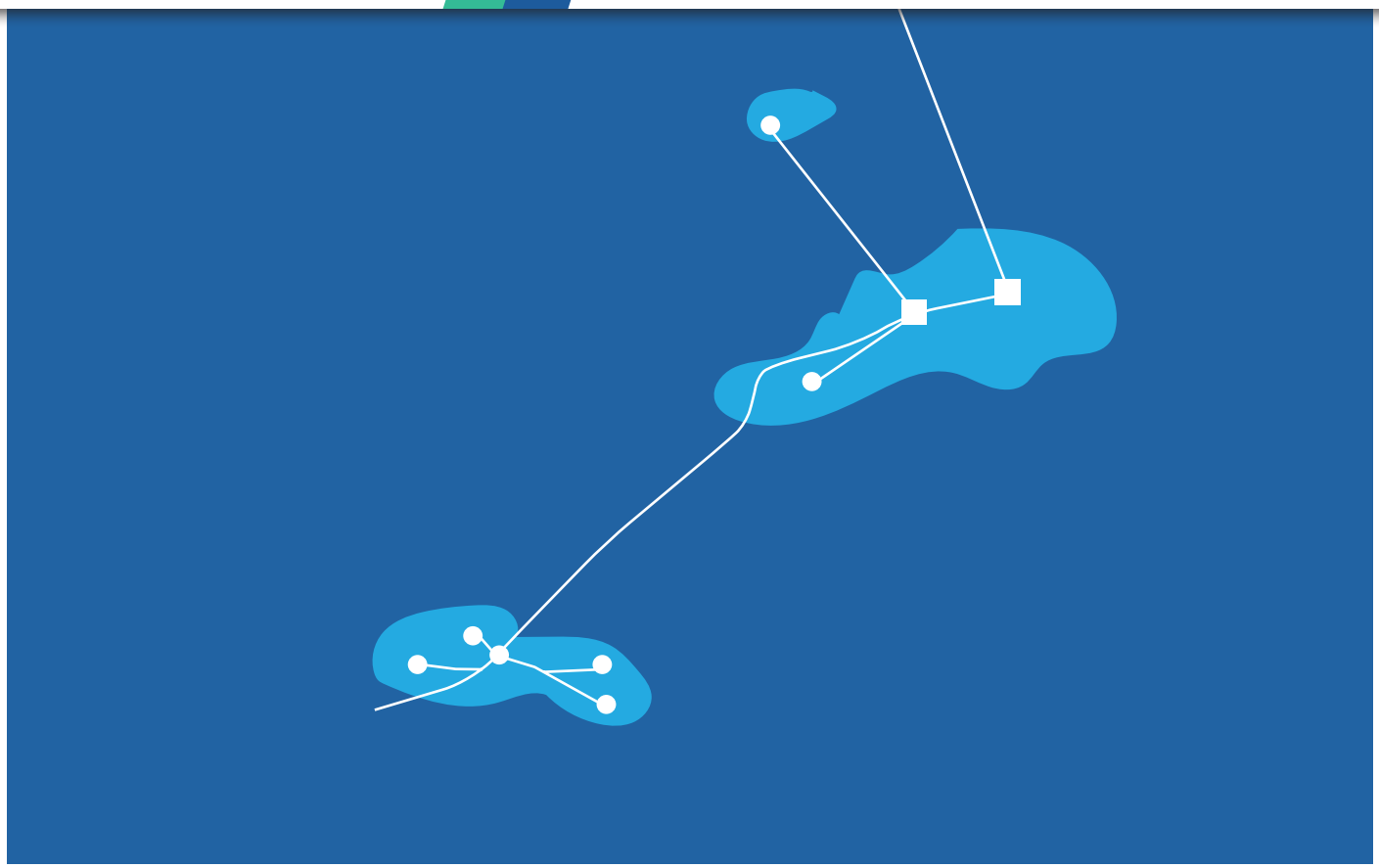
KINSALE ENERGY

Kinsale Area Decommissioning Project

Decommissioning Plan – Seven Heads Petroleum Lease Consent Application No.2



253993-00-REP-29 | 30th September 2021

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Kinsale Area Decommissioning Project

Glossary of Terms

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Glossary of Terms

Term	Explanation
AA	Appropriate Assessment
ALARP	As Low As Reasonably Practicable
AHV	Anchor Handling Vessel
Buoyancy tank	An enclosed air-filled section of a boat or ship designed to keep it afloat and prevent it from sinking
Bunkering	Supply of fuel for use by ships in a seaport
CA	Comparative Assessment
Cantilever	Structural element anchored at only one end to a support from which it is protruding
CCS	Carbon Capture and Storage
Concrete mattress	A series of concrete blocks usually connected by polypropylene ropes resembling a rectangular mattress, used for the weighting and/or protection of seabed structures including pipelines
CoP	Cessation of Production: the stage at which, after all economic development opportunities have been pursued, hydrocarbon production ceases.
CRU	Commission for Regulation of Utilities
CSV	Construction Support Vessel
DAA	Dublin Airport Authority
DCCAE	Department of Communications, Climate Action and Environment
DCENR	Department of Communications, Energy and Natural Resources
DECC	Department of the Environment, Climate and Communications
DECC (UK)	Department of Energy & Climate Change (UK)
Decommissioning	Planned shut-down or removal of a building, equipment, plant, offshore installation etc., from operation or usage offshore.
Diesel	A low viscosity distillate fuel
DSV	Diving Support Vessel
DTTAS	Department of Transport, Tourism and Sport
ER	Environmental Report
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
FBE	Fusion Bonded Expoxy
FEAS	Marine Institute's Fisheries Ecosystems Advisory Services
Flowline	Pipeline carrying unprocessed oil/gas within the oil or gas field area
Freespan	A free span on a pipeline is where the seabed sediments have been eroded, or scoured away leaving a void under the pipeline so that the pipeline is no longer supported on the seabed
Grout	Particularly fluid form of concrete used to fill gaps, generally a mixture of water, cement, and sand
GSRO	Geoscience Regulatory Office

Term	Explanation
HES	Health, Environment and Safety
HFCs	Hydrofluorocarbons
HWM	High Water Mark
HLV	Heavy-Lift Vessel
IALA	International Association of Marine Aids to Navigation and Lighthouse Authorities
IMO	International Maritime Organisation
In situ	In the original place.
Interconnector	Structure which enables energy to flow between networks, refers to international connections between electricity and natural gas networks
IOSEA	Irish Offshore Strategic Environmental Assessment
IWDG	Irish Whale and Dolphin Group
Jacket	The structure comprising the “legs” of the offshore platform connected together by horizontal and diagonal trusses and usually made of welded tubular steel. The jacket is typically secured to the seabed by piles
KA	Kinsale Alpha platform
KADP	Kinsale Area Decommissioning Project
KB	Kinsale Bravo platform
KPIs	Key Performance Indicators
km	Kilometre: 1,000m, equivalent to 0.54 nautical miles
LPP	Layer Polypropylene
Manifold	A pipe or chamber branching into several openings.
MARPOL	The International Convention for the Prevention of Pollution from Ships
MRCC	Marine Rescue Co-ordination Centres
Natura 2000 sites	Natura 2000 is a network of nature protection areas in the territory of the European Union. It is made up of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs) designated respectively under the Habitats Directive and Birds Directive.
NIS	Natura Impact Statement
nm	Nautical Mile (1852m = 1 minute of latitude = 1/60 degree of latitude)
NPWS	National Parks and Wildlife Service
NUI	Normally Unmanned Installation: an installation with minimal facilities which is not permanently crewed and is controlled from a remote location (e.g. other platform or shore)
OGUK	Oil & Gas UK
OSPAR	Oslo and Paris Convention
P&A	Plug and Abandon (wells)
PAD	Petroleum Affairs Division of the Department of Communications, Climate Action and Environment
PEP	Project Execution Plan
PETRONAS	Petroliam Nasional Berhad

Term	Explanation
PLEM	Pipeline End Manifold
PSV	Platform Supply Vessel
PUDAC	Permit to Use or Discharge Added Chemicals
ROV	Remotely Operated Vehicle: a small, unmanned submersible used for inspection and the carrying out of some activities such as valve manipulation
SAC	Special Area of Conservation: established under the Habitats Directive
Seafastening	Action of fastening/securing cargoes on ship with the aim of preventing them from movement while the ship is in transit
Semi-submersible rig	A floating mobile drilling rig supported on a number of pontoons, and typically anchored to the seabed while on station
SFPA	Sea Fisheries Protection Authority
Shears	Cutting instrument in which two blades move past each other
SPA	Special Protection Area: established under the Birds Directive
Subsea manifold	Large metal piece of equipment made up of pipes and valves, designed to transfer oil or gas
SWK	South West Kinsale
TEG	Triethylene Glycol
Tie-backs	Link between a satellite field and an existing production facility
Topsides	The collective name for the many drilling, processing, accommodation and other modules which when connected together make up the upper section of the platform which rests on the jacket
Umbilical	Cable and/or hose which supplies required electrical power and chemicals for subsea well control
WDC	Western Drill Centre
Wet Gas	Any gas with a small amount of liquid present

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Kinsale Area Decommissioning Project

Section 1

Introduction

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1 Introduction

1.1 Introduction

PSE Kinsale Energy Limited (Kinsale Energy) is progressing with the decommissioning[1] of the Kinsale Area gas fields and facilities (incorporating the Kinsale Head gas fields and facilities and the Seven Heads gas field and facilities), which have come to the end of their productive life. Gas production from the wells ceased on 5 July 2020. The decommissioning of the entirety of the Kinsale Area gasfields and facilities is collectively referred to as the Kinsale Area Decommissioning Project (KADP).

The entire KADP plan consists of:

- Facilities preparation: disconnect and degas process plant and pipelines (all pipelines displaced with seawater).
- Wells: plug and abandon all platform and subsea wells and removal of any surface component of these wells, including wellhead structures and platform conductors.
- Platform topsides: complete removal in accordance with OSPAR Decision 98/3.
- Subsea structures: (e.g. manifolds, wellhead protection structures): full removal in accordance with OSPAR Decision 98/3, including the removal of connecting spool pieces, umbilical jumpers and associated protection materials.
- Platform jackets: complete removal in accordance with OSPAR Decision 98/3.
- Offshore pipelines and umbilicals: rock cover of freespans and pipeline ends.
- Export pipeline (offshore and onshore section): fill onshore section with grout and rock cover of freespans in offshore section.
- Decommissioning the Inch Onshore Terminal (full removal and reinstatement to agricultural use, as per the terms of the site planning permission, Cork County Council planning reference 2929/76).

1.2 Background

Pursuant to section 13 of the Petroleum and Other Minerals Development Act 1960 as amended (1960 Act), a petroleum lease was granted in respect of the Kinsale Head gas fields and facilities in May 1970 (Offshore Petroleum Lease No. 1 (“OPL-1”)). The Kinsale Head Plan of Development was submitted and agreed with the then Minister for Communications, Climate Action & Environment (as he then was, now the Minister for the Environment, Climate and Communications) (the “Minister”). This was in respect of the Kinsale Head gas fields and facilities pursuant to the terms of the OPL-1.

A petroleum lease was granted in respect of the Seven Heads gas field and facilities in November 2002 pursuant to Section 13 of the 1960 Act (“Seven Heads Petroleum Lease”). The Seven Heads Field Plan of Development (“Seven Heads Plan of Development”) was submitted and agreed with the then Minister in respect of the Seven Heads gas field and facilities in accordance with the terms of the Seven Heads Petroleum Lease.

Kinsale Energy submitted, and is now submitting further plans for decommissioning to the Minister for approval pursuant to Section 13 of the 1960 Act, as addenda to the existing plans of development relevant to the Kinsale Area and Seven Heads Petroleum Leases.

[1] Meaning the removal, part removal or leaving in place of any installation or facility.

1.2.1 Previous Applications

To reflect project scheduling requirements and to facilitate studies on the potential for any re-use options for the Kinsale Area facilities, a two stage consent application process for the Decommissioning Plans was originally proposed by Kinsale Energy.

Decommissioning Plans covering the first stage (**Consent Application no. 1**) were submitted on 28th June 2018 covering the following works:

- Facilities preparation: disconnect and degas process plant and pipelines (all pipelines displaced with seawater).
- Wells: plug and abandon all platform and subsea wells and removal of any surface component of these wells, including wellhead structures and platform conductors.
- Platform topsides: complete removal in accordance with OSPAR Decision 98/3.
- Subsea structures: (e.g. manifolds, wellhead protection structures): full removal in accordance with OSPAR Decision 98/3, including the removal of connecting spool pieces, umbilical jumpers and associated protection materials.

Consent Application no. 1 was approved on 26 April 2019.

For Kinsale Head only, a subsequent application (**Consent Application no. 2**) was submitted on 8th August 2019 to cover the removal of the Kinsale Alpha and Bravo jackets. Consent Application no. 2 was approved on 26 February 2020.

At the time of the previous consent applications, there were ongoing studies by others which could potentially have resulted in future re-use of one or more of the subsea pipelines. No future re-use potential has been identified within the timeframe of the KADP. Therefore, this application ("**Kinsale Head Consent Application no. 3"** and "**Seven Heads Application no. 2"**) is being made in relation to the decommissioning of the pipelines and associated umbilicals.

In accordance with section 13A of the 1960 Act, an Environmental Impact Assessment Report (**EIAR**) was prepared to accompany Consent Application no. 1. The EIAR was updated, by way of Addendum, for Consent Application no. 2. The EIAR has again been updated, by way of Addendum, for this application. Any reference to EIAR shall mean a reference to the entire of the EIAR and these two Addendums, together.

The EIAR provides an assessment of all likely significant environmental impacts of the decommissioning of the Kinsale Area gas fields to enable the Minister to undertake an Environmental Impact Assessment to determine whether the proposed decommissioning of the offshore and onshore facilities associated with the Kinsale Area fields would or would not be likely to have significant effects on the environment.

In accordance with regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) ("**the 2011 Regulations"**) and Section 13A of the 1960 Act, an Appropriate Assessment Screening Report ("**AA Screening Report**") was prepared to accompany the Consent Application no. 1. The AA Screening Report was updated for Consent Application no. 2, and is again updated for this consent application . The AA Screening Report informs the competent authority, the Minister, in carrying out its screening for Appropriate Assessment as to whether or not the Project is likely to have any significant impacts on any European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives in light of the best scientific knowledge in the field.

At the time of Consent Application no. 2, Section 5 of the Dumping at Sea Act 1996, as amended, did not yet apply to "offshore installations"[2].

[2] Pursuant to Section 1 of the Dumping at Sea Act offshore installations means "any man-made structure, plant or vessel or parts thereof, whether floating or fixed to the seabed, placed in the sea for the purpose of

Under Section 5 of the Dumping at Sea Act 1996, the Environmental Protection Agency (the "**Agency**") has the power to grant a permit that allows the offshore pipelines and umbilicals to remain in situ. Section 5(12) postponed the legal effect of Section 5, so that the power did not apply to "offshore installations" pending an order of the Government.

The necessary order of the Government was made on 2 March 2021 within the Dumping At Sea Act 1996 (Section 5(12)) (Commencement) Order 2021 (SI No. 92 of 2021). That Order appointed 1 April 2021 as the day on which Section 5 came into operation as respects offshore installations. With effect from 1 April 2021, Section 5 does now apply to offshore installations, including any offshore pipelines and umbilicals that had been placed in the sea for the purpose of exploitation of gaseous hydrocarbons.

1.2.2 Current Applications

Applications to the Minister under the **1960 Act** and the **Continental Shelf Act**, to leave the pipelines and umbilicals in situ, are now being made, as outlined in Section 1.3 below. A separate application is being made to the Agency under the Dumping at Sea Act.

The application to the Minister under the Continental Shelf Act 1968 (as amended) relates only to acts of construction, alteration or improvement of the existing pipeline and umbilical structures from the outer limit of the State's territorial seas, generally 12 nautical miles, to the wells. The application applies to the use of new engineering materials to preserve the pipelines and umbilicals *in-situ.* The application does *not* apply to leaving the offshore pipelines, umbilicals and any content within to remain *in-situ.*

The application to the Agency under the Dumping at Sea Act relates only to the parts of the pipeline and umbilicals within the "maritime area", so does *not* extend onshore beyond the line of high water of ordinary or medium tides. Also, the application to the Agency applies only to the defined act of "dumping". The deliberate disposal in the maritime area of an offshore installation, by leaving the offshore pipelines, umbilicals and any content within to remain in situ, satisfies that definition. The defined act of "dumping" does *not* apply to the use of engineering materials to protect the pipelines and umbilicals in situ. The controlled installation of protective rock berms over pipelines and umbilicals to avoid and/or reduce hazards to fishing, shipping etc. is a construction activity with an engineering purpose. This use of engineering materials is not an act of disposal, as the materials are used to fulfil a specific function. The same logic applies with equal force to existing in situ protection (including protection mattresses).

No application to the Minister for Housing, Local Government and Heritage (or the Minister for State with responsibility for Planning and Local Government to whom relevant functions have been delegated) for lease, licence, approval or consent under the **Foreshore Act 1933** (as amended) is required. The pipeline and umbilicals on the foreshore are the subject of a foreshore licence granted by the Minister on 14 September 1978, and amended on 27 March 1997. The foreshore licence requires the pipeline to be maintained to avoid injury to navigation, which requires the use of engineering materials to preserve the pipelines and umbilicals in situ.

1.3 Consent Applications

The facilities to be decommissioned under the various consent applications for the KADP are set out below.

offshore activities". Offshore activities is defined in Section 1 as meaning "activities carried out in the sea for the purpose of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons".

1.3.1 Previous Applications

1.3.1.1 Consent Application no.1 - Kinsale Head Petroleum Lease (OPL 1)

This application was submitted to the Minister on 28 June 2018 and Ministerial Consent was received on 26 April 2019 and includes the following:

- The Kinsale Alpha (KA) and Kinsale Bravo (KB) topsides,
- All infield subsea infrastructure associated with the OPL-1, including the subsea manifold, PLEMs, valve skid, intermediary tee skid, pipeline/umbilical terminations and associated protection materials.
- All OPL-1 subsea and platform wells including the wellhead structures,
- 3 previously abandoned exploration wells
- Consent for this application was granted by the Minister on 26th April 2019

1.3.1.2 Consent Application no.1 - Seven Heads Petroleum Lease

This application was submitted to the Minister on 28 June 2018 and Ministerial consent was received on 26 April 2019 and includes for the following facilities under the Seven Heads Petroleum Lease:

- Five Seven Heads Field subsea development wells including the wellhead structures
- One previously abandoned exploration well
- All infield subsea infrastructure associated with the Seven Heads gas field, including the subsea manifold, pipeline/umbilical terminations and associated protection materials.
- Consent for this application was granted by the Minister on 26th April 2019.

1.3.1.3 Consent Application no.2 - Kinsale Head Petroleum Lease (OPL 1)

This application was submitted to the Minister on 8 August 2019 and Ministerial consent was received on 26 February 2020 and includes the following facilities under the Kinsale Head Petroleum Lease:

- The Kinsale Alpha (KA) and Kinsale Bravo (KB) jackets.
- Consent for this application was granted by the Minister on 26th Feb. 2020.

1.3.2 Current Application

1.3.2.1 Consent Application no.2 – Seven Heads Petroleum Lease (this Decommissioning Plan)

This application seeks consent to decommission the following facilities under the Seven Heads Petroleum Lease:

- All infield pipelines and umbilicals associated with the Seven Heads gas field
- The 18” Seven Heads export pipeline and umbilical

- To use engineering materials (Rock Placement) to protect the pipelines and umbilicals in situ

Kinsale Energy is now making two separate applications under the relevant legislation with respect to pipeline and umbilical decommissioning as follows:

1. Application for approval of an addendum to Seven Heads Field Plan of Development under Section 13 of the 1960 Act

As noted previously, the Seven Heads gas field has come to the end of its productive life. Gas production from the wells ceased on 5 July 2020. PSE Seven Heads Limited is applying to the Minister for approval for an addendum to the Seven Heads Plan of Development for the decommissioning of certain facilities as set out in this document. Kinsale Energy has prepared this Decommissioning Plan – Seven Heads Petroleum Lease – Consent Application no. 2 (the "**Decommissioning Plan**") which sets out the details for the decommissioning[3] of certain facilities in the Seven Heads gas fields.

In accordance with section 13A of the 1960 Act, an EIAR accompanies this application. An AA Screening Report has also been prepared to accompany this application.

2. Application for Consent under Section 5 of the Continental Shelf Act 1968 (as amended)

Pursuant to Section 5(2) of the Continental Shelf Act 1968, as amended, the consent of the Minister is also sought by PSE Seven Heads Limited to alter certain facilities within the area designated pursuant to Article 2 of the Continental Shelf Designated Areas Order 1993 SI 92 of 1993.

The application to the Minister under the Continental Shelf Act 1968 relates only to acts of construction, alteration or improvement of the existing pipeline and umbilical structures from the outer limit of the State's territorial seas, generally 12 nautical miles, to the wells. The application applies to the use of engineering materials to protect the pipelines and umbilicals i*n situ*. The application does *not* apply to leaving the offshore pipelines, umbilicals and any content within to remain i*n situ.*

These, and the related applications, are the final applications being made to decommission the KADP.

1.3.3 Related Applications

A separate application is being submitted to the Department of the Environment, Climate and Communications for the following:

Kinsale Head Petroleum Lease – Consent Application no. 3

- To leave in situ all infield pipelines and umbilicals associated with the Kinsale Head gas fields
- To leave in situ the 24" export pipeline (offshore and onshore section) and to fill the onshore section with grout
- To use engineering materials (Rock Placement) to protect the pipelines and umbilicals in situ

As noted above separate applications are also being made to the EPA for consent under Section 5 of the Dumping at Sea Act 1996 for the leaving in situ of pipelines and umbilicals within the maritime area.

1.3.4 Environmental Assessment

As outlined above in Section 1.2 (Background), , in accordance with section 13A of the 1960 Act, an EIAR was prepared to accompany Consent Application no. 1. The EIAR was updated, by way of Addendum, for Consent Application no. 2. The EIAR has again been updated, by way of Addendum, for this application.

[3] Meaning the removal, part removal or leaving in place of any installation or facility.

The **addendums** (253993-00-REP-24 and 253993-00-REP-27) have been produced to reflect the additional information provided to the Minister on 14th November 2018 and 12th December 2018 during the Consent Application No. 1 process and for Consent Application 2, as well as any additional relevant environmental information which has been published in the interim. Any reference to EIAR shall mean a reference to the entire of the EIAR and these two Addendums, together. The EIAR should be read in conjunction with the Decommissioning Plan which has also been submitted as part of this consent application process.

The EIAR has been prepared to identify, describe and assess the likely significant environmental impacts of the entirety of the proposed decommissioning of the Kinsale Area gas fields and facilities including the decommissioning of the Inch onshore gas terminal.

As outlined above in Section 1.2 (Background), in accordance with regulation 42 of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) and Section 13A of the 1960 Act, an **AA Screening Report** was prepared to accompany the Consent Application no. 1. The AA Screening Report was updated for Consent Application no. 2, and is again updated for this consent application (253993-00-REP-25 and 253993-00-REP-26). The AA Screening Report informs the competent authority, the Minister, in carrying out its screening for Appropriate Assessment as to whether or not the entirety of the proposed decommissioning of the Kinsale Area gas fields and facilities, including the decommissioning of the Inch onshore gas terminal, is likely to have any significant impacts on any European sites, either alone or in combination with other plans and projects, taking into account their conservation objectives and in light of the best scientific knowledge in the field.

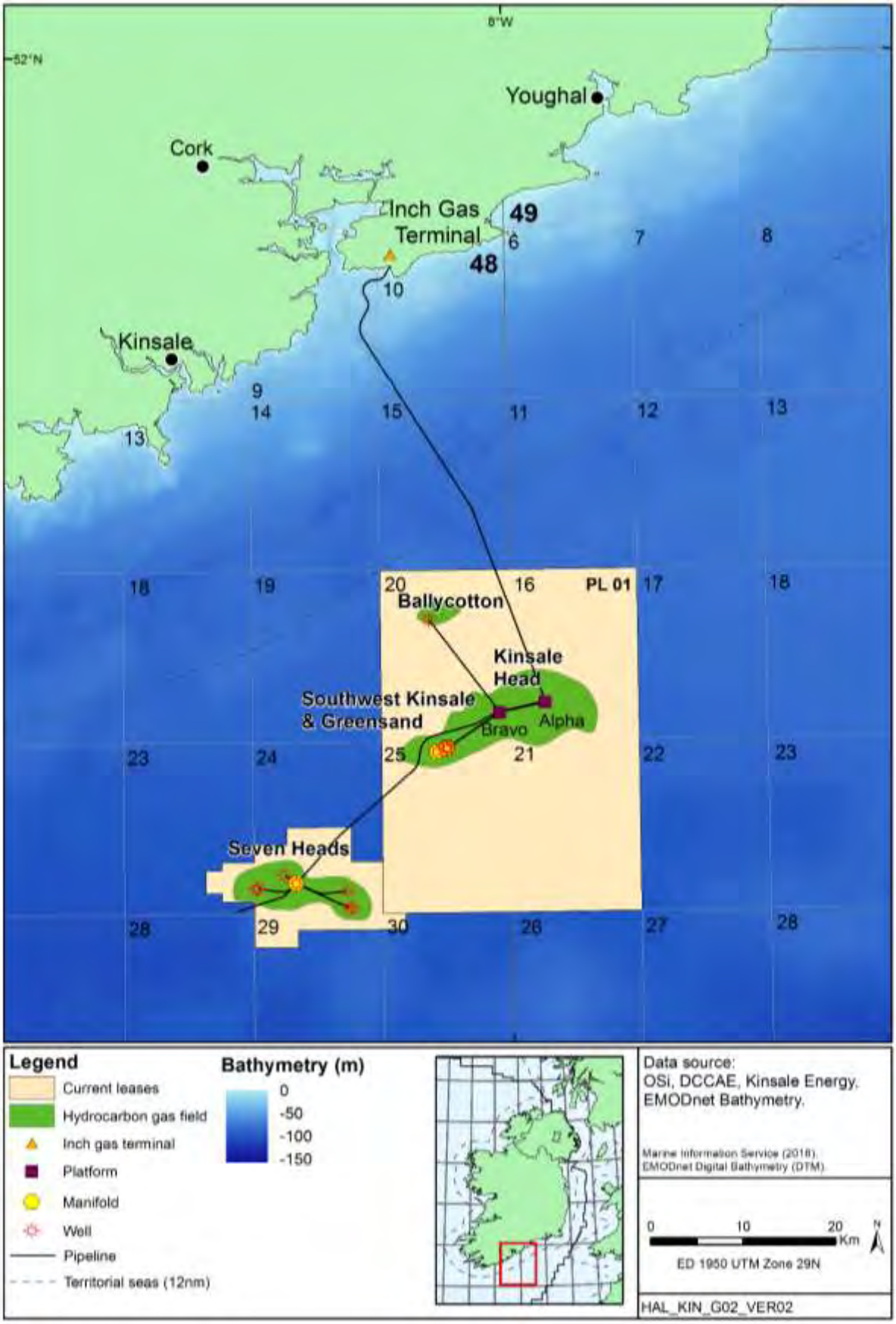

Figure 1: Location of the Kinsale Area fields and facilities

1.4 Seven Heads Petroleum Lease

The Seven Heads Petroleum Lease, details are summarised in **Table 1** below.

Table 1: Lease details

Lease	Commencement Date	Block No.	Area (km²)	Participants (* = Operator)	% Interest
Seven Heads Petroleum Lease	13 November 2002	48/23 (p), 48/24 (p), 48/29 (p) & 48/30 (p)	168.5	*PSE Seven Heads Limited	87.37%
				Island (Seven Heads) Limited.	12.63%

1.5 Overview of Facilities

The Kinsale Area contains several natural gas fields as shown in **Figure 2** below.

The Seven Heads gas field is located within the Seven Heads Petroleum Lease.

Adjacent gas fields, Kinsale Head, Southwest Kinsale, Greensand and Ballycotton gas fields are all located within Kinsale Head Petroleum Lease (OPL 1).

The Seven Heads facilities were installed between 2002 and 2003 with gas production commencing in 2003. The Seven Heads field ceased production at the same time as the Kinsale Head field on July 5 2020.

See **Section 2** for details of the facilities.

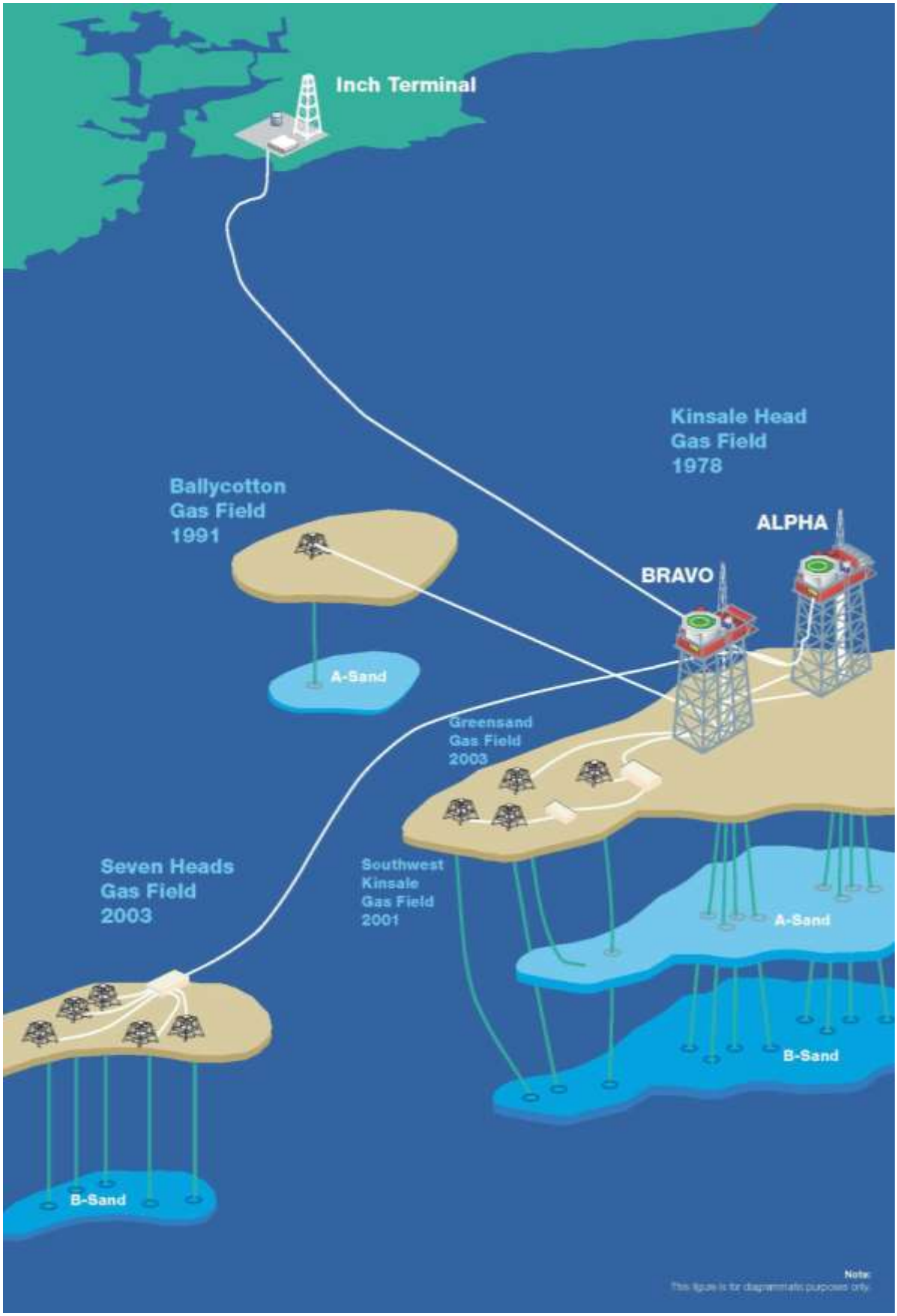

Figure 2 Kinsale Area Facilities

1.6 Summary of Statutory Background

Table 2 below summarises the relevant key National, European and International legislation and the associated consents and requirements for decommissioning of infrastructure relevant to the KADP.

Details of all relevant International Conventions and European Legislation is included in **Appendix A1**.

Table 2: Key National, European and International legislation relevant to the KADP

Relevant Legislation	Consents / requirements for Decommissioning
Section 13 of The Petroleum & Other Minerals Development Act 1960 (as amended)	Application to the Minister is being made pursuant to Section 13 for decommissioning.
Section 5 of The Continental Shelf Act 1968 (as amended)	Application to the Minister is being made for the consent to "alter/construct/improve" works or structure in 'or remove any object or material from' the Continental Shelf designated area.
Section 5 of the Dumping at Sea Act 1996 (as amended)	Application to the Agency is being made for permit that allows the offshore pipelines and umbilicals to remain in situ
Part IIA of the Electricity Regulation Act 1999 (as amended)	Section 13D renders the decommissioning of petroleum infrastructure and the abandoning of any well as a "designated petroleum activity". Section 13E requires a safety permit to carry out designated petroleum activity.
Section 3 of the Petroleum (Exploration and Extraction) Safety Act 2010 (as amended)	Kinsale Energy's current safety permit includes decommissioning. Approval of Safety Case received for decommissioning.
Energy (Miscellaneous Provisions) Act 1995, Section 17	Minister shall not approve abandonment without consent of Minister of Marine.
European Communities (Birds and Natural Habitats) Regulations 2011 (as amended)	Screening to be undertaken by competent authority to determine whether actions will affect European site. Screening report to be submitted to competent authority. Transposes Habitats Directive (92/43/EEC) and Birds Directive (2009/147/EC) into Irish Law. Application is accompanied by an AA Screening Report.
Environmental Impact Assessment Directive 2011/92/EU amended by Directive 2014/52/EU	EIA Screening, and EIA if required, to be undertaken by competent authority. Application is accompanied by an EIAR.
Decisions 98/3, OSPAR (1998)	The dumping, and leaving wholly or partly in place, of disused offshore installations is prohibited within the OSPAR maritime area.
Foreshore Act 1933 (as amended)	No application to the Minister for Housing, Local Government and Heritage (or the Minister for State with responsibility for Planning and Local Government to whom relevant functions have been delegated) for lease, licence, approval or consent under the Foreshore Act 1933 is required. Kinsale Energy is entitled to surrender the existing licence, upon payment of a specified fee.

1.7 Methodology

This Decommissioning Plan has been prepared in line with the legislation as detailed in **Section 1.6,** and in the absence of specific decommissioning guidance documents in Ireland, taking cognisance of the following guidance documents for decommissioning projects:

[1] PAD (2004). Rules and Procedures Manual for Offshore Petroleum Production Operations Rev 4.4, 2004, Petroleum Affairs Division, Department of Communications, Marine and Natural Resources, Dublin.

[2] PAD (2011), Rules and Procedures Manual for Offshore Petroleum Exploration and Appraisal, 2011, Petroleum Affairs Division, Department of Communications, Marine and Natural Resources, Dublin

[3] DMNR (1992). Licensing Terms for Offshore Oil And Gas Exploration, Development & Production 1992, Department of the Marine and Natural Resources, Dublin

[4] EPA (2014). Guidance on assessing and costing environmental liabilities 2014.

[5] DECC (UK) (2011). Decommissioning of Offshore Oil and Gas Installations and Pipelines under the Petroleum Act 1998. Version 6, 134pp.

[6] OGUK (UK) (2013). Long-term degradation of Offshore Structures and Pipelines Decommissioned and left *in situ*. Commissioned by Oil & Gas UK, 41pp.

1.8 Overview of Decommissioning Plan

This Decommissioning Plan details the selected option for the decommissioning of certain facilities within the Seven Heads gas fields.

A number of options were initially considered to carry out the decommissioning of the facilities, including the consideration of alternative uses of the facilities (refer to **Section 3.3**), as well as a number of different options to carry out the physical decommissioning (refer to **Section 4**).

No feasible alternative uses for the facilities have been identified and the different methods to carry out the decommissioning have been assessed, which resulted in the identification of a number of preferred methods for the decommissioning of each facility.

The broad scope of work involved in decommissioning the facilities (covered by this Decommissioning Plan) is the leaving in situ of the pipelines and umbilicals, and rock cover of freespans and remaining in situ protection materials.

Table 3 sets out a summary of the decommissioning alternatives initially considered. Refer to **Section 4** of this Decommissioning Plan for further detail on the alternatives considered.

Table 3: Summary of proposed decommissioning options for the Seven Heads Facilities (Consent Application No.2)

Facility	Decommissioning Alternatives Initially Considered	Comment
Pipelines, Umbilicals and protection materials	• Full Removal • Partial Removal • Leave in situ	Full removal and partial removal were initially considered as alternatives for pipelines, umbilicals and protection materials. Refer to **Appendix E of the EIAR (Comparative Assessment)** which considered the safety, environmental, technical, social and cost aspects of the various alternatives and which identified leave *in situ* as the optimal option.

1.9 Objective of Decommissioning Project

The objective of this Decommissioning Plan is to ensure that the decommissioning is undertaken in a safe, environmentally friendly and cost efficient manner. The Kinsale Area Decommissioning Project will ensure minimum impact on the environment. The Decommissioning Plan will ensure that the necessary measures are identified, managed and monitored to lead to successful decommissioning.

The criteria which define the successful decommissioning of the facilities are as follows:

- Compliance with the Minister's consent requirements.
- All decommissioning activities completed safely and with due regard to the environment.
- All activities undertaken in compliance with laws and regulations.
- All works carried out in accordance with good oilfield practice.
- All facilities will be safely decommissioned using standard procedures and appropriately licensed contractors.
- All disposal of wastes, materials and substances will comply with regulatory requirements.
- All records relating to decommissioning and the disposal or recycling of wastes, materials and substances retained throughout the closure process and made available for inspection thereafter through the DECC.
- Hazards and environmental risks addressed and the Minister satisfied that the Kinsale Area has minimum impact on the Environment.
- An Environmental Management System in place and actively implemented during the decommissioning period.
- Residual (post-decommissioning) risks reduced to a satisfactory level.
- Appropriate funds in place to cover the costs.

KINSALE ENERGY

Kinsale Area Decommissioning Project

Section 2

Facilities Description

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2 Facilities Description

2.1 History of Operations

The Kinsale Head Gas Field was discovered in 1971 and was brought on-stream in 1978 under a Plan of Development approved by the then Department of Industry and Commerce. The Kinsale Head field was developed with two fixed steel platforms (Kinsale Alpha and Kinsale Bravo) with gas exported by pipeline from Kinsale Alpha to the onshore Inch Terminal. The discovery of the field was the basis for the development of the natural gas industry in Ireland and Kinsale Head was Ireland's only source of gas until the installation of an interconnector pipeline from Scotland in 1993.

Following the Kinsale Head discovery, there was extensive exploration of the Celtic Sea with ~90 wells drilled, the last was the Midleton well in Block 49/11 drilled by Kinsale Energy in 2015. However, despite the intensive exploration effort, no other large fields have been discovered, although a number of smaller gas fields have been commercially exploited as subsea tie-backs to Kinsale Head, including the Seven Heads field, which was the last development in the area.

The Kinsale Area fields and infrastructure are summarised in **Table 4,** for information.

Table 4: Summary of Development History for the Kinsale Area Fields

Lease	Field	No. of Wells	Facilities	Date/First Production	Status (2021)
OPL-01	Kinsale Head	14	Kinsale Alpha (Manned Platform with production, drilling & accommodation) 7 x Platform Wells	1978	Wells abandoned; platform demanned
			Kinsale Bravo (Manned Platform with production, drilling & accommodation) 7 x Platform Wells	1979	Wells abandoned; platform demanned
	Ballycotton	1	1 x Subsea Well	1991	Shut-In; well abandonment imminent
	Southwest Kinsale *	3	3 x Subsea Wells	1999 – 2001	Wells Abandoned
	Greensand	1	1 x Subsea Well	2003	Well Abandoned
Seven Heads	Seven Heads	5	1 x Subsea Manifold 5 x Subsea Wells	2003	Shut-in; well Abandonment ongoing

The Seven Heads field was developed by a group led by Ramco Energy in 2003; Ramco's interest (86.5%) was subsequently acquired by Marathon in 2006 and is now operated by PSE Seven Heads Limited, a subsidiary of PSE Kinsale Energy Limited.

Details of the pipelines and umbilicals which are the subject of this Consent Application are given in Section 2.2 below. All of the pipelines have been degassed and displaced to seawater as part of the decommissioning activities under Consent Application 1.

2.2 Inventory of Facilities

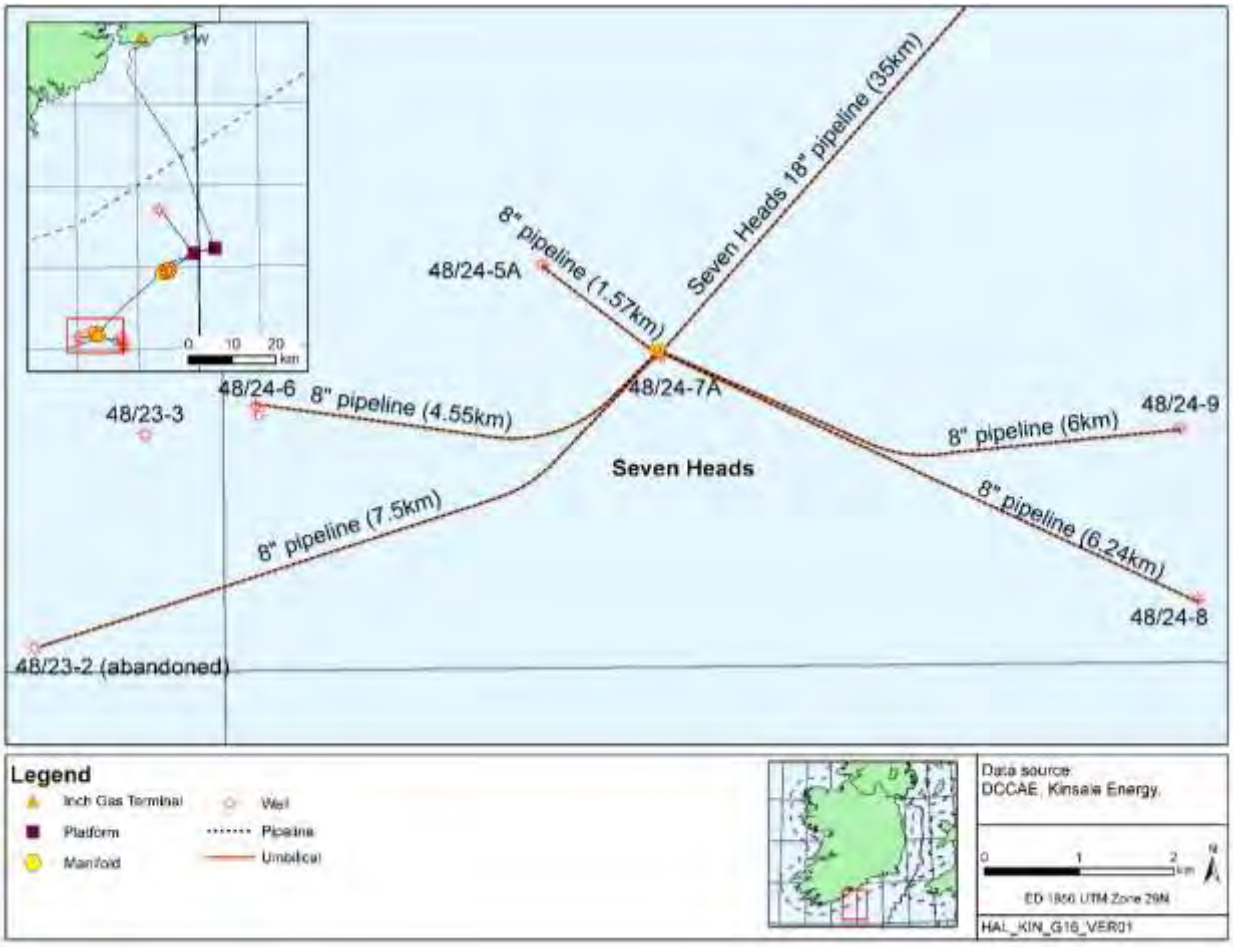
The facilities to be decommissioned, relevant to this Decommissioning Plan, are illustrated (**Figure 3**) and summarised in **Table 5**.

This Decommissioning Plan is only for the pipelines, umbilicals and protection materials associated with the Seven Heads Lease.

Layout drawings of all facilities within Seven Heads Lease are included in **Appendix A2**.

2.2.1 Seven Heads Development

Figure 3: Seven Heads Facilities



Seven Heads is connected to KA via a 35.00km concrete coated 18” pipeline installed in 2003, which is variously buried, exposed or rock covered. The control umbilical is laid alongside the pipeline with the same protection. The 18” pipeline terminated at the Seven Heads manifold, which connected the export line to six separate 8” flowlines and umbilicals of various lengths (0.06-7.45km), All flowlines have rock cover and concrete mattress protection.

The Seven Heads pipeline and umbilical cross the active Hibernia Atlantic “D” and the disused PTAT telecommunications cables. A separate telecommunications cable (Hibernia Express, installed in 2015) crosses over the Seven Heads pipeline and umbilical to the south of these. These are separated by concrete mattresses. The Seven Heads export pipeline to Kinsale Alpha has been displaced to seawater and disconnected at the subsea manifold. The pipeline will be subsequently disconnected at the Alpha platform in 2022 by the platform removal vessel.

The 5 Seven Heads production flowlines were displaced to seawater as part of the campaign to displace the 18” pipeline. All flowlines (including the unused well ”F” flowline) have been disconnected at the manifold and their respective wellsite locations.

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2.2.2 Summary of Seven Heads Lease Facilities (Seven Heads - Consent Application 2)

Tables 5 and **Table 6** summarises the Seven Heads facilities to be decommissioned as detailed herein.

Table 5: Pipelines to be decommissioned

Pipeline	Length (km)	Description	Year installed	Status	Tie-in spools pieces	Protection materials	Comments
Seven Heads export pipeline	35.00km	18″ X52 steel, 3LPP and concrete coated	2003	Shut-in; displaced to seawater; disconnected	Two 14″ tie-in spools, 44m and 36m in length at the manifold end. Two 14″ tie-in spools, 42m and 39m in length at the KA end.	10 mattresses (6x2x0.15m) and 25 mattresses (5x3x0.15m) at the manifold end. 41 mattresses (5x3x0.15m) on the pipeline end at KA. 3 mattresses (5x3x0.15m) at each of the two crossings over the Ballycotton pipeline and umbilical.	There are 3 communication cable crossings. The Seven Heads pipeline crosses over the Hibernia Atlantic “D” and the disused PTAT cable, while the Hibernia Express cable installed in 2015 crosses over the Seven Heads pipeline.
Seven Heads well 48/24-5A pipeline	1.57km	8″ X52 steel, 3LPP coated	2003	Shut-in; displaced to seawater; disconnected	8” spool, 44m long at the manifold.	22 mattresses (6x3x0.15m) and 4 mattresses (6x2x0.15m) at the manifold. 13 mattresses (6x3x0.15m) at the well.	No freespans identified

Pipeline	Length (km)	Description	Year installed	Status	Tie-in spools pieces	Protection materials	Comments
Seven Heads well 48/24-6 pipeline	4.67km	8″ X52 steel, 3LPP coated	2003	Shut-in; displaced to seawater; disconnected	Two 8” spools, 23m and 27m long at the manifold.	24 mattresses (6x3x0.15m) and 16 mattresses (6x2x0.15m) at the manifold. 27 mattresses (6x3x0.15m) at the well.	No freespans identified
Seven Heads well 48/24-8 pipeline	6.32km	8″ X52 steel, 3LPP coated	2003	Shut-in; displaced to seawater; disconnected	Two 8” spools, 39m and 35m long at the manifold.	16 mattresses (6x3x0.15m) and 5 mattresses (6x2x0.15m) at the manifold. 37 mattresses (6x3x0.15m) at the well.	No freespans identified
Seven Heads well 48/24-9 pipeline	5.77km	8″ X52 steel, 3LPP coated	2003	Shut-in; displaced to seawater; disconnected	Two 8” spools, 51m and 34m long at the manifold.	24 mattresses (6x3x0.15m) and 4 mattresses (6x2x0.15m) at the manifold. 12 mattresses (6x3x0.15m) at the well.	No freespans identified
Seven Heads well 48/23-2 (abandoned) pipeline	7.45km	8″ X52 steel, 3LPP coated	2003	Shut-in; displaced to seawater; disconnected	Two 8” spools, 33m and 25m long at the manifold.	26 mattresses (6x3x0.15m) and 19 mattresses (6x2x0.15m) at the manifold. 8 mattresses (6x3x0.15m) at the well.	No freespans identified. Well F flowline is inactive and was never used; filled with seawater since installation; well not tied-in

Source: Genesis (2011), Xodus (2016c), Anatec (2017), Kinsale Energy’s as-built data

Table 6: Umbilicals to be decommissioned

Umbilical	Diameter	Length	Current Burial Status / Installation Method	Protection materials	Comments
Seven Heads Umbilical	123.5mm	35.00km	Laid alongside Seven Heads 18" pipeline, sharing the same protection materials.	Protection materials are the same as those listed in Table 5 for the Seven Heads pipeline cable crossings and tie-in to the platform and the manifold, along with 18 additional mattresses (6x2x0.15m) covering the umbilical tie-in to the platform.	Two 3rd party crossings of communication cables under the pipeline & umbilical: PTAT (Mercury) and 360 Atlantic "D" (360 Networks Inc.). One 3rd party crossing (Hibernia Express) over the pipeline & umbilical.
Seven Heads well umbilicals	93.2mm	1.57 to 7.45km	All laid alongside 8" pipelines and rock covered.	Protection materials are the same as those listed in Table 4 for the tie-in pipes, with 45 additional mattresses (6x2x0.15m) covering the umbilicals to the trees.	Well 48/23-2 (Well F) umbilical inactive and never used.

Source: Genesis (2011), Xodus (2016c), Anatec (2017), Kinsale Energy's as-built data

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Kinsale Area Decommissioning Project

Section 3

Cessation of Production

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3 Cessation of Production

3.1 Summary

The Kinsale Area gas fields were in production since 1978 (Kinsale Head) and gas reserves were exhausted by 2020.

A cessation of operations permit in accordance with section 8.8 of the PAD Rules & Procedures Manual for Offshore Petroleum Production Operations was submitted to and consented by DCCAE, with final CoP occurring on 5th July 2020.

3.2 Technical and Economic Evaluations

Kinsale Energy also separately submitted to the Minister a report detailing the technical and economic evaluations that supported the CoP timeframe.

3.3 Other Uses Considered

The Kinsale Area facilities (including pipelines and umbilicals) were designed for dry gas production and processing, and the majority of the facilities are now close to or beyond their original design lives. Nevertheless, parts of the facilities may have been suitable for re-use, depending on the service, particularly the main Kinsale and Seven Heads export pipelines..

Three potential re-uses have been considered at a high level. These are hydrocarbon production, carbon capture and storage (CCS) and offshore wind energy production. An assessment of the alternatives and other uses are outlined in full at **Sections 3.3 and 3.4 of the EIAR**.

Following discussions with DECC regarding potential future use of the pipelines, it was the position of the Department that Consent Application 2 for Seven Heads should be submitted on the basis that arrangements are not to be made to provide for the future use of the pipelines. Kinsale Energy is proceeding with decommissioning on the basis that none of the pipelines or umbilicals will be re-used.

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Kinsale Area Decommissioning Project

Section 4

Decommissioning Options

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4 Decommissioning Options

As no feasible alternative uses for the Seven Heads pipelines and umbilicals have been identified, they will be decommissioned. This section details the various decommissioning options which were considered for the Kinsale Area pipelines and umbilicals (**Section 2.2**) and the reasoning for the identified preferable option included in this Decommissioning Plan (**Section 1.7**). An assessment of the alternatives and other uses for the Kinsale Area pipelines and umbilicals are outlined in full at **Sections 3.3 and 3.4 of the EIAR**.

4.1 Pipelines and Umbilicals

There are a number of alternative approaches to decommission the Kinsale Area pipelines and umbilicals.

A **Comparative Assessment** (CA) was used to decide on the best approach from various options, using a framework which drew on OSPAR Decision 98/3 and OGUK (2015) guidance. The CA followed a systematic process, with a scoring system to assess each of the proposed decommissioning options, which was underpinned by technical and environmental information relevant to the various options, in which the safety, environmental, technical, social aspects and cost of the various options were evaluated. The process is documented in a CA report (**refer to EIAR Appendix E**) which includes the scoring methodology and scoring matrices for each of the options, and also narrative expanding upon the implications of each of the options.

This process resulted in a preferred decommissioning option for the pipelines and umbilicals which involves leaving these in situ, with rock cover used to remediate freespans and pipeline ends, including overall concrete mattresses left on the remaining pipeline end sections to reduce future risks to third parties. This is referred to as Option “Z” in the Comparative Assessment Report. The impact of this option with regards to quantity of rock placement has been previously calculated to amount to approximately 5,059 tonne (total for pipelines across the Seven Heads) based on a conservative assumption of rock berm design for the purposes of environmental assessment. Actual berm design will be subject to engineering assessment, to ensure the volume of rock deployed is minimised, subject to achieving the required technical function. The freespan lengths which will require rock placement will be verified by a pre placement survey.

The environmental impact of any potential additional quantities of rock placement has been accounted for in the EIAR and Comparative Assessment. The KADP EIAR assesses the impacts of various options for subsea and pipeline decommissioning. Section 7.3.1 of the EIAR sets out the potential effects of a clear and preferred methodology based on the results of the CA.

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Kinsale Area Decommissioning Project

Section 5

Decommissioning Project Management

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5 Decommissioning Project Management

5.1 Project Management Approach

The decommissioning project is being carried out in accordance with the PETRONAS Project Management System (PPMS). The PPMS is a gated process which segregates a project's life cycle into distinct phases.

The key objective of the PPMS document is to promote consistency in application and approach when undertaking projects managed by PETRONAS.

PETRONAS have developed a PPMS system specifically for decommissioning projects as detailed in **Figure 4** below.

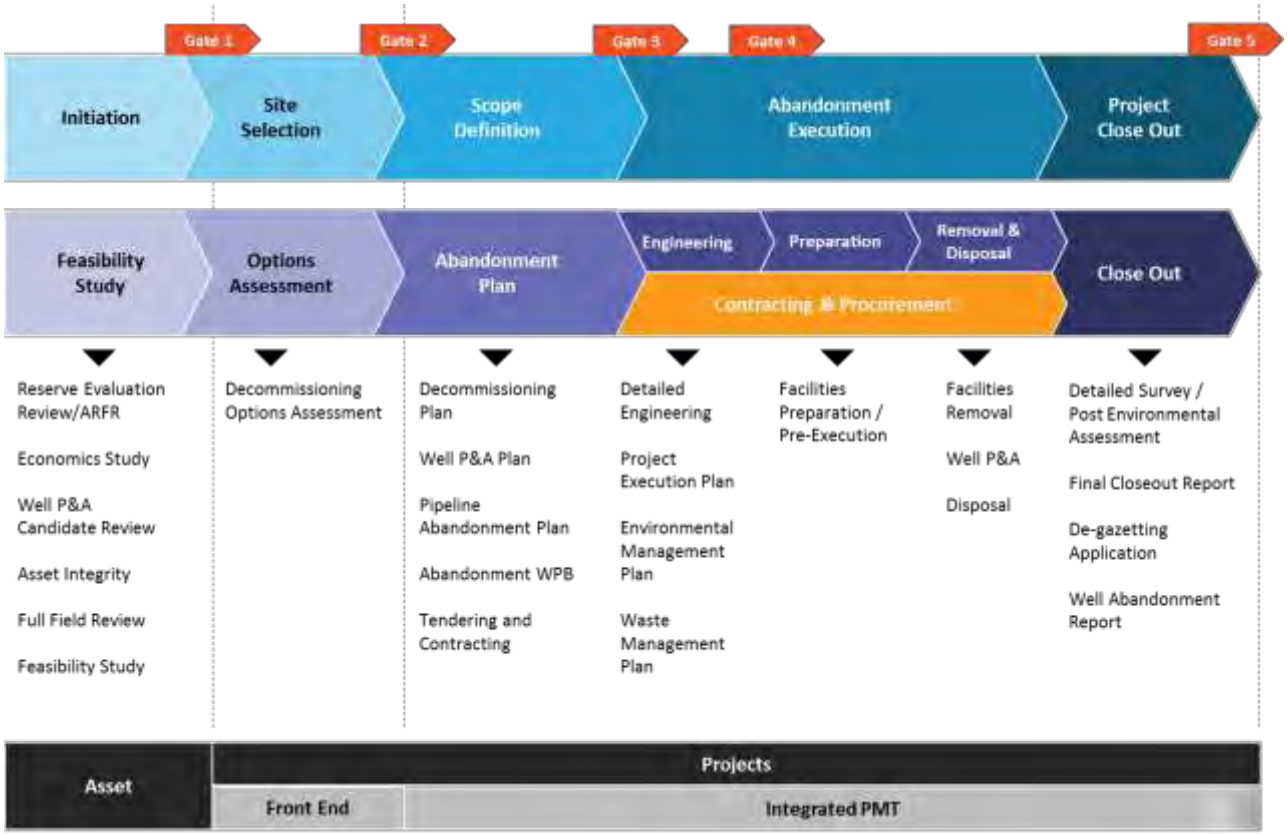

Figure 4: PETRONAS Project Management System for decommissioning projects

Completion of this Decommissioning Plan, managing all permitting, licences, authorisations, notices, consents and consultations and nomination of the decommissioning works contractors falls within Gate 1, 2 and 3 of the overall KADP, for which Kinsale Energy will also be responsible.

The selection of the final decommissioning methodology falls within Gate 4 which will be the responsibility of the selected removal contractors, in conjunction with Kinsale Energy. Execution, management of the works and project close-out will be the responsibility of the selected contractors.

5.2 Organisation

The project organisation will change through the life of the project to reflect the work scope. Initially, a small in-house Kinsale Energy team was set up to manage the regulatory and permitting process of the KADP.

This team was expanded in line with the Project Execution Plan (PEP) with existing KEL personnel being augmented as required by specialist contract personnel or by secondees from PETRONAS. The overall project organisation for the execution phase is as shown in **Figure 5.**

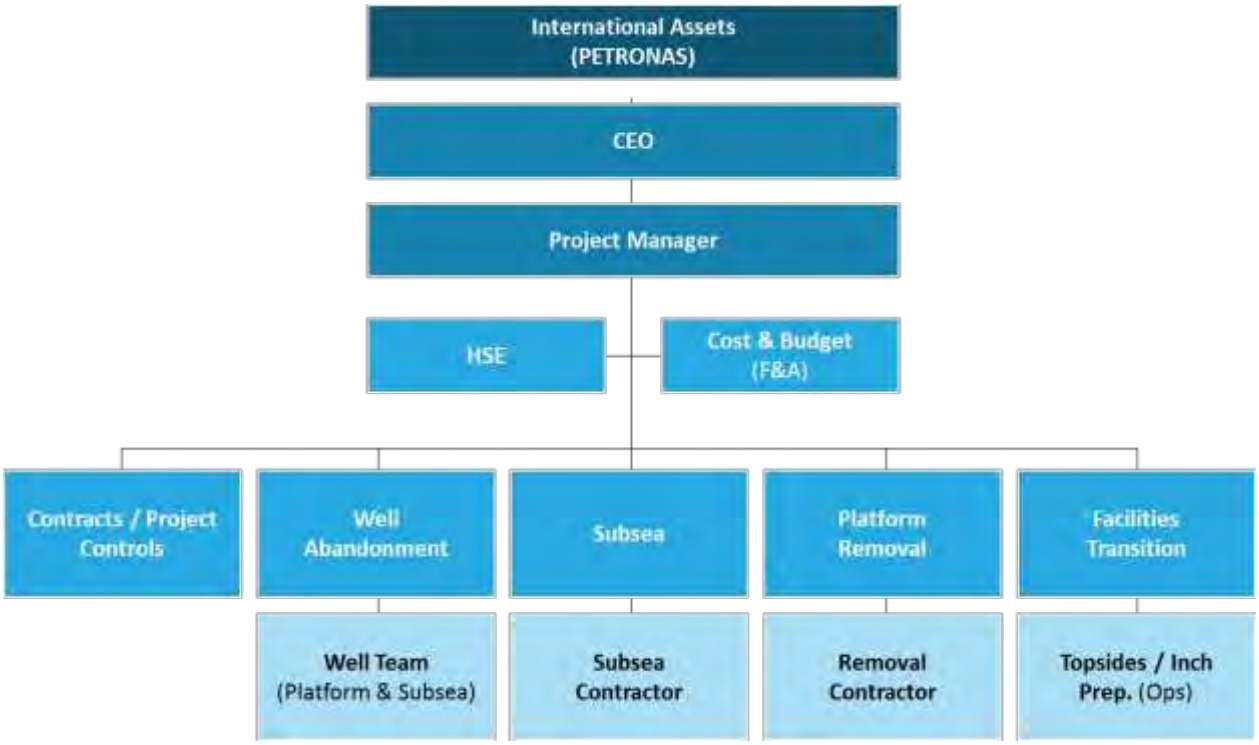

Figure 5: Project Team – Execution Phase

5.3 Resources

The following key positions are critical for project success and will be filled by Kinsale Energy/PETRONAS for the duration of the decommissioning works schedule (note that the positions shown in Italics below will not be required for the pipeline decommissioning works covered by this Consent Application):

- Head of Decommissioning
- *Project Controls Manager*
- *Topsides Facilities Decommissioning Coordinator*
- Subsea Infrastructure Decommissioning Coordinator
- *Well Abandonment Coordinator*
- Onshore Site Decommissioning Coordinator
- Project Engineers
- HES Manager
- Decommissioning Contracts Manager
- *Project Planner*

Additional external support may also be required from 3rd party organisations and consultants:

- Wells Engineering Team
- Other (public relations, marketing, legal advice etc.)

5.4 Costs

An indicative estimate of the overall cost will be provided separately to the Geoscience Regulatory Office (GSRO).

Subsequent to this, the monthly reports provided to the Minister will include details of cost, as per Condition 7 of Consent No.1.

5.5 Reporting

Reports to be issued during the decommissioning process have been agreed with the regulators (GSRO, and other regulatory bodies) and the following reports are in place or proposed.

Monthly Progress Report

A Monthly Decommissioning Progress Report is submitted to GSRO; this is the primary reporting mechanism throughout the project, supplemented by other reports as required, e.g. operational site reports etc.

The purpose of the Monthly Progress Report is to notify to the GSRO details of:

a) the status and progress of decommissioning, including engineering, planning and operations and

b) any unusual occurrences, including accidents, pollution and other HS&E incidents.

c) update on cost

Each Monthly Project Progress Report will:

a) cover one calendar month and

b) will be submitted within 25 days of the end of the report period.

The Format for the Monthly Project Progress Report is generally in accordance with the requirements set out in Appendix D of the Rules & Procedures for Offshore Production Operations

Operational Reports

During the course of decommissioning operations, a number of additional reports may be generated, depending on the specific activity in progress, e.g.:

- Subsea/marine operations – weekly activity summary

Post-Decommissioning Reports

- Decommissioning Close Out Report (refer to **Section 7.3**) including;
  - Seabed Clearance Survey Report
  - Environmental Summary Report
  - Decommissioning Operations Report

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Kinsale Area Decommissioning Project

Section 6

Decommissioning Activities and Schedule

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6 Decommissioning Activities and Schedule

6.1 Consent Application No. 3 Decommissioning Activities

6.1.1 Pipelines and Umbilicals

The decommissioning activity involves rock cover remediation of pipe ends and rock cover of freespans only. Additionally, mattresses or grout bags will be retained in place, where they are associated with sections of pipeline ends beyond the tie-in spools which are proposed to be recovered as part of the subsea structures removal. These will also be subject to rock placement.

For the purposes of the environmental assessment, rock cover, on freespans 'pipe ends and mattresses remaining *in situ* was assumed to be placed such that at least 0.2m cover would be provided at all points. The rock berm is calculated with a 1m wide berm over the pipe and mattresses (where present) and 1:2.5 slopes on either side. These rock cover dimensions were considered in order to provide a conservative yet reasonable assessment of the potential associated impact. Actual rock berm design will be subject to engineering assessment to ensure the volume of rock deployed is minimised subject to achieving the required technical function.

Table 7 provides estimates of the rock placement required for the decommissioning rock placement operations, based on the EIAR rock berm dimensions and the 2017 survey results. The rock placement vessel used for this assessment is assumed to have an approximate rock carrying capacity of 9,260m^3 (25,000Te), with the capability of placing approximately 1,666m^3 (4,500Te) of rock per day.

Graded rock will be used similar to existing rock material specifications (1"-5"), with all rock being placed in a controlled manner using a dedicated dynamically positioned fall pipe vessel and monitored by an ROV during placement. The rock will be sourced onshore, most likely from a UK or Norwegian quarry, because currently there are no Irish quarries with high capacity facilities for loading ships.

Table 7 Estimated rock placement requirements for *in situ* decommissioning options

Pipelines and Umbilicals	Pipe ends & freespans	
	Length of rock placement (Approx.)	Quantity (Approx.)
Seven Heads 18" export pipeline and main control umbilical	350m	626m^3 / 1,691Te
Seven Heads 8" flowlines & umbilicals to wells	1,360m	1,247m^3 / 3,368Te
Total	1,710m	5,059Te

Source: Based on CA method statements (modified after Ramboll 2017a, b) and length of pipeline exposure in Xodus (2016c)

The estimated vessel times for the pipeline, umbilical and protective material decommissioning is indicated in **Table 8**, with the overall schedule estimated at 12 days (including a 25% contingency).

Table 8 Estimated vessel timings (days) for pipeline and umbilical decommissioning

Vessel	Mob/ Demob/ Transit	Rock Placement	Total Duration	Total with contingency
Rock Placement Vessel (pipe ends & freespans)	8	2	10	12

Source: Based on CA method statements (modified after Ramboll 2017a, b) and additional vessel timings for rock placement vessel based on indicative mob/demob timings: vessel rock capacity (25,000Te) and placement rates (4,500Te/day).

6.2 Decommissioning Schedule

An indicative project programme for the entire KADP is shown in **Figure 6**.

Post CoP, the subsea pipelines connecting the platforms to the onshore terminal and subsea wells were displaced with seawater into the wells. Following this the platform well plug and abandonment was completed in order to achieve hydrocarbon free status on the Kinsale Alpha and Bravo platforms.

A subsea programme of works to decommission all relevant subsea structures, including the removal of spool pieces, umbilical jumpers and protection materials, is being undertaken in parallel with subsea well plug and abandonment activities and was completed in September 2021.

The works covered by this application are expected to be undertaken in the following periods:

- Pipeline pre-placement Survey: Q2/Q3 2022
- Rock placement on pipelines /umbilicals: Q3/Q4 2022

Some of these timings may be affected by uncertainties including:

Marine vessel availability: the specialised vessels required for Rock Placement, may not be available in the time windows planned, due to market conditions or over-runs on other projects; the contracting strategy will be flexible to allow for re-scheduling if required.

Weather: many of the key operations are weather sensitive, e.g. surveys, rock placement, and the program may be delayed due to extreme weather conditions. The time estimates and durations used for planning purposes are based on historical performance data, and include some allowance for weather downtime, based on previous experience.

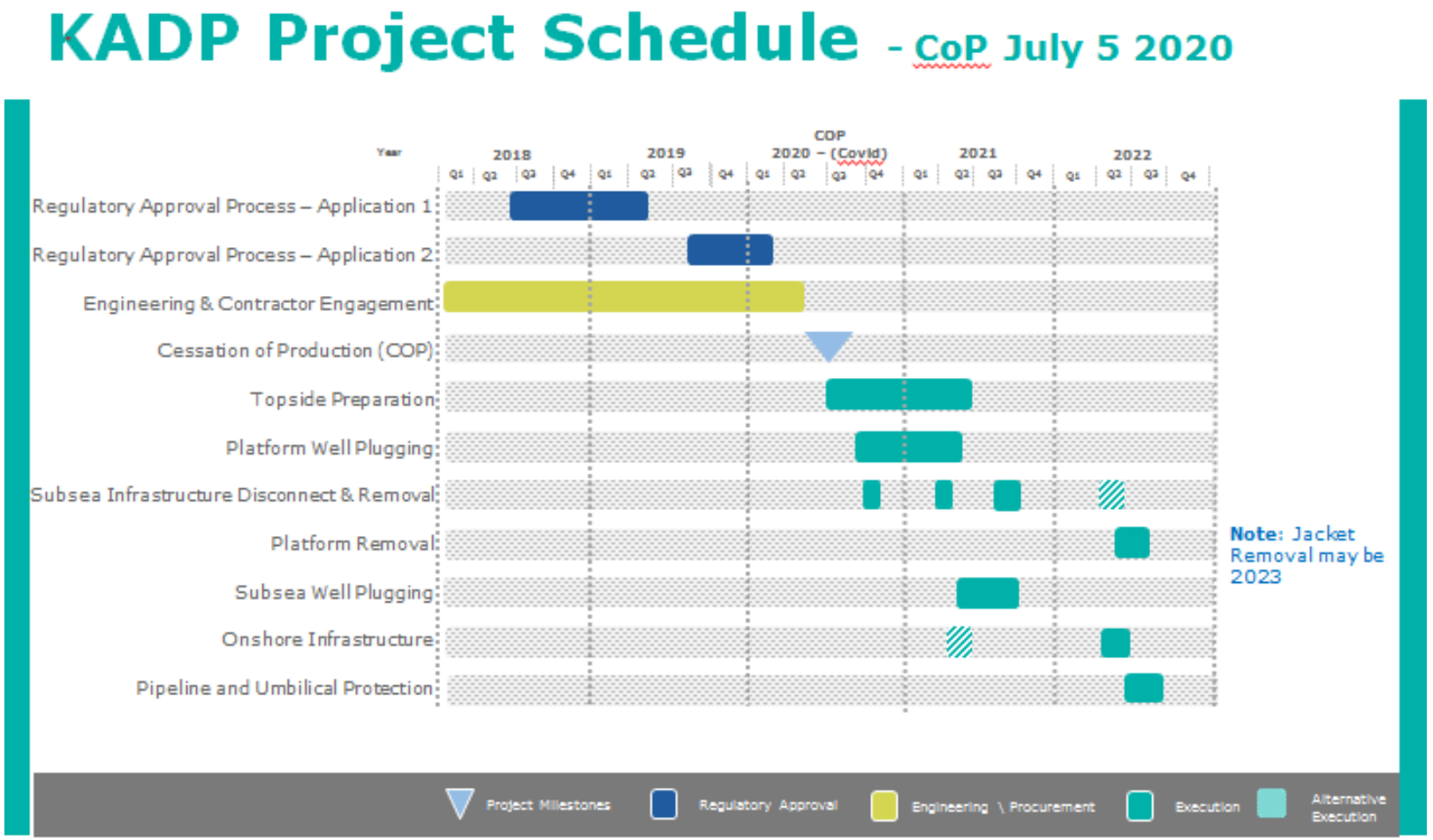

Figure 6: Indicative Project Schedule

Note: The timing of activities may also vary depending on company strategy and availability of specialised marine vessels.

6.3 Materials and Waste Management

6.3.1 Waste Management Objectives

Kinsale Energy will follow the principles of the waste hierarchy for the KADP. Taking into account key resource and waste management policy and legislation and the likely waste generation from the relevant decommissioning activities, the resource and waste management objectives for KADP are as follows:

- Maximise reuse and recycling;
- Minimise disposal of waste to landfill; and
- Minimise environmental impacts of waste management.

6.3.2 Materials Generated

No materials will be generated from the facilities covered by this Decommissioning Plan.

6.3.3 Waste Management Strategy

As the scope of this decommissioning plan includes the leaving in situ of the pipelines and umbilicals and the placement of rock, there will be no waste generated by these works. Therefore there is no specific waste management strategy for the facilities covered by this Decommissioning Plan.

Normal vessel waste is covered under normal maritime legislation (i.e. Marpol) and the required plans will be put in place.

However, the decommissioning contractor will be responsible for developing and implementing appropriate procedures, securing the relevant authorisations and agreements to ensure appropriate management and disposal of waste and resources throughout the KADP. The Contractor will also be required to employ staff with skills, qualifications and experience appropriate to the needs of the works to be carried out during the KADP

In addition, written approval from KEL must be obtained prior to commencement of any decommissioning works. The contractor will be responsible for managing environmental issues through appropriate risk management, mitigation, auditing, licensing and monitoring and will be required to ensure compliance with legislative and commercial standards.

6.4 Health and Safety

6.4.1 KEL Health, Safety and Environment Risk Management System

In addition to the legislative basis set out above, and adhering to the OSPAR Convention requirement to protect the maritime area against the adverse effects of human activities, Kinsale Energy (as a wholly owned subsidiary of PETRONAS) operates a Health, Safety and Environment Management System (HSEMS) based on the requirements of internationally accepted standards for Environmental Management (ISO14001) and for Occupational Health and Safety (OHSAS18001).

Kinsale Energy's Health, Environment and Safety (HES) policy commits the company to take all reasonable and practical steps to prevent and eliminate risks of injuries, occupational illness, damage to property and the conservation of the environment. This policy is applicable to Kinsale Energy's activities and those of its contractors. All contractors must adhere to all Kinsale Energy HES policies and procedures.

The Kinsale Energy HSEMS is structured around 8 elements which are summarised below:

Leadership and Commitment: addresses top-down commitment and company culture necessary for success in the systematic management of HES.

Policy & Strategic Objectives: a written HES Policy is required as a minimum.

In setting strategic objectives and developing a HES Plan, management is required to consider the overall risk levels of its business activities taking into consideration the legal requirements, technological change, emerging issues and key stakeholders expectations.

Organisation, Responsibilities, Resources, Standards & Documents: addresses the organisation of people within Kinsale Energy, and the resources and documentation for sound and sustainable HES performance. Requires that the organisation and resources are adequate for its purpose, and that responsibilities for safety critical positions at all levels are clearly described, communicated and understood. It requires that staff based offshore are developed following structured competency assessment and training systems.

Hazards and Effects Management Process (HEMP): describes the identification of hazards and evaluation of HES risks for all activities, products and services, and the development of control and recovery measures to reduce HES risks to as low as reasonably practicable (ALARP).

Planning and Procedures: addresses asset integrity, procedures and work instructions, work permit system, management of change, contingency and emergency planning expectations, legislation compliance, process safety management, purchasing and procurement.

Implementation and Monitoring: addresses how activities are performed and monitored, and how corrective action is taken when necessary.

Audits: puts in place a programme to review and verify the effectiveness of the management system. It includes audits by independent auditors of processes or facilities.

Management Review: a formal process for management to review the effectiveness and suitability of the Management System in managing HES risks and ensuring continual improvements in HES performance. A management review occurs every 2 months at the HES Management Committee meeting.

6.4.2 Safety Case

In accordance with the requirements of the Petroleum Safety Framework, as established under the Petroleum (Exploration and Extraction) Safety Act 2010, and as amended by the Petroleum (Exploration and Extraction) Safety Act 2015, Kinsale Energy submitted a number of Safety Cases to the CRU, as follows:

- Decommissioning Safety Case – covered platform based activities up to “hydrocarbon-free” status
- Well Work Safety Cases – covers all well abandonments
- Non-Production Installation Safety Case – covers well intervention vessels/drilling rigs (prepared by NPI Owner)

The Safety Cases submitted to the CRU were prepared in accordance with the Safety Case Guidelines, including CRU18183 ‘Requirements of the Petroleum Safety Framework’, CER/16/024 ‘Safety Case Requirements’, CER/16/106 ‘ALARP Guidance’ and CER/16/016 ‘Compliance Assurance System’.

The Decommissioning Safety Case and platform Well Work Safety Cases were approved by the CRU on the 02nd July 2020. The Subsea Well Abandonment Well Work Safety Cases and Non Production Installation Safety Case were approved on the 01st April 2021.

The CRU carried out a final visit to Alpha and Bravo platforms and Inch terminal from 28th to 30th July 2021. Following on from the visit, CRU issued a letter on 6th August confirming that they considered all locations to be hydrocarbon free, in accordance with the Safety Case Guidelines. The CRU confirmed the

Decommissioning Safety Case, and the Platform Wellwork Safety Cases no longer applied and the associated permits were cancelled.

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Kinsale Area Decommissioning Project

Section 7

Post-Decommissioning Phase

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7 Post-Decommissioning Phase

7.1 Post Decommissioning Status

Previous Consent Applications for Seven Heads allowed for:

- All wells to be plugged and abandoned

- Subsea structures to be removed.

Under the current application (Consent Application 2) remaining offshore pipelines, umbilicals and associated protection material will be decommissioned *in situ.*

7.2 Post Decommissioning Survey

The pipelines and umbilicals decommissioned in situ will be surveyed prior to rock placement to accurately record their location and status and to confirm the locations of freespans. Rock berm locations will be surveyed as part of the rock placement operations. This information will be included in navigational charts and also passed on to representatives of the fishing community.

7.3 Decommissioning Close-out Reports

A close out report will be submitted to the Geoscience Regulatory Office (GSRO) within 6 months of completion of the offshore decommissioning scope covered by this Decommissioning Plan. Pursuant to Condition 8 of Consent No.1, the close out report will contain the following information:

- Confirmation of completion of decommissioning works included within this Decommissioning Plan.
- Details of the decommissioning works undertaken including:
  - Equipment & vessels used,
  - Materials used,
  - Cost,
  - Construction drawings, and
  - An explanation of any variations (approved during the works) to the original approved Decommissioning Plan.
- Survey Reports to confirm everything completed in accordance with the Decommissioning Plan

7.4 Post Decommissioning Monitoring

The decommissioning plan involves the leaving in-situ of pipelines/umbilicals with rock cover remediation where required.

Kinsale Energy is confident, based on the historical stability of the seabed, pipelines and rock placement over the past forty years, as well as the results of risk assessments and fishing interaction studies it has carried out, that the potential for impact on other users of the sea from the in-situ infrastructure is remote.

Post decommissioning surveys will be carried out at intervals within a period of 10 years from completion of the initial post decommissioning survey, using a risk-based assessment approach.

Each survey will entail acoustic surveys of the entire length of the pipelines and umbilicals. A survey report will be submitted to GSRO after each survey.

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Section 8

Environmental Assessment

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8 Environmental Assessment

An Environmental Impact Assessment Report (EIAR) and AA Screening Report have been prepared for the entire KADP project, to provide the necessary environmental appraisal information to enable the Competent Authority, in this case the Minister for Environment, Climate and Communications to undertake an Environmental Impact Assessment (EIA) for the decommissioning of the Kinsale Area facilities. This includes the facilities associated with this Decommissioning Plan.

An EIAR addendum (Ref: 253993-00-REP-27) and AA Screening Addendum ((Ref: 253993-00-REP-26) have been prepared to reflect additional information provided to the Minister during the consent process for Consent No.1 and any new or additional relevant environmental information which was published since the preparation of the EIAR.

The following summarises the key points of the EIAR and EIAR Addendum.

8.1 Environmental Baseline and Sensitivity

Since 2002, there have been a series of seabed baseline and monitoring surveys undertaken in the Kinsale Area associated with exploration wells, field and pipeline developments and operations. Together with geophysical mapping undertaken as part of rig site and pipeline route surveys, and seabed survey undertaken in 2017 for the KADP, these surveys provide a good understanding of the seabed topography, sediments and their dynamics, fauna and contaminant status.

Section 4 and 5 of the EIAR details the environmental baseline for the terrestrial and offshore Kinsale Area and its sensitivity. The EIAR addenda submitted with Consent Application no. 2 and this Consent Application summarise new and relevant information available since the EIAR was completed, for example the results of the ObSERVE programme of surveys of bird and marine mammals off Ireland, updates from observations of marine mammals and birds made during recent Celtic Sea Herring Acoustic Surveys, and changes to the other users baseline.

8.2 Environmental Assessment Methodology and Identification of Potentially Significant Effects

Effects which could arise from the activities associated with the KADP were identified on the basis of the nature of the project (including its location, physical and operational characteristics, residues, emissions and wastes), considered against the description of the offshore and terrestrial environment, and the understanding of impact pathways from a range of sources, including:

- Regional and site specific environmental data, including a pre-decommissioning environmental survey carried out in May 2017, and a site walkover at the Inch terminal site in June 2017
- Typical vessel specifications (e.g. for support, heavy lifts and rock placement)
- Estimates of materials and wastes arising from the decommissioning work
- Decommissioning planning studies and indicative information provided by decommissioning contractors and engineering consultants
- Typical drilling rig and vessel specifications
- Experience of relevant aspects and operations of analogous projects in the Celtic Sea, Irish Sea, North Sea and elsewhere
- Peer reviewed scientific papers describing the effects of specific and analogous interactions
- Other publicly available “grey” literature

- The Irish Offshore Strategic Environmental Assessment (IOSEA) 4 Environmental Report and Irish Offshore Strategic Environmental Assessment (IOSEA) 5 Environmental Report
- Conservation site designations, potential designations, and site advice etc. where relevant
- Applicable legislation, guidance and policies
- A number of EIAR workshops involving Kinsale Energy and the report authors
- Input to the EIA process through consultation with relevant stakeholders.

Potential effects of the KADP were identified on the basis of defined severity criteria, and allow for the consideration of effect likelihood, scale and frequency. The identification of potential effects (positive or negative) also considered those which are direct and indirect, which could lead to cumulative or transboundary effects, as well as their likely duration.

Potential effects were identified against a range of relevant environmental receptors within the broad environmental factors which must be considered under the EIA Directive, namely: population and human health; biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC; land, soil, water, air and climate; material assets, cultural heritage and the landscape; and interaction between the factors. Additionally, effects from the vulnerability of the project to risks of major accidents and/or disasters were also considered.

Potentially Significant Environmental Effects to be Considered Further

A number of environmental effects were identified as being of potential significance and/or with potentially moderate or more severe impacts. Those decommissioning activities identified to likely, directly or indirectly, affect one or more relevant environmental factors have been grouped together by major source of effect as summarised in **Table 9** below. These potential effects are considered in Section 7 of the EIAR.

Table 9: Summary of potential significant environmental effects[4] for each Consent Application

Source of Potential Significant Effect	Activity	Relevant Environmental Factor				
		Population and human health	Biodiversity	Land, soil, water, air and climate;	Material assets, cultural heritage and the landscape;	interaction between the factors r
Consent Application 1						
Physical presence: decommissioning operations	Physical presence in field and in transit of supply vessels, barge/or heavy lift vessels and drilling rig	✓	✓		✓	
Physical disturbance	Drill rig positioning and vessel anchoring. Mattress removal, cutting of spool pieces and umbilical jumpers and their subsequent removal. Removal of manifolds and wellheads.		✓	✓	✓	✓

[4] The potential significant environmental effects outlined in this table relate to the EIA of the entirety of the KADP. The potential significant environmental effects associated with the decommissioning of the pipelines and umbilicals are outlined in further detail in Section **7** of the EIAR.

Source of Potential Significant Effect	Activity	Relevant Environmental Factor				
		Population and human health	Biodiversity	Land, soil, water, air and climate;	Material assets, cultural heritage and the landscape;	interaction between the factors r
Underwater noise	Mechanical cutting well conductors and removal of well surface casings. Rig and vessel noise.		✓			✓
Discharges to sea	Cementing and other chemicals associated with well abandonment operations. Hydraulic fluid release during umbilical cutting.		✓	✓		
Energy use and atmospheric emissions	Power generation (rig and vessel) Materials recycling			✓	✓	✓
Waste: materials recycling, reuse and disposal	Solid and liquid wastes to shore Removal of hazardous materials Materials recycling Onshore waste treatment, landfill of residual waste/materials Offloading and storage/dismantling of offshore structures onshore Road transport Hazardous material handling.	✓		✓	✓	
Accidental events	Dropped objects Vessel collision risk Accidental spills of fuel/lubricants.	✓	✓	✓	✓	✓
Consent Application 2 (Kinsale Head)						
Physical presence: decommissioning operations	Physical presence in field and in transit of supply vessels, barge/ or heavy lift vessels.	✓	✓		✓	
Physical presence: legacy materials (left *in situ*)	Presence of jacket stumps and protection materials post decommissioning	✓			✓	
Physical disturbance	Vessel anchoring. Excavation of jacket piles/leg stump remediation and removal of jacket. Recovery of large items of debris from the seabed. Remedial rock placement at jacket		✓	✓	✓	✓
Underwater noise	Mechanical cutting of jacket legs and structural members. Vessels. Post-decommissioning survey.		✓			✓

Source of Potential Significant Effect	Activity	Relevant Environmental Factor				
		Population and human health	Biodiversity	Land, soil, water, air and climate;	Material assets, cultural heritage and the landscape;	interaction between the factors r
Discharges to sea	Release of inhibited water from export pipelines.			✓		
Energy use and atmospheric emissions	Materials recycling			✓	✓	✓
Waste: materials recycling, reuse and disposal	Offloading and storage/dismantling of offshore structures onshore Road transport. Materials recycling Onshore waste treatment Landfill of residual waste/materials.	✓			✓	
Accidental events	Dropped objects Accidental spills of fuel/lubricants and chemical spills.	✓	✓	✓	✓	✓
Consent Application 3 (Kinsale Head Lease) and Consent Application 2 (Seven Heads Lease)						
Physical presence: decommissioning operations	Physical presence in field and in transit of supply vessels, barge/ or heavy lift vessels.	✓	✓		✓	
Physical disturbance	Presence of pipeline, umbilicals and protection materials post decommissioning	✓			✓	
Underwater noise	Vessel anchoring. Recovery of large items of debris from the seabed. Remedial rock placement of pipelines. Acoustic surveys of the seabed.		✓	✓	✓	✓
Discharges to sea	Vessels, including rock placement. Post-decommissioning survey.		✓			✓
Waste: materials recycling, reuse and disposal	Landfill of residual waste/materials. Road transport Material Recycling	✓		✓	✓	✓
Accidental events	Dropped objects Accidental spills of fuel/lubricants and chemical spills.	✓	✓	✓	✓	✓

A consideration of KADP activities or issues judged to have positive, minor or negligible environmental effects is given in **Appendix D of the EIAR**.

8.3 Management of Residual Effects and Conclusions

Through a systematic evaluation of the activities relating to the proposed KADP and their interactions with the environment, a variety of environmental effects were identified, the majority of which were of limited extent and duration and considered minor. Those activities identified as being of potentially greater concern were described and assessed further in the EIAR.

A number of potential effects are mitigated through mandatory requirements (e.g. as required by legislation) and project scope of works (e.g. rock placement on pipelines remaining *in situ*). Such mandatory control measures and additional mitigation measures identified are listed in **Table 10**, and will be included in detailed design and final project planning and execution.

These are fully detailed in the EIAR, Section 8.

Table 10: Summary of commitments and actions

Issue	Action
Environmental Management Commitments	
Compliance assurance	Ensure management of the applications for and monitoring of compliance with the requirements of project environmental permits and consents.
Procurement	Ensure requirement to meet MARPOL standards for special areas included in procurement of vessels and rigs used in decommissioning operations.
Contractor management	All vessels and the rig to be used during decommissioning will be subject to audit. Contractor performance will be monitored throughout the decommissioning operations
Activity planning	Wherever possible, seek to minimise vessel days by making using of vessel synergies and careful activity phasing.
Interaction with other users: decommissioning operations	Notices to Mariners will be issued to cover all phases of decommissioning work to communicate the nature and timing of the activities. All vessels used in the decommissioning operations will meet applicable national and international standards (e.g. in terms of signals and lighting) and would follow established routes to ports. Should the jackets be placed in “lighthouse mode” for a period of time following topside removal, navigational aids of a type agreed with the Commissioner of Irish Lights will be deployed. Consult will take place with fisheries organisations and relevant marine authorities in accordance with legislation.
Discharges to sea:	Ensure chemical risk assessment is undertaken as part of final well decommissioning chemical selection and apply for relevant chemical permits (Permit for Use and Discharge of Added Chemicals – PUDAC).
Waste production	Implement a detailed Resource and Waste Management Plan which maximises the potential for reuse and recycling, including source segregating waste where appropriate. Management of all waste will be undertaken in accordance with the relevant waste legislation and only permitted and licensed waste facilities will be used.
Atmospheric emissions	As part of the decommissioning waste management plan (above), the benefit of materials returned to shore will be maximized through preferential reuse and recycling wherever possible.
Accidental events: Seabed debris from dropped objects	All lifting operations will be risk assessed.

Issue	Action
Accidental events: loss of diesel inventories	Undertake audit of vessel bunkering procedures. Bunkering to be conducted in favourable sea states and during daylight hours so far as practicable. Procedure to be agreed with DTTAS.
Mitigation measures and residual effects	
Interaction with other users: decommissioning operations	Guard vessels will be used to minimise the potential for interaction between decommissioning vessels and other users.
	Residual effect: *The use of guard vessels would reduce the risk of other user interaction with certain activities associated with the decommissioning project (e.g. heavy lifts). Noting that these would take place in existing and charted surface exclusion zones, with all vessels subject to mandatory lighting and marking controls, the addition of a guard vessel will result in a minor risk reduction to other users. The residual impact from interactions with other users is temporary and minor.*
Interaction with other users: legacy materials left *in situ*	Rock cover remediation will be used to mitigate the potential snagging risk associated with decommissioning pipelines and umbilicals *in situ*, and the rock will be designed to be over trawlable.
	Residual effect: *On application of rock cover following removal of exclusion zones around relevant infrastructure, there remains a low risk to other users (primarily fishing) from interactions with pipelines and umbilicals. The option to rock cover all exposed pipeline sections would further reduce risks to third parties.*
	Pipelines and umbilicals will be surveyed post-decommissioning to establish their exact position and this information will be included into navigational charts
	Residual effect: *The post-decommissioning survey will confirm/update the position of the pipelines and umbilicals and inform any update to their charted location to ensure other users are aware of their accurate position, and therefore contribute to risk reduction from interaction.*
Physical disturbance: sensitive seabed features	The minimisation of rig and vessel movements which require anchoring, and the use of dynamic positioning (DP) on most vessels, where practicable (note that sensitive features (e.g. wrecks, Annex I habitats) have not been recorded in previous surveys within the working area). Pipeline decommissioning options (rock placement) which minimise physical disturbance will be selected subject to wider environmental, safety, technical and economic considerations. For each option involving rock placement, efforts will be made to minimise the volume of rock deployed.
	Residual effect: *The measures have the potential to reduce the significance of effect by minimising seabed footprint of activities. The predicted effect of seabed disturbance is negligible and short-term.*

8.3.1 Conclusion

The overall conclusion of the Environmental Impact Assessment Report is that, in view of the predicted scale, intensity and duration of the activities, with the implementation of the proposed mitigation and risk reduction measures and commitments in **Table 10**, the KADP will not result in significant adverse effects on the environment, other users, or population and human health.

8.4 Conclusions of the Appropriate Assessment Screening

A separate Appropriate Assessment Screening Report (reference, 253993-REP-14) plus addenda submitted with Consent Application no. 2 and this Consent Application has been prepared for the entire KADP to provide the necessary information required by the competent authority, the Minister, to undertake screening (Stage 1) to determine if a full Appropriate Assessment of the decommissioning of the Kinsale Area gas fields and facilities is required. The screening assessment was carried out without reference to any measures intended to avoid or prevent impacts on any European Site, commonly referred to as mitigation measures.

The report concludes that the proposed project is not directly connected with or necessary to the management of any Natura 2000 sites.

The screening assessment identified 13 SACs and 15 SPAs within approximately 100km of the proposed project. Based on the information provided above, and by applying the precautionary principle, it is determined that it is possible to rule out likely significant impacts on the integrity of any Natura 2000 site and therefore it is not deemed necessary to undertake any further stage of the Appropriate Assessment process.

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Kinsale Area Decommissioning Project

Section 9

Stakeholder Engagement

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9 Stakeholder Engagement

9.1 Introduction

A systematic, documented process has been put in place to manage the stakeholder consultation requirements and we have set out below our approach to this process.

The overarching approach that has been adopted for stakeholder management on the project is as follows:

- Any party outside of the project participants is considered a stakeholder.
- All stakeholders will be consulted with and updated on the project as appropriate
- Ensure stakeholders have had the opportunity to input into the project as appropriate

To achieve the above:

- A stakeholder manager was appointed for the project. Their role is to:
  - co-ordinate stakeholder communications, and
  - maintain a register of all stakeholder communications.
- A live stakeholder register is being maintained and which records historic and planned stakeholder engagement and communications.
- The register will be maintained throughout the development of the project.

9.2 Stakeholder Engagement Activities

During the preparation of the previous consent applications, under Consent Application 1 and 2, discussions were had and/or correspondence made with statutory and non-statutory bodies and other interested parties in order to ensure that issues relating to the proposed KADP were addressed. The parties consulted include the following:

- Geoscience Regulatory Office (GSRO) – Dept of Environment, Climate and Communications (formerly Petroleum Affairs Division (PAD) - Department of Communications, Climate Action and Environment)
- Commission for Regulation of Utilities (CRU),
- Marine Planning and Foreshore Unit – Department of Housing, Planning and Local Government,
- Cork County Council,
- National TFS (Trans Frontier Shipments) Office, Dublin City Council,
- National Parks and Wildlife Service (NPWS),
- National Monuments (NM),
- Ervia,
- Gas Networks Ireland (GNI),
- ESB,
- Cork Port Operations,
- Naval Operations (Cork),
- South West Regional Fisheries Forum,
- South East Regional Fisheries Forum,
- Birdwatch Ireland,

- Irish Whale and Dolphin Group (IWDG),
- Cork City Council,
- TDs and local councillors.

For a full list of consultees, please refer to Appendix F of the EIAR.

A consultation response was received from the Irish Whale and Dolphin Group (IWDG) noting the need to ensure that the decommissioning works will not disturb or degrade the marine habitat for cetaceans.

The proposed decommissioning scope of work and the environmental assessment has had due regard to the concerns regarding the protection of cetaceans and ensures that potential adverse effects are minimised.

A written response was also received from Dublin Airport Authority (DAA) stating that DAA has no observations to make on the KADP.

A meeting was held between Kinsale Energy, Arup/Hartley Anderson and NPWS during the consultation process. At this meeting Kinsale Energy outlined the proposed decommissioning project as well as detailing the methodology being used to assess ecological impacts and impacts on Natura 2000 sites. NPWS requested that the following was also considered:

- To consult with the IWDG for data on cetaceans.
- To consider the Marine Institute's Fisheries Ecosystems Advisory Services (FEAS) survey data, in particular marine mammal and seabird observations made during the Celtic Sea herring and ground fish surveys.

Subsequent to the meeting, useful information was obtained from both the IWDG and FEAS publications which has been reflected in the KADP EIAR.

A response was also received from the National Monuments Service of the Department of Culture, Heritage and the Gaeltacht regarding the underwater archaeology assessment. The environmental assessment has had due regard to underwater archaeology.

In addition to the above, two public consultation sessions were undertaken with invitations made to all key stakeholders and interested members of the local community. The first information session took place at the Clayton Hotel, Cork City On 18th April 2018. An advertisement was placed in the local newspapers and letters sent to key stakeholders. The second public information session was hosted in the Aghada Community Centre, East Cork on 19th April 2018. This was arranged to facilitate residents living in the area of the onshore Inch terminal. Letters of invitation were individually delivered to residents in the Inch area in advance of the information session.

Both public information sessions were well received, with a total attendance of 45 people across both sessions. Feedback received from stakeholders has been positive and will be monitored and managed for the duration of the project.

For Consent Application 2 (Seven Heads Lease), consultations were also held with the Environmental Protection Agency

9.3 Further Stakeholder Engagement

Stakeholder management will continue throughout the decommissioning works and may extend beyond completion, if there are any long term monitoring or maintenance requirements imposed as conditions of the consents (refer to **Section 7**).

Taking into consideration the stakeholder consultation which has been completed as part of the preparation of the Decommissioning Plan (refer to **Section 9.2**), the following stakeholders are included on Kinsale Energy's current stakeholder register may require further consultation prior to, during and/or following the decommissioning works:

- Geoscience Regulation Office (GSRO) – Department of Environment, Climate and Communications
- Commission for Regulation of Utilities (CRU)
- Gas Networks Ireland/Ervia
- Marine Planning and Foreshore Unit - DHPLG
- Cork County Council
- TFS Office, Dublin City Council
- NPWS & National Monuments - DAU - DAHRRG
- The Irish Coast Guard (IRCG)
- Irish Maritime Operations Centre (NMOC) of the Irish Coast Guard - (Marine Rescue Co-Ordination Centre (MRCC) of the Irish Coast Guard)
- Marine Radio Affairs Unit of the Maritime Safety Directorate
- Maritime Safety Policy Division of the Maritime Safety Directorate
- Ship Source Pollution Prevention Unit Irish Maritime Administration (Formerly - Marine Environmental Division of the Maritime Safety Directorate)
- Marine Institute
- Commissioners of Irish Lights (CIL)
- Naval Operations – Department of Defence
- Cork Port Operations
- Environmental Protection Agency
- RNLI Ballycotton
- Sea Fisheries Protection Authority
- Sea Fisheries Policy Division
- South & West Fishermen's Organisation
- Irish South & West Fish Producer Organisation (IS&WFPO)
- Irish South & East Fish Producer Organisation (IS&EFPO)
- South West Regional Fisheries Forum / (Regional Inshore Fisheries Forum)
- South East Regional Fisheries Forum / (Regional Inshore Fisheries Forum)
- National Inshore Fisheries Forum (NIFF)
- Irish Fish Producers Organisation (IFPO)
- Bord Iascaigh Mhara
- Irish Fish Producers Organisation
- Irish Whale and Dolphin Group
- Birdwatch Ireland
- Landowners of onshore pipeline & wayleave
- Local Residents – Inch
- General Public
- Environmental Protection Agency (EPA)
- Health & Safety Authority

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Appendix A

Further Information

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Appendix A1

Relevant International Conventions and European Legislation

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A1.1 Relevant International Conventions and European Legislation

Table A1 below summarises the key international conventions and European legislation relevant to the KADP. **Section A1.2** and **Section A1.3** provide further detail.

Table A1: Key International legislation relevant to the KADP

Relevant Legislation	Consents / requirements for Decommissioning
OSPAR Convention (1992)	The KADP shall take all possible steps to prevent and eliminate pollution and apply the necessary measures to protect the maritime area against the adverse effects of human activities during works. Under paragraph 2 of the Decisions 98/3, the dumping, and leaving wholly or partly in place, of disused offshore installations is prohibited within the OSPAR maritime area – Kinsale Area platforms and subsea structures to be removed as part of the KADP.
MARPOL Convention, International Maritime Organisation (1978)	Ireland ratified the Convention, the requirements of which are transposed in Sea Pollution Act, 1991 (No. 27 of 1991). The Convention will apply to all shipping operations associated with the KADP ensure the prevention of pollution of the marine environment.
UN Convention on the Law of the Sea (1982)	The Convention will apply to the granting by the competent authority of an authorisation for the KADP.
Basel Convention	Any waste generated by the KADP, which has to be exported from Ireland, will be subject to the Convention.
Espoo Convention	Assessment required of the potential for the proposed activity to result in significant transboundary effects.
OECD Decision on the Control of Transboundary Movements of Waste	Any waste generated by the KADP, which will be exported from Ireland, will be subject to the OECD Decision.
Ballast Water Convention	All vessels associated with the KADP are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management plan. All ships vessels also have to carry a ballast water record book and an international ballast water management certificate.
Water Framework Directive (2000/60/EC)	The Water Framework Directive, EC (2000), sets the objectives for water protection for the future and applies to inland surface waters, groundwater, transitional waters and coastal waters. Most of the KADP activities will be located outside 'coastal waters', as defined in the Directive. The Directive requirements will apply only to near shore and onshore decommissioning activities.
Marine Strategy Framework Directive (2008/56/EC)	The Directive aims to achieve good environmental status for the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. Most of the KADP activities will be located within the marine area, to which the Directive applies. The Directive requirements will apply to KADP activities.
Waste Framework Directive (2008/98/EC)	Waste activities arising from the KADP must comply with the Directive.
Commission Decision 2000/532/EC on the list of wastes, as amended by Commission Decision 2014/955/EU	Waste, arising from the KADP, must be classified in accordance with the Decision.

Relevant Legislation	Consents / requirements for Decommissioning
Regulation (EC) No 1013/2006 on Shipments of Waste	The management of waste, arising from the KADP, must comply with the requirements of the Regulation.
Aarhus Convention (Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters) (1998)	The relevant requirements of the Aarhus Convention, in relation to public participation in decision making on environmental matters, have been incorporated into the EIA Directive 2011/92/EU.

A1.2 Relevant International Conventions

MARPOL Convention

MARPOL Convention, International Maritime Organisation (1978), is the main international convention covering prevention of pollution of the marine environment. It was developed in an effort to minimise pollution of the oceans and seas and to preserve the marine environment. Its aim is to eliminate planned discharge of pollutants to the marine environment and to minimise accidental spillage of deleterious substances.

The MARPOL Protocol was developed and adopted in 1978 in response to a number of tanker accidents in 1976 and 1977. As the 1973 Convention had not yet entered into force, the 1978 Protocol absorbed the parent Convention. It entered into force in 1983 and was updated by amendments over the years. In 1997, a new Protocol was adopted to amend the Convention and a new Annex VI added.

The Convention includes regulations aimed at preventing and minimising pollution from ships - both accidental pollution and that from routine operations - and currently includes six technical Annexes.

Ireland ratified the Convention, the requirements of which are transposed in Sea Pollution Act, 1991 (No. 27 of 1991).

The Convention will apply to all shipping operations associated with the KADP.

UN Convention on the Law of the Sea (1982)

The UN Convention on the Law of the Sea (UNCLOS), UN (1982), defines the exclusive economic zone (not greater than 200 nautical miles from the low water mark) where the rights and jurisdiction of the coastal State are governed by the Convention. Within the exclusive economic zone, the convention gives a State the sovereign right to the exploitation of resources and exclusive jurisdiction over authorisation and regulation of any installations or structures (refer to Article 56, paragraph 1(a) and 1(b) and Article 60, paragraph 1 and 2).

Article 193 of UNCLOS further references the granting of exclusive rights to Coastal States to explore and exploit the natural (non-living) resources and states the following with regard to environmental protection:

“States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment”.

With regard to disused installations or structures, Article 60, paragraph 3, states the following:

“Any installations or structures which are abandoned or disused shall be removed to ensure safety of navigation, taking into account any generally accepted international standards established in this regard by the competent international organization [such as the International Maritime Organisation (IMO)]*. Such removal shall also have due regard to fishing, the protection of the marine environment and the rights and duties of other States. Appropriate publicity shall be given to the depth, position and dimensions of any installations or structures not entirely removed”.*

The ambiguity between the requirement to remove abandoned or disused installations and reference to publicity for structures not entirely removed has led to debate and different interpretations of the decommissioning requirements of UNCLOS.

UNCLOS also makes provision for the protection and preservation of the marine environment (Part XII, Articles 192 to 237 inclusive).

Coastal states are obliged to adopt national laws and take measures to prevent, reduce and control pollution of the marine environment, arising from, or in connection with, the exploration or exploitation of the natural resources of the seabed and subsoil, and from dumping within their jurisdiction.

A number of other articles are relevant to the proposed KADP, including the following:

- Article 194 – Measures to Prevent, Reduce and Control Pollution of the Marine Environment.
- Article 206 – Assessment of Potential Effects of Activities.
- Article 208 – Pollution from seabed activities subject to national jurisdiction
- Article 210 – Pollution by Dumping.
- Article 214 – Enforcement with respect to pollution from seabed activities.

Ireland and the European Union have ratified the Convention.

The Convention will apply to the granting by the competent authority of an authorisation for the KADP.

Basel Convention (1989)

The Basel Convention, UN (1989), is a comprehensive global environmental agreement on the management of hazardous and other wastes. The Convention aims to protect human health and the environment against the adverse effects resulting from the generation, management, transboundary movement and disposal of hazardous and other wastes. The Basel Convention was adopted in 1989 and entered into force in 1992. Ireland has ratified the Convention.

The Convention regulates the transboundary movements of hazardous and other wastes by applying the “Prior Informed Consent” procedure (shipments made without consent are illegal). The Convention obliges its Parties to ensure that hazardous and other wastes are managed and disposed of in an environmentally sound manner. To this end, Parties are expected to minimise the quantities that are moved across borders, to treat and dispose of wastes as close as possible to their place of generation, and to prevent or minimise the generation of wastes at source. Strong controls have to be applied from the moment of generation of a hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal.

In 1995, an amendment to the Basel Convention (“the Ban Amendment”) was adopted. The amendment provided for the prohibition of:

- All transboundary movements to States, which are not included in Annex VII, of hazardous wastes covered by the Convention that are intended for final disposal, and
- All transboundary movements to States, which are not included in Annex VII, of hazardous wastes covered by paragraph 1 (a) of Article 1 of the Convention that are destined for reuse, recycling or recovery operations.

In 1998, Annexes VIII and IX were added to provide further elaboration as to the wastes regulated by the Convention as listed in Annexes I and III. Since then, various changes to these Annexes VIII and IX have also been adopted.

The Basel Convention has been implemented in European Union and Irish legislation.

Any waste generated by the KADP, which has to be exported from Ireland, will be subject to the Convention.

Espoo Convention (Convention on Environmental impact Assessment in a Transboundary Context) (1991)

Ireland is a Contracting Party to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo 1991) and thus an assessment is needed of the potential for the proposed activity to result in significant transboundary effects. The relevant requirements of the Espoo Convention, in relation to the environmental assessment of transboundary effects, have been incorporated into the EIA Directive 2011/92/EU.

OECD Decision on the Control of Transboundary Movements of Waste

Since March 1992, transboundary movements of wastes destined for recovery operations between member countries of the Organisