoing basis.

Revision Record

Revision	Section	Description of Changes	Revised By	Date
C	All	Updated Executive Summary and used new Petroleum CSG Closure Plan Template	Bill Cleary	September 2011
D	All	Update to Executive Summary. Sections 2, 3, 4 populated.	Daniel Longhurst	27-Apr-12
D1	All	Sections 5&6 populated.	Daniel Longhurst	12-Jun-2012
E	All	General update, additional content & detail added, reference to latest cost estimates added	Daniel Longhurst Jill Overland	19-Apr-2013

Approval Record

Name	Position	Signature	Date
Mike Kelly	Production Unit Manager		
Andrew Gwenter	Operations Manager		
Steve Johnston	Surface Engineering Manager		
Roger Perkins	HSE Manager		
Jill Overland	Finance Manager		

Table of Contents

1.0 Executive Summary

The objective of the Closure plan is to ensure that BHP Billiton acts as a responsible corporate citizen while preserving shareholder value. The plan establishes BHP Billiton local management accountability and ownership of closure activity and compliance with relevant industry standards, regulations or applicable legislative requirements. Further, the plan provides for compliance with BHP Billiton Corporate requirements and all contractual obligations in order to protect public and employee health, safety and welfare while limiting or mitigating adverse environmental effects or socio-economic impacts and protection of indigenous values. Finally, the plan will provide a basis on which the financial consequences of closure can be estimated to avoid or minimise the costs or any long-term liabilities to BHP Billiton while ensuring investment decisions include appropriate consideration of closure.

BHP Billiton, United Kingdom Production Unit (UKPU), is presently engaged in the production of oil and gas from the Liverpool Bay development in the Irish Sea off the west coast of the United Kingdom. Oil is produced from the Douglas field, which is then treated at the Douglas Complex and piped 17 km to an oil storage barge (OSI) ready for export by tankers. Gas is produced from the Lennox, Hamilton, Hamilton North and Hamilton East fields. After initial processing at the Douglas Complex, the gas is piped by subsea pipeline to the Point of Ayr gas terminal for further processing. It is then sent by onshore pipeline to EON's combined cycle gas turbine power station at Connah's Quay.

BHP Billiton UKPU is the Operator with 46.1% working interest and facility abandonment is expected to commence in FY22. The actual timing will depend on reservoir performance and ultimate recovery mechanism employed.

The closure concept is to revert to a 'blue sea' and 'green field' status where possible. This involves the following:

Wells – 9 suspended wells and 41 active wells are to be plugged and abandoned in line with UK Oil & Gas guidelines. Abandonment of suspended wells commenced in 2011 and will be ongoing at a rate of 2 or 3 wells per year until all are abandoned. A recent (February 2013) review of the status of the suspended wells concluded that 6 of the 9 will require a drilling rig, so the cost estimate for these wells has increased in the FY13 ACSR update (just one was previously thought to require a drilling rig). Permanent abandonment of suspended wells is a high priority for DECC, the UK Oil & Gas regulator so there is no scope for deferring this work. The platform based wells are anticipated be abandoned using a Heavy Hydraulic Work Over Unit, and the single subsea well is expected to be abandoned with the assistance of a jack-up drilling rig.

The Offshore Facilities and Pipelines (6 platforms and one FSU) will be removed in compliance with OSPAR regulations. At this stage it is anticipated that the majority of the subsea pipelines and power & control umbilical will be left in situ with ongoing inspection and verification program. The mobile jack-up unit (Irish Sea Pioneer) currently owned by LBA JV is expected to be sold. Any fields/facilities deemed uneconomical prior to the overall LBA end of economic life, will be mothballed with maintenance reduced to minimum levels to comply with HSE & Government legislative requirements.

Onshore Facilities and Pipelines will be decommissioned and left in place. The Point of Ayr Terminal will be removed and the land rehabilitated. Telecoms infrastructure at Penmaenrhos and Gwaenysgor will be removed.

Brownfield sites (POA Terminal and Colliery) will be rehabilitated to a Greenfield status. Post closure plans for the land are not finalized, however it is anticipated that part of the environmentally sensitive and protected coastal regions will be donated to organisations with which BHP Billiton has existing partnership agreements, in accordance with the views and requirements of relevant regulators and stakeholders.

Based on the 8 years left to cessation of production and commencement of decommissioning activities, the Plan is aligned to the Identification Phase and Class 4 cost estimate. The key components for determination of costs are spread rates for drilling jack-up rig and derrick barges; spread rates for diving and anchor handling support vessels and the duration of closure activities.

The cost estimate is primarily based on the WGPSN report of June 2012, including the Appendix on well abandonments prepared by REC Consultancy on behalf of BHPB WWD. The cost estimate for the suspended wells is based on a memo by WWD dated 27th February 2013.

As at June 2013, the Closure Costs in real, pre-tax, undiscounted 100% share terms is $684m USD and the Expected Closure Value in NPV, 100% share is $ 487m USD.

Using probability weighted deterministic alternatives with criteria of low and high (25% each) and mid (50%) the BHPB Net share for FY2013 is:

- NPV Accounting Based Closure Cost (Booked Provision): $224m USD
- Undiscounted Accounting Based Closure Cost (Real): $315m USD.

The Valuation and Accounting Provision calculations were completed in April 2013 while the Year used for amortization of rehabilitation of Asset is FY21. The Year used to discount the accounting rehabilitation provision is FY23.

The Closure Cost and NPV Variances from FY12 are due to an updated cost estimate from World Wide Drilling and higher contingency partly offset by revised Macro economic assumptions and the abandonment of one exploration well in FY13.

2.0 Introduction

2.1 Facility Overview

The offshore facilities to be decommissioned are:

- The Douglas complex, comprising Accommodation Platform, Production Platform and Wellhead platform
- The Hamilton, Hamilton North and Lennox satellite platforms
- The Oil Storage Installation
- The Hamilton East subsea wellhead
- A total of 9 subsea pipelines for hydrocarbon production, and 6 subsea pipelines for chemical transfer

The onshore facilities to be decommissioned are:

- The Point of Ayr Gas Terminal
- The Connah's Quay Gas Reception Facility
- The Dunes valve
- Three onshore pipelines for hydrocarbon production (two onshore sections of offshore pipelines, one wholly onshore) and one for chemical transfer (onshore section of offshore pipeline)

An overview of the Liverpool Bay facilities is shown in Figure 2.1.

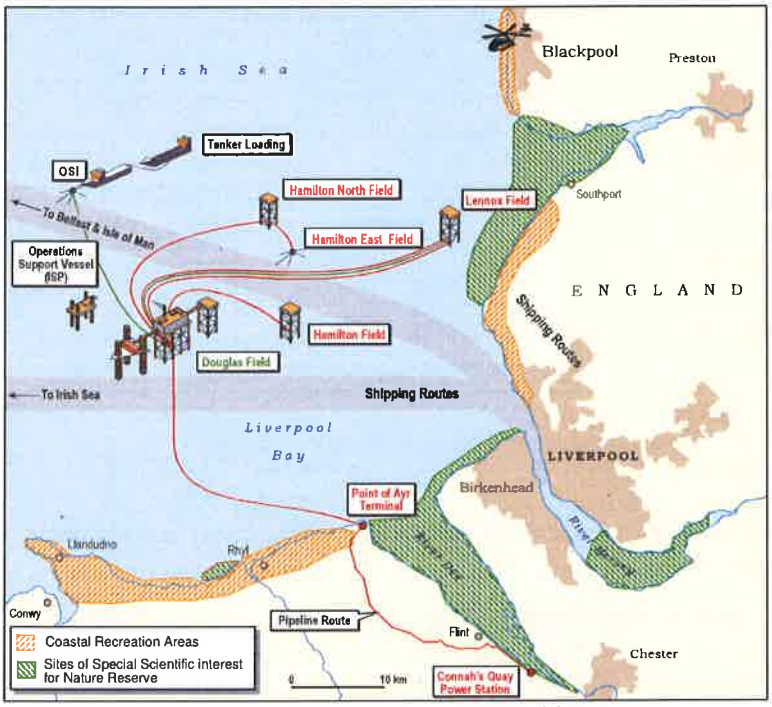

Figure 2.1 Overview of Liverpool Bay facilities

2.2 Scope for Facility Closure

Douglas Complex

The Douglas Complex is located in approximately 30m of water depth and comprises the following bridge-linked units:

- Douglas Accommodation Platform (DA), containing helideck, living quarters, lifeboats, workshops, non-hazardous chemicals & utilities, and emergency power generation. The DA is a converted Le Tourneau 116C jack-up drilling rig with the topsides supported on the jack-up legs and spud cans.
- Douglas Production Deck (DD), containing all hydrocarbon processing plant (including compression), pipeline risers, main power generation, and hazardous chemicals & utilities. The DD is a piled jacket structure with 8 legs.
- Douglas Wellhead Platform (DW), containing all Douglas wellheads (total 22 wells). The DW is a piled jacket structure with 6 legs.

The Douglas Complex is shown in Figure 2.3.

Figure 2.2 Douglas Complex

Oil Storage Installation

The Oil Storage Installation (OSI) comprises a catenary anchor leg rigid arm mooring (CALRAM) and oil storage barge (OSB). The CALRAM buoy is moored with 9 anchor chains and is connected to the OSB with 2 rigid arms. The OSB contains living quarters, workshops, machinery spaces, cargo storage tanks and ballast tanks. The OSI is located in approximately 30m of water depth.

The OSI is shown in Figure 2.3, with a visiting offtake tanker alongside.

Figure 2.3 Oil Storage Installation (left hand side)

Satellite Platforms

The Hamilton Platform is a small wellhead platform containing 4 wells. It contains no processing equipment. It is located in approx 26m water depth.

The Hamilton North platform is a small wellhead platform containing 3 wells and a flexible riser from the subsea Hamilton East wellhead. It contains no processing equipment. It is located in approximately 22m water depth.

The Lennox platform is a wellhead platform containing 13 wells and a small amount of processing equipment. It is located in approximately 7m water depth.

The Lennox platform is shown in figure 2.4

Figure 2.4 Lennox Platform

Point of Ayr Gas Terminal

The Point of Ayr Gas Terminal is located close to the village of Talacre in Flintshire, Wales, at the mouth of the Dee estuary. The terminal site includes Administration & Control Building, warehouses & workshops, power generation turbine, fired heaters, gas and sulphur processing equipment, and utilities. The processing equipment includes, gas sweetening units (two parallel trains), dew point control units (two trains), sulphur recovery unit, tail gas clean-up unit and thermal oxidiser.

As well as the village, the Gas Terminal is adjacent to several Sites of Special Scientific Interest (SSSIs) and recreational areas.

The Point of Ayr Gas Terminal is shown in Figure 2.5. The village of Talacre, and adjacent caravan park can be seen to the north of Terminal, with dunes beyond, whilst the edge of the Dee estuary can be seen to the east.

Figure 2.5 Point of Ayr Gas Terminal (looking north)

Deeside Colliery

Adjacent to the Gas Terminal is the former Deeside Colliery, now disused. This land is owned by BHP Billiton and remediation of the land is included in the Closure Plan and cost estimate. Figure 2.6 shows an aerial view of the Terminal with the colliery site visible to the south-east.

Figure 2.6 Point of Ayr Gas Terminal and adjacent Deeside Colliery

Connah's Quay Gas Reception Facility

The Connah's Quay Gas Reception Facility (GRF) is located within the site of the E.On UK power station at Connah's Quay, Flintshire, Wales. The GRF contains piping, metering, analysers, valves and filters.

The GRF is shown in Figure 2.7

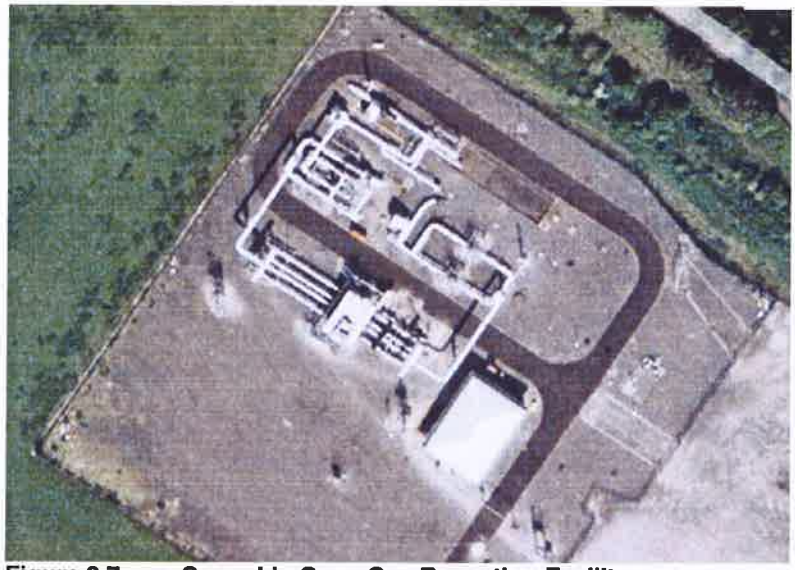

Figure 2.7 Connah's Quay Gas Reception Facility

Pipelines

The following pipelines (including offshore, landfall and onshore pipelines) are located in Liverpool Bay:

Offshore Reference	On Land Reference	Description
-	P 852	24 inch Gas Export from Point of Ayr to Connah's Quay
PL 1030	P 908	20 inch Gas Export from Douglas to Point of Ayr (offshore)
PL 1031	-	14 inch Oil Export from Douglas to Oil Storage Installation
PL 1032	P 906	3 inch Condensate from Point of Ayr to Douglas
PL 1033	P 907	3 inch Methanol Supply from Point of Ayr to Douglas
PL 1034	-	14 inch Oil Export from Lennox to Douglas
PL 1035	-	16 inch Gas Export from Lennox to Douglas
PL 1036	-	12 inch Gas Re-injection from Douglas to Lennox (although now mostly decommissioned, the Lennox riser is still in use and the old pipeline still supports and protects PL 1038)
PL 1036A	-	12 inch Replacement Gas Re-injection from Douglas to Lennox, now functioning as Gas Export from Lennox to Douglas
PL 1037	-	2 inch Methanol from Douglas to Lennox
PL 1038	-	2 inch Wax Inhibitor from Douglas to Lennox
PL 1039	-	20 inch Gas Export from Hamilton to Douglas
PL 1040	-	2 inch Methanol from Douglas to Hamilton
PL 1041	-	14 inch Gas Export from Hamilton North to Douglas
PL 1042	-	2 inch Methanol from Douglas to Hamilton North
PL 1860	-	8 inch Flexible Gas Export from Hamilton East to Hamilton North
PL 1861U	-	¾ inch methanol from Hamilton North to Hamilton East ¾ inch annulus vent gas from Hamilton East to Hamilton North (hoses within 114 OD umbilical)

2.3 Decommissioning Methodology

The basis of abandonment for the Liverpool Bay onshore and offshore facilities is summarized below:

Offshore facilities:	complete removal and transportation onshore for re-use or disposal
Offshore pipelines:	cleaning, burial and periodic future surveying
Offshore wells:	plugging and abandoning with conductor removed to 3m below the sea bed
Onshore facilities:	complete removal for re-use or disposal, and restoration of land to green-field status
Onshore pipelines:	cleaning and leaving in situ

2.4 Regulatory Requirements

The following legislation is relevant to offshore and onshore oil & gas decommissioning activities in the UK:

1. UN Convention on the Law of the Seas 1982 – UNCLOS
2. I.M.O. Guidelines and Standards
3. OSPAR – 1998 Oslo and Paris (OSPAR) Convention for the Protection of the Marine Environment of the North East Atlantic.
4. The London (Dumping) Convention
5. Other Regional Conventions
6. Directive on the Conservation of Wild Birds (79/409/EEC)
7. Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)
8. Petroleum Act 1998
9. Pipeline Safety Regulations 1996
10. Radioactive Substances Act – 1993
11. Safety Case Regulations
12. The Coast Protection Act 1949
13. Food and Environment Protection Act 1985

14. The Environmental Protection Act 1990 & Waste Management Licensing Regulations 1994
15. Pollution Prevention and Control Act 1999
16. Special Waste Regulations 1996
17. Transfrontier Shipment of Waste Regulations 1994
18. Radioactive Substances Act 1993
19. Transfrontier Shipment of Radioactive Waste Regulations 1993
20. Dangerous Substances in Harbour Areas Regulations 1987
21. Water Resources Act 1991
22. Health and Safety at Work etc Act 1974
23. The Offshore Petroleum Activities (Oil Pollution Prevention and Control Regulations 2005)

Discussion of Key Regulations - Offshore

The LB Closure Plan is in accordance with the OSPAR Guidelines and the Dept of Energy and Climate change document 'Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998' (with reference to Decommissioning Guidance notes, Issued March 2011 version 6.) The main changes of significance in the 2011 guidelines relate to clarity with regard to decommissioning liability.

OSPAR Decision taken in Sintra Portugal 98/3 on the disposal of Disused Offshore Installations in the North East Atlantic in summary advises the following:

Paragraph 2 "The dumping, and the leaving wholly or partly in place, of disused offshore installations within the maritime area is prohibited."

Paragraph 3. Three categories of facilities are considered that could be exceptions to paragraph 2 if the UK DECC and the other countries who are party to the Decision 98/3 agree:

I. Footings of steel platform with jacket weight >10,000 tonnes and installed before 9 February 1999 could be left in place.
II. Gravity based and floating concrete installations could be dumped or left wholly or partly in place.
III. Other disused offshore installations in exceptional and unforeseen circumstances e.g. structural damage could be dumped or left wholly or partly in place.

The benefit of dumping / leaving in place has to be demonstrated to be preferable to total removal by a comprehensive process summarised in the Decision. Note: the default decision is total removal of the platforms.

Annex 2: Framework for Assessment of proposals for disposal at sea. This is a very comprehensive framework of information, assessment and justification required.

Annex 3: Consultation Process. This lays out a comprehensive consulting process among all the Contracting Parties to the Decision on each occasion where disposal at sea is considered.
Therefore the requirements for the Liverpool Bay facilities in accordance with the OSPAR guidelines are for total removal of the platforms. The pipelines are currently excluded from the OSPAR decision but the UK requirements of the Department of Energy and Climate Change have been taken into consideration in this respect.

The Department of Energy and Climate change document 'Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998' Section 10 advises the following with respect to pipelines that may be considered to be left in-situ:

I. Those which are adequately buried or trenched and which are not subject to development of spans and are expected to remain so;
II. Those which were not buried or trenched at installation but which are expected to self bury over a sufficient length within a reasonable time and remain so buried;
III. Those where burial or trenching of the exposed sections is undertaken to a sufficient depth and it is expected to be permanent;
IV. Those which are not trenched or buried but which nevertheless are candidates for leaving in place if the comparative assessment shows that to be the preferred option (e.g. trunk lines);
V. Those where exceptional and unforeseen circumstances due to structural damage or deterioration or other cause means they cannot be recovered safely and efficiently.

Note: Refer to Appendix 10 of the OSPAR and the Dept of Energy and Climate Change Guidelines for the full document and details of all relevant decommissioning requirements.

Discussion of Key Regulations - Onshore

For the Onshore decommissioning activities at the Point of Ayr gas terminal, the key regulatory requirements are contained in the PPC regulations and the associated PPC Permit.

Section 2.7 ('Closure and Decommissioning') of the PPC Permit states:

2.7.1. The operator shall maintain and operate the activities so as to prevent, or where that is not practicable, to minimize, any pollution risk on closure and decommissioning.
2.7.2. The operator shall maintain a site closure plan which demonstrates how the activities can be decommissioned to avoid a pollution risk and return the site to a satisfactory state.
2.7.3. The operator shall carry out and record a review of the site closure plan at least every 4 years.
2.7.4. The site closure plan (or relevant part thereof) shall be implemented on final cessation or decommissioning of the activities or part thereof.

This document is intended to satisfy the requirements of the Permit for a closure plan, with a level of detail provided appropriate to the timescale remaining until the anticipated date of closure (greater than 5 years). It is recognized that closer to the date of closure a greater level of site-

specific detail will be required to satisfy the PPC Permit requirements. It is recommended that a separate Point of Ayr Closure Plan document is issued 5 years from the date of anticipated closure, with a detailed plan to satisfy the Permit requirements.

2.5 Key Stakeholder Requirements

Other than the regulatory requirements covered by legislation in section 2.4, the principal stakeholder requirement relating to decommissioning of the Liverpool Bay facilities is the commitment to restore the Point of Ayr Gas Terminal to green-field status. This was a condition of the planning approval granted prior to construction of the facility.

Views of governmental and non-governmental stakeholders will be sought and taken into account during the further development of the plan. In the 17 years since the start of production, UKPU has built up effective ongoing relationships with many community stakeholders in North Wales and the North West of England; this process will continue in the run-up to, and during, field decommissioning.

3.0 Roles and Responsibilities

Roles & Responsibilities for activities related to the Closure Plan are, where applicable:

- Production Unit or JIU Manager – review and approval of Closure Plan
- Finance; Surface Engineering; Operations; HSE Managers or equivalent – review and endorsement of Closure Plan
- Finance Analyst – validation of accounting procedures used
- Surface Engineer – validation of methodology for abandonment, alignment with any regulatory requirements/criteria/process, address BHP Billiton Corporate or Petroleum requirements/Standards and assess reasonableness of costs
- Cost Engineer – development of cost estimates and alignment to Class of Cost Estimate level and preparation of phasing of expenditure with categorization into Pre; Execution and Post Closure Phases
- Safety and Risk Engineer – validation of Risk Assessment methodology and Risk register content
- External Affairs representative – validation of community commitments and any community/external relations plan (includes reporting status)
- Legal representative – validation of any JV agreements and contractual obligations
- Planner – alignment with LOA Optimized Base Plan
- Human Resource Manager – validation of any employment or redundancy program

4.0 Closure Plan Subject Matter

Notes:

*The level of detail in the **Closure Plan** must be sufficient for the required class of cost estimate. Subject matter may be omitted if it is not needed to support the required class of cost estimate.*

The following Sections of the Closure Plan content are to be developed subject to the production life cycle of the facility and based on GLD.032 (Phase/duration to closure) and GLD.031.01 (Class of Cost estimate based on Phase/duration to closure and based on:

Greater than 5 years to Closure:	***Identification Phase – Class of Cost Estimate – Level 5/4***
Between 5 to 3 years to Closure:	*Select Phase – Class of Cost Estimate – Level 3*
Between 3 to 1 year to Closure:	*Definition Phase – Class of Cost Estimate – Level 2*
Within 1 year to Closure:	*Execution Phase – Class of Cost Estimate – Level 2/1*

4.1 Commitments for Closure

4.1.1 Government Regulations

See section 2.4.

4.1.2 Contractual Commitments

Article 19 of the Liverpool Bay Joint Development Agreement places the following Abandonment requirements on the Operator:

- To abandon the operations and property in accordance with the Petroleum Licenses, relevant Laws and good oil and gas field practice.
- To recover and dispose of as much of the property as can economically and reasonably be salvaged, and credit net proceeds thereof to the joint account.
- To prepare an Abandonment Plan when 50% of the recoverable reserves have been produced, and to update the plan annually.

4.1.3 Community Commitments

Not required for Identification Phase.

4.1.4 Corporate Policy and Group Level Document requirements

Relevant CSG and Group documents include:

GLD.035 Directional Planning – Appendix 5

GLD.031.01 Capital Cost Estimate Classification

GLD.032 Major Capital Projects – Petroleum

4.1.5 Post closure land and infrastructure alternatives

Alternative uses of land and infrastructure identified to date are:

- Offshore natural gas storage
- Offshore CO2 storage
- Alternative industrial use of the Deeside Colliery site

Offshore gas storage could potentially be a viable option for the Lennox field, as it contains a reasonably large gas cap, and has high permeability and a good well stock (13 wells), thereby allowing high gas withdrawal rates. However, the Lennox field is currently connected to the gas National Transmission System (NTS) via the Douglas Platform and the Point of Gas Terminal; the operating costs of which could not be sustained by a gas storage project alone. The use of Lennox for gas storage therefore would more likely be economic via a new pipeline connection to the Centrica facilities in Morecambe Bay. This option is not currently being pursued by BHPB but would be considered should an approach be made by Centrica, who have relevant expertise in gas storage that the LB JV does not. Gas sweetening would be required for the use of Lennox for gas storage; these currently exist within Centrica's existing onshore facilities.

Offshore CO2 storage at Hamilton and Hamilton North is currently being considered by the LB JV, following an approach by a third-party who are seeking to develop a CO2 storage facility in the East Irish Sea. At the current time this opportunity is high-level concept only, but would involve re-use of some LB facilities by the third-party and a reduction in abandonment costs for the LB JV.

No alternative use has been identified for the land currently occupied by the Point of Ayr Gas Terminal as there is an existing commitment to return this to greenfield status after decommissioning. However, no such commitment exists for the Deeside Colliery site. The Closure Plan currently assumes that this land will be decontaminated and returned to greenfield status, but other options may be possible. The most likely of these is an alternative industrial usage, such as exploration for and/or production of coal bed methane or shale gas. These options will be explored as the Closure Plan develops, subject to interest from third parties, planning and regulatory requirements, and the views of the local community.

4.1.6 Post closure land and infrastructure use objective and completion criteria

Other than the possibilities for gas storage and CO2 storage described in section 4.1.5, there are currently no post-close land and infrastructure uses identified. All land is currently planned to be returned to green-field status as per commitments made at the time of the planning application.

4.2 Closure for site at end of LOA Optimised Base Plan

4.2.1 Closure Schedule

Abandonment of Suspended Exploration & Appraisal Wells

Abandonment of the 11 suspended E&A wells in Liverpool Bay commenced in 2011 with well 110/12-17, and continued in 2012 with well 110/13-3. An attempt to abandon well 110/13-14 in 2012 had to be cancelled due to an equipment failure. There are therefore 9 suspended wells remaining in the field at April 2013. The program is planned to continue at a rate of 2-3 wells per year until 2016.

All the suspended wells were subject to visual survey by ROV in 2012 and will again be surveyed in 2013. The 2012 surveys found that one well, 110/15-6z, had gas bubbles emerging in the vicinity of the wellhead. During the 2013 survey, this wellhead will be jetted to allow a closer inspection to determine exactly where the bubbles are coming from. A strategy for abandoning that well will then be developed by WWD, in consultation with UKPU and DECC.

Abandonment of Facilities

The overall Liverpool Bay end of field life (EOFL) is anticipated in the current Five-Year Plan (5YP) to be at the end of FY21 (note that no Life of Asset Plan update was carried out in FY13). Individual fields that have their EOFL before the overall EOFL date (Hamilton, Hamilton North, Hamilton East) will have their facilities mothballed and subject to minimum inspection & maintenance for structural integrity and safety until full field abandonment takes place. Full field abandonment will then take place from the overall EOFL date onwards, currently estimated to take a total of 3 years (i.e. FY22 to FY24).

It may be possible to reduce abandonment costs by conducting joint abandonment activities with Centrica in Morecambe Bay. This would require an extended period of mothballing for all facilities until the early to mid-2020s. Preliminary economic analysis comparing the costs of mothballing and subsequent inspection and maintenance, with the cost reduction achieved through joint abandonment, suggests that delaying abandonment would not be the most economic option. For the purposes of Closure Planning it is currently assumed that joint abandonment with Centrica will not take place.

4.2.2 Rehabilitation and Remediation

Offshore Facilities

Removal of offshore facilities will be carried out in accordance with the OSPAR requirements (see section 2.4) which include removal of piles to 3m below the sea bed. All pipeline tie-in spools above the sea bed, including sub sea valves, will be removed as described in section 4.2.4. Offshore pipelines left in situ will be subject to re-burial and span remediation where a need is identified by subsea survey, either at the time of decommissioning or as a result of the subsequent periodic pipeline surveys.

No further offshore rehabilitation and remediation is then required.

Onshore Facilities

Rehabilitation and Remediation will be carried for the onshore facilities (including the disused Deeside Colliery site) as part of the final steps in the onshore decommissioning activity, described below.

Civils Removal

Above ground structures will be removed completely. The removal of civil foundations will be to a depth of 1m. Non-contaminated concrete and masonry will be crushed at site and used as backfill to establish levels. Excess non-contaminated materials will be removed to licensed landfill or to stockpile.

Prior to approaching the authorities regarding soil contamination, a preliminary assessment of the subsoil will be performed one year prior to abandonment and then a further sample taken immediately following decommissioning.

The Point of Ayr terminal may simply require soil samples to be taken at agreed locations over the site and analysed to determine the hydrocarbon content. If contaminated ground is found, then excavation of that ground continues until sample results are negative and approved by an independent nominated person or the appropriate authorities.

Any contaminated soil, grade and concrete will be removed to an authorised land fill site, under a licensed disposal procedure. Soil sampling via boreholes has recently (October 2012) been carried out at the Deeside Colliery site to identify any contamination that may be present; at the time of the current revision to this Closure Plan the results of the sampling are awaiting.

All underground pipework, cabling and drainage systems will be removed for scrap.

When, demonstrably, all contamination is removed the whole terrain is refilled with clean soil. Terrain surface is restored by humus soil of the same quality, colour and thickness as the surrounding area. Landscaping can then commence.

Landscaping

The current cost estimate has included for leaving the PoA Terminal, Connah's Quay AGI and the former Deeside Colliery as 'green field'. It includes for, crushing of concrete and masonry on site and backfilling as necessary to establish levels prior to application of 100mm of topsoil.

Exact Landscaping requirements will be dependent on the function that the land will fulfill and has not been included in the estimate. If, for example, it is to be utilised for farming then topsoil will be applied and ploughed prior to sale. Approval for agricultural use will be dependent on groundwater contamination checks.

For costing purposes it has been assumed that the land will not be used for agricultural purposes but that the land will be reinstated to green field status as described above. The exact method of green field reinstatement (e.g. planting or allowing to self-seed) will be determined closer to the time in consultation with relevant local stakeholders.

4.2.3 Design and Engineering

The decommissioning design will follow the staged approach illustrated in Figure 4.1 below.

Detailed design and engineering work for Decommissioning will commence in the Definition phase 3 years prior to the start of decommissioning.

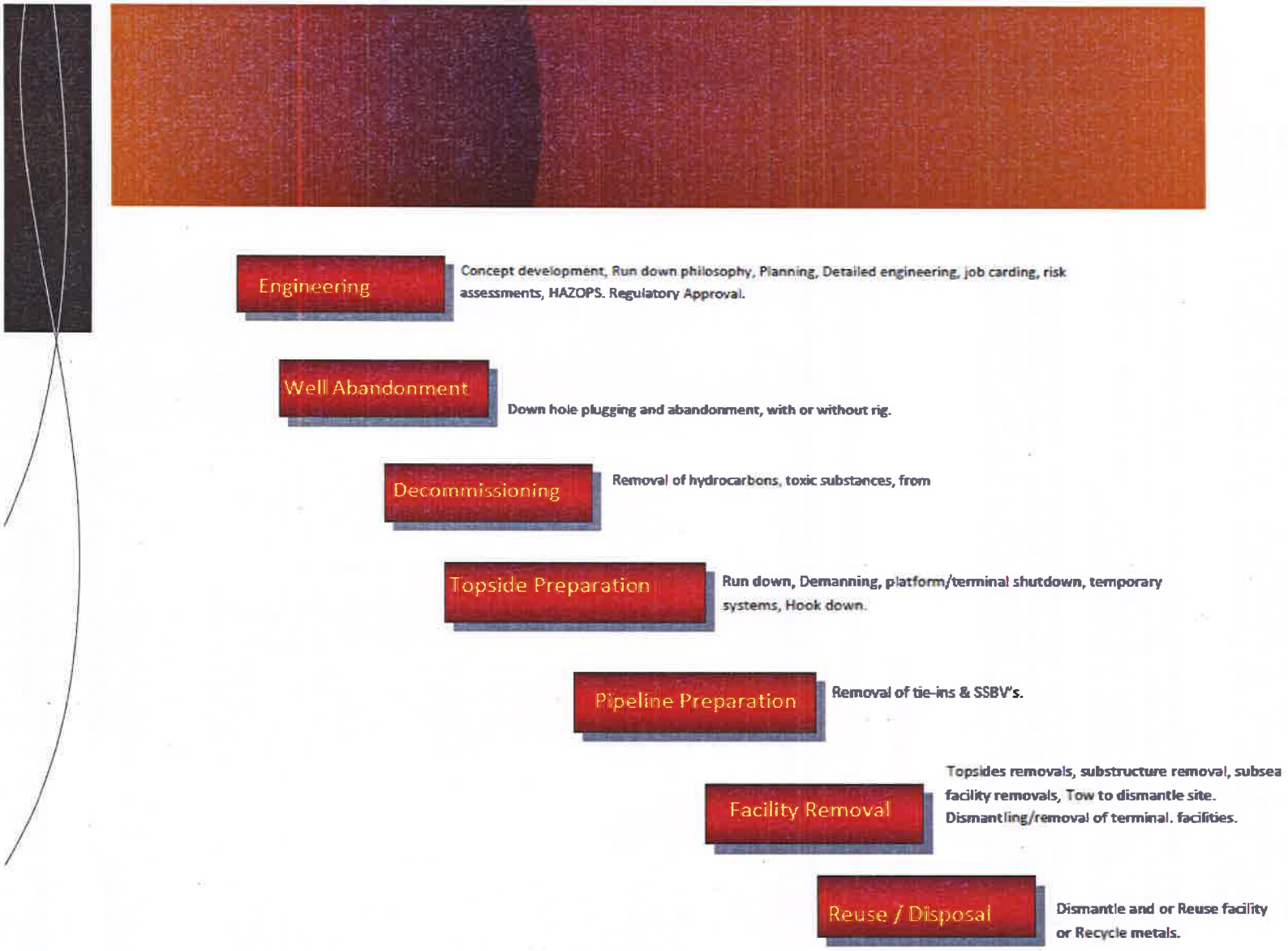

Figure 4.1 Overview of Decommissioning Stages

4.2.4 Deconstruction, demolition and demobilisation

Offshore Facilities

The platform removal is based on reverse of the installation, wherein the platform is destructed in the reverse of the installation sequence. An alternative approach of "piece small removal" (where the platform is destructed into small sections using cutting equipment) has been investigated in previous studies, but this approach has been shown to be a high cost solution with greater safety implications and as such has been excluded from the current plans.

To achieve the reverse installation, the removal work is split into four distinct phases, as follows:

- Well plug and abandonment.
- Process decommissioning (removal of hydrocarbons).
- Topsides preparations (Hook down).
- Platform removal.

Well Plug & Abandonment (P&A)

The Liverpool Bay well P&A methodology for active wells has been developed by BHP Billiton Petroleum's World-wide drilling group (WWD), in a report prepared by REC Consultancy dated 10th February 2012 (incorporated into the WGPSN report of June 2012 as Appendix 4).

The abandonment methods proposed comply with the current requirements for the abandonment of wells in the UK as specified in Issue 3 of the UK Oil & Gas 'Guidelines for the Suspension and Abandonment of Wells' document dated January 2009. In preparing the P&A cost estimates reference has been made to the Issue 1 of the UK Oil & Gas 'Guidelines on Well Abandonment Cost Estimation' document dated April 2011.

Methodology for abandonment of the remaining suspended E&A wells has been developed by WWD, supported by Interact. The method and costs are summarized in the WWD memo of 27th February 2013.

Process Decommissioning

The topsides process decommissioning includes the flushing and purging of topside equipment. The process trains will be flushed until the requisite level of cleanliness is achieved.

Effluent from flushing and cleaning will either be removed from the platform or disposed of onshore, or re-injected into the field. The effluent disposal can be completed by flushing the effluent through the export pipeline; however the offshore disposal option has some merit. This will involve the effluent being injected into the reservoir formation as part of the well P

& A work; this will preclude the cost of offshore handling, but will require careful scheduling and co-ordination with the Well P & A programme.

The offshore pipelines will be cleaned using pig trains to displace slugs of chemicals in between each pig, these will be propelled using water to leave an inert medium within the pipeline. This will both clean the pipeline and prepare it for cutting during the sub-sea removal stage of work. The resultant contaminated fluids will be either sent back to the Douglas complex, to shore or alternatively routed into an abandoned well (preferred option) for disposal.

The pipeline decommissioning work will be phased by platform with the topsides decommissioning; to ensure that the field is cleaned in a phased approach, wherein each satellite and its pipelines are cleaned progressively. Thus ending with the cleaning of the Douglas complex and the export pipeline. It would therefore be logical to link this with the Well P & A for the Douglas wellhead platform and use that reservoir for the disposal of the effluent should that option be chosen.

Topsides Preparation (Hook Down)

The preparation phase consists of the work to isolate each module from the platform and its neighbouring modules to allow the SSCV or Heavy Lift Vessel to remove each module intact.

For the purpose of the hook down exercise, it is assumed that all production has ceased and that the Platform is in a 'dead' state prior to commencement. Generally, decommissioning of each module follows a similar process i.e. installation of padeyes / padears, cleaning, purging, isolation, set-up of local temporary supplies.

The first activities will be to install temporary supplies, these will be required to allow the permanent systems to be disconnected, and typically these will include: power and air (for tools etc), lighting, firewater, temporary communications and alarms. The preparation will continue with the installation of access scaffolding after which any required temporary strengthening steelwork for transportation purposes will be installed. The major work will involve the installation of the removal aids (padeyes and padears) followed by the disconnection of the electrical cables between each module (note: drilling platform topsides will be a single lift). Then all the interconnecting piping will be cut, where a module is physically joined to its neighbour it will be required that the splice connections are severed. The timing of which will depend upon the local structural integrity. Thus some can be carried out prior to the arrival of the SSCV and other will need to wait until the preceding module has been lifted clear.

The main aim of the hook down process is that the maximum scope of work is completed prior to the arrival of the SSCV to both provide a safe operation whilst minimising the requirement for the SSCV which has a high day rate.

Platform Removal

The platform removal cost is essentially the reverse procedure to installation. The modules, decks and jackets are removed in the direct reverse sequence and operation of their installation.

This will require the use of a SSCV or Heavy lift vessel to lift the structures. The majority of the structures were installed in the mid 1990's with the platforms and jackets being installed by Thialf. The current cost estimate is based upon using the SSCV Saipem 7000 which is capable of lifting the Douglas Production Topsides, circa 10500t. Further investigation will be required closer to the date of decommissioning to assess the suitability this vessel with regards to logistics, e.g. minimum water depths etc.

The topsides are split into either modules or decks, drilling platforms being single lift topsides. These will be severed from their neighbouring module or jacket as appropriate. Lifting rigging will be attached to the pre installed padears, these are cast, lift attachments required for large lifts. The structure will then be lifted by the SSCV crane(s) and set onto the cargo barge, where it will be sea-fastened prior to transportation.

With some of the smaller lifts, (typically bridges, vents etc.). These will be set onto either the deck of the SSCV to be cut into sections if necessary, or directly onto the cargo barges. If these sections are cut into smaller units to take up less space on the cargo barges, additional strengthening works may be required.

The Jacket removal operation can only commence when the topsides have been completely removed. The first task will be to install the lift frame, which will also include the work platform. This will then give access to install the pile cutting equipment (Abrasive Water Jet).

The regulations require the piles to be severed 3m below the seabed. To achieve this, the inside of the piles will be cleared of silt by air-lift to a depth of 5m. The Abrasive Water Jet system will be lifted and installed within the jacket legs to cut the leg piles, followed by the skirt piles. The skirt pile operation will be co-ordinated with the use of Remotely Operated Vehicles (ROV's) to allow accurate stabbing and recovery of the Abrasive Water Jet equipment.

Upon completion of the cutting operation the Abrasive Water Jet equipment will be removed and the jacket lift rigging will be installed. In some instances and depending upon weather, it may be necessary to leave one pile cutting operation until the rigging is installed, to ensure on bottom stability.

The jacket will then be lifted clear and set onto a cargo barge, to accommodate this, a set of bumpers will be installed onto the cargo barges. These bumpers will assist in the accurate location of the jacket onto the grillage. This is essential as the jacket, complete with the bottom 3m of pile section, needs to be located, to allow the transportation loads to be transferred into the grillage.

Removal of the Douglas Accommodation platform will be slightly different as it is a converted jack-up drill rig (the Morecambe Flame), which is located in place on subsea mats/rock dump (which are being left in-situ) and bridge linked to the Douglas production platform. The jack-up equipment is presently serviceable with the platform simply being held by the brake mechanism.

To remove the jack-up rig, the bridge (including services) and the living quarters (including access ways) will have to be removed. Assuming the hull inspection and jack-up

mechanism proves to be satisfactory the platform would then be towed away. This would be one of the last topside decommissioning activities, as the accommodation would be used to support the field abandonment.

The oil storage installation (OSI) consists of an oil storage barge (OSB) connected to a catenary anchor leg moored buoy via a rigid arm (CALRAM). The OSI is planned to be decommissioned at the same time as the main abandonment. The OSI including the OSB, CALRAM, PLEM, flexible riser and moorings will be towed to a designated disposal site.

Subsea Removals

Subsea pipelines and cables will be left in place; cables will be cut away by ROV local to the platform to allow the jackets to be lifted off the seabed.

The pipeline tie-in spools back to the pipeline trench transition will be cut into manageable lengths (approx 50m) and recovered to the deck of the DSV for subsequent onshore disposal. A grit entrained water jet cutter is proposed for the cutting operations enabling a single-cut operation through the concrete/steel composite.

The pipelines will be cut at either end of the SBVs and the remaining exposed section of the pipeline buried using the hydrodynamic excavation tool. The SBVs themselves will be recovered to the surface using the onboard DSV crane and stored on board pending transit to shore. Mattresses will be removed but rock dump will be left in place, additional rock dumping may be required to all exposed ends of the pipelines.

Onshore Facilities

The terminal and AGI removal will involve distinct phases, as follows:

- Process decommissioning (removal of hydrocarbons)
- Facilities removal including waste disposal
- Civils removal including waste disposal
- Asset disposal
- Landscaping

Land Pipelines are to be cleaned and left in place.

The site will be demolished completely and returned to 'green field'. Consideration could be given to retaining the existing office and or workshop buildings if there should be potential future use of the structures by the prospective purchaser.

The site is within the bounds of a site of special scientific interest. As such the abandonment activities will have to be the subject of an environmental risk assessment.

Process Decommissioning

The process decommissioning includes the flushing and purging of all equipment. The process trains will be flushed and purged until the requisite level of cleanliness is achieved. Disposal of wastes could be done via waste disposal contractors onshore, or would preferably be achieved by pumping offshore for disposal into a well prior to P&A.

The pipelines will be cleaned using pig trains with slugs of chemicals in between each pig. These will be propelled using inhibited water to leave an inert medium within the pipeline. A temporary pig launcher will be installed at the Connah's Quay AGI during this period.

Facilities Removal

Some facilities could be removed for possible re-sale, the base case however, is for total dismantling on-site using modern excavator type cutting shears.

Dismantling on-site will generally be carried out by a specialist subcontractor, who will be closely monitored in the areas of Safety and Environmental control. Engineered procedures will be developed to ensure that structural dismantling is carried out safely. Equipment and items such as cable will be removed first, followed by cutting of steelwork into small pieces ready for disposal.

Environmental protection will be ensured by the minimum disruption to the raised beach area and therefore existing landscaping. Wildlife protection will be ensured by avoiding the use of explosives.

Civils Removal

See section 4.2.2.

Landscaping

See section 4.2.2.

Asset Disposal

Scrap metallic material will be marshaled in an area within the terminal and will be loaded into road wagons for delivery to the nearby Mostyn Dock. The wagons will be offloaded at Mostyn dock into a barge for onward sea transport to a steel recycling contractor at Liverpool Docks.

Non-metallic materials will be disposed of by road transport to appropriate licensed waste recycling centres or to landfill sites under a licensed disposal procedure.

Land ownership disposal will be organised via the usual land agencies. The type of re-sale opportunities available at the time of sale will largely dictate the extent of landscaping required and also possibly the extent of civil works. This will therefore be evaluated further once the likely market conditions are better known. The nature reserves, recreational areas and SSSIs adjacent to the terminal will likely be donated to appropriate governmental or non-governmental bodies.

4.2.5 Treatment and disposal of wastes

Disposal of Fluids

Waste fluids from process and pipeline decommissioning activities (offshore and onshore) can be disposed onshore via suitable licensed waste disposal contractors, or preferably, via injection to an offshore well prior to the well being plugged and abandoned. Disposal into a well is likely to be the option with minimum environmental impact. The feasibility and impacts of disposal into a well will be further examined in a future update to the Closure Plan.

Dismantling and Disposal of Offshore Facilities

All materials removed from offshore will be transported onshore for further dismantling and disposal. Wherever possible, re-use and recycling will be promoted in preference to disposal via landfill.

The current plan is based on the various Liverpool Bay offshore structures being delivered on barges to Able UK Ltd, TERRC (Teesside Environmental Reclamation & Recycling Centre) at Hartlepool. Alternative disposal yards, belonging to Peterson SBS and located in the Shetland Islands or Harland and Wolf of Belfast, are also available for dismantling and disposal activities. These options will be reviewed during future updates of this document.

TERRC has planning permission and is fully licensed to carry out the following:

- Dismantling and refurbishment of redundant marine structures and equipment
- Storage and processing of sea-dredged aggregate
- Handling and stockpiling of rock armour
- Recycling of construction and demolition waste
- Waste transfer facility
- Bulk waste material storage
- Enlargement and refurbishment of dock and use as base for oil related floating crane and transport barges
- Berth facilities
- Use of land as fabrication yard for offshore jackets, exploration production platforms and accommodation modules
- Construction of marine related jackets and equipment
- Storage, processing and disposal of LSA contaminated materials
- Receiving, storage, processing and disposal of drill cuttings
- A Waste Management Licence is in place from the UK Environment Agency
- A licence for the receipt and temporary storage of Radioactive Sources (Radioactive Sources Act 1993)

The 51 Hectare facility has a wet/dry dock basin 10 Hectare in area with a dredged level in the basin of 6.65m LAT giving maximum retained water depths of 11.15m Quay 10 has been designated for heavy load-in operations and has had its capacity increased. Quay 11 is also under development. This will achieve a combined length of 300m with a dredge berthing pocket 50m wide x 350m long to a depth of 14.5m LAT. The quay loading capacity will be 16 tonnes per sq metre.

The site has been developed so that it can take SPMT's (Self propelled modular transporter) over the entire site at their maximum carrying capacity and a Feasibility Study

has been undertaken which confirms that the site can receive large structures being skidded in up to 24000 tonnes.

The open yard adjacent to the quays cover an area of 41 Hectares and will be used for initial marshaling of structures after offloading and for preliminary dismantling prior to movement to the decommissioning area.

There is a decommissioning area of 5 Hectares of concrete hard standing with cut off drainage and interceptor for module storage and processing. Should covered facilities be required to store delicate or weather sensitive equipment that may be removed from the structures then additional warehousing of approximately 1700m2 can be made available.

Structures will be checked carefully to ensure that they are gas free and that any hydrocarbons or other hazardous substances are identified for subsequent specialist treatment. They will then be cut into large sections in the 1500 – 2000 tonne range following an engineered procedure to ensure that this is done safely and without risk of collapse. These large sections will then be moved to the decommissioning slab using multi trailers.

Once placed on the decommissioning slab activities will be closely monitored particularly in the areas of Safety and Environmental control. Engineered procedures will be developed to ensure that structural dismantling is carried out safely. Equipment and items such as cable will be removed first, followed by cutting steelwork into small pieces ready for shipment to steel mills. Services of specialists will be required in areas such as asbestos removal, removal of radioactive scale and flushing of systems, if not carried out prior to arrival.

Scrap material will be marshaled in an area close to the quay and will be loaded onto ships for delivery to steel mills. Other materials such as non- ferrous metal will be disposed of to appropriate stockholders or to landfill sites under a licensed disposal procedure. Saleable items of equipment will be disposed of on the open equipment market.

Disposal of Onshore Facilities

Wherever possible, re-use and recycling will be promoted in preference to disposal via landfill.

Scrap metallic material will be marshalled in an area within the terminal and will be loaded into road wagons for delivery to the nearby Mostyn Dock. The wagons will be offloaded at Mostyn dock into a barge for onward sea transport to a steel recycling contractor at Liverpool Docks.

Non-metallic materials will be disposed of by road transport to appropriate licensed waste recycling centres or to landfill sites under a licensed disposal procedure. Non-contaminated concrete and masonry will be crushed at site and used as backfill to establish levels.

A preliminary assessment of the subsoil will be performed one year prior to abandonment and then a further sample taken immediately following decommissioning. If contaminated ground is found, then excavation of that ground continues until sample results are negative and approved by an independent nominated person or the appropriate authorities.

Any contaminated soil, grade and concrete will be removed to an authorised land fill site, under a licensed disposal procedure. Soil sampling via boreholes has recently (October 2012) been carried out at the Deeside Colliery site to identify any contamination that may be present; at the time of the current revision to this Closure Plan the results of the sampling are awaiting.

4.2.6 Human Resources

Estimation of Human Resources is not required at the Identification Phase. More detail will be provided in subsequent phases of development of the Closure Plan, closer to the anticipated date of closure.

4.2.7 Community and external affairs

UKPU has a comprehensive Community Engagement Plan covering all phases of field life:

H-000-GG-181 http://dctmhou/webtop/drl/objectId/09004683801c64e9

4.2.8 Monitoring of rehabilitation performance, maintenance, review and reporting

Ongoing monitoring after decommissioning will be required for offshore pipelines left in situ, and potentially for onshore sites post-rehabilitation. A detailed plan for such monitoring, review and reporting is not required at the Identification Phase (greater than five years to closure). More detail will be provided in subsequent phases of development of the Closure Plan, closer to the anticipated date of closure. All plans will be compliant with applicable legislation and BHPB Billiton standards. Where relevant, plans for ongoing monitoring will be agreed with the appropriate authorities, including the DECC Decommissioning Unit (offshore pipelines) and the Environment Agency (onshore sites).

4.3 Risk analysis and control

Closure Plan risks are included in the UKPU Risk Register (hyperlink to register included).

The main risk to the Closure activities is poor HSE performance and Cost Management during closure. The mitigation actions have not been fully defined, however an action has been recorded to engage a consultant to assist in updating the closure plan in line with GLD and CSG requirements.

4.4 Cost Estimation

4.4.1 Basis of estimates

Content is aligned to GLD.031.01 based on the current phase for closure activities.

Level of accuracy:
Greater than 5 years to Closure: +/- 20%

Based on the 8 years left to cessation of production and commencement of decommissioning activities, the Plan is aligned to the Identification Phase and Class 4 cost estimate.

As at June 2013, the Closure Costs in real, pre-tax, undiscounted 100% share terms is $684m USD.

Using probability weighted deterministic alternatives with criteria of low and high (25% each) and mid (50%) the FY2013 undiscounted accounting based Closure Cost (real) is $315m USD BHPB Net share.

The Valuation and Accounting Provision calculations were completed in April 2013 while the Year used for amortization of rehabilitation of Asset is FY21. The Year used to discount the accounting rehabilitation provision is FY23.

The Closure Cost has increased by $123m from prior submissions mainly due to an updated cost estimate from World Wide Drilling and higher contingency partly offset by revised Macro economic assumptions and the abandonment of one exploration well in FY13.

4.4.2 Pre-closure cost considerations

Not recorded.

4.4.3 Closure Execution cost considerations

Closure execution costs include: demolition of facilities, demobilization, rehabilitation and revegetation, collection, treatment and disposal of hazardous wastes, human resources costs, community costs, owners team costs to execute the closure project, facilities, services and personnel.

4.4.4 Post closure cost considerations

Not recorded, however it should be noted that post-closure costs may include ongoing survey requirements for offshore pipelines which are left in situ, as per UK regulatory requirements.

5.0 Accounting Provision Determination

Provision is calculated using standard Annual Closure Summary Review (ACSR) Template, which is maintained and controlled centrally. The provision calculation in ACSR template is in accordance with GLD.004.01 Accounting Interpretation.

For FY2013, the NPV Accounting Based Closure Cost (Booked Provision) is $224.3m USD.

The NPV has increased by $91m from prior submissions mainly due to an updated cost estimate from World Wide Drilling and higher contingency partly offset by updated macro economic assumptions and the abandonment of 1 well in FY13.

The Accounting Provision calculation was completed as at April 2013. It is assumed that the asset ceases production in FY21 (year used for amortization of rehabilitation of asset) and abandonment activities take 3 years (FY22-FY24). The mid-point of FY23 has been used to discount the rehabilitation provision. The expected provision has been calculated on a probabilistic basis (probabilistic weighted deterministic alternative).

For GBP denominated costs – inflation = 2.25%, discount rate = 3.5%.

For USD denominated costs – inflation = 2.0%, discount rate = 3.0%.

6.0 Value Estimate and Model

Real costs are calculated as per Corporate ACSR Sheet "Real and Nominal Cost Input Form" and are in compliance with the Investment Evaluation Standards and the Validation details have been endorsed by the Valuation Practice Leader as per Section 1.09.

Detailed deterministic and probability weighted closure costs for all phases are provided in Appendix 6.0 and 7.0.

7.0 Changes to this document

Changes to this document shall comply with CENG-PR-PET-AD-0001 Operations & Maintenance Document & Record Control.

Appendices

Appendix 1.0 List of Facilities in scope of Closure Plan

See main document section 2.2

Appendix 2.0 Regulatory Requirements

See main document section 2.4

Appendix 3.0 JV Agreements (relevant to Closure Plan)

See main document section 4.1.2 and Liverpool Bay Joint Development Agreement in Closure e-room

Appendix 4.0 Community commitments

Not required at identification phase

Appendix 5.0 Risk Register

See Closure e-room

Appendix 6.0 Range Analysis

PROBABILITY WEIGHTING OF COST ESTIMATES) (Mandated by Closure Standardization Process)	25.0%			50.0%			25.0%			100%		
COST ESTIMATE CASE & PHASE	LOW CASE			MID CASE			HIGH CASE			PROB. WT.		
	CO. CODE CURR. BASED COSTS	USD BASED COSTS FOR NON-USD CO. CODE CURR.	TOTAL COST IN USD	CO. CODE CURR. BASED COSTS	USD BASED COSTS FOR NON-USD CO. CODE CURR.	TOTAL COST IN USD	CO. CODE CURR. BASED COSTS	USD BASED COSTS FOR NON-USD CO. CODE CURR.	TOTAL COST IN USD	CO. CODE CURR. BASED COSTS	USD BASED COSTS FOR NON-USD CO. CODE CURR.	TOTAL COST IN USD
CURRENCY	GBP	USD	USD	GBP	USD	USD	GBP	USD	USD	GBP	USD	USD
EXCHANGE RATE	1.5121	1.0000		1.5121	1.0000		1.5121	1.0000		1.5121	1.0000	
1.0 REAL COST ESTIMATES (Millions)												
1.1 GROSS JV CLOSURE COSTS INCLUDING SALVAGE												
1 PRE-CLOSURE PHASE - GROSS COSTS												
1 Project Management & Eng.			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
2 HSE (Including Monitoring)			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
3 PCO - Parent Company Overhead / COPAS			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
4 Contingency			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
SUB-TOTAL	0.0	$0.0	$0.0	0.0	$0.0	$0.0	0.0	$0.0	$0.0	0.0	$0.0	$0.0
2 CLOSURE EXECUTION PHASE - GROSS COSTS												
1 Project Management & Engineering	28.1		$42.5	28.1		$42.5	28.1		$42.5	28.1	$0.0	$42.5
2 Well Abandonments - Dry Trees	87.3		$132.1	145.5		$220.1	203.8		$308.1	145.5	$0.0	$220.1
3 Well Abandonments - Wet Trees		$28.3	$28.3		$47.1	$47.1		$66.0	$66.0	0.0	$47.1	$47.1
4 Closure OPEX			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
5 Offshore - Host Fac. Abandonment	138.2		$208.9	138.2		$208.9	138.2		$208.9	138.2	$0.0	$208.9
6 Offshore - Subsea Fac. Abdmt	3.7		$5.5	3.7		$5.5	62.0		$93.8	18.3	$0.0	$27.6
7 Offshore - Pipeline, Flowlines			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
8 Onshore - Plant / Fac. / Shorebase	15.4		$23.3	15.4		$23.3	15.4		$23.3	15.4	$0.0	$23.3
9 Onshore - Flowlines / Pipelines			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
10 Storage of Assets			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
11 Disposal - Sale of Assets (Salvage)			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
12 Disposal - Scrapping or Reefing			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
13 HSE & Regulatory			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
14 PCO - Parent Company Overhead / COPAS			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
15 Contingency	54.5	$5.7	$88.1	66.2	$9.4	$109.5	89.5	$13.2	$148.5	69.1	$9.4	$113.9
SUB-TOTAL	327.3	$33.9	$528.8	397.1	$56.6	$657.1	537.0	$79.2	$891.3	414.7	$56.6	$683.6
3 POST CLOSURE PHASE - GROSS COSTS												
1 Project Management & Eng.			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
2 Storage of Assets			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
3 Disposal - Sale of Assets (Salvage)			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
4 HSE (Including Monitoring)			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
5 PCO - Parent Company Overhead / COPAS			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
6 Contingency			$0.0			$0.0			$0.0	0.0	$0.0	$0.0
SUB-TOTAL	0.0	$0.0	$0.0	0.0	$0.0	$0.0	0.0	$0.0	$0.0	0.0	$0.0	$0.0
TOTAL GROSS JV CLOSURE COSTS (ALL 3 CLOSURE PHASE	327.3	$33.9	$528.8	397.1	$56.6	$657.1	537.0	$79.2	$891.3	414.7	$56.6	$683.6
NET JV CLOSURE COSTS (ALL PHASES & EXCL. "SOLE")	150.9	$15.6	$243.8	183.1	$26.1	$302.9	247.6	$36.5	$410.9	191.2	$26.1	$315.1

Appendix 7.0 Expected Value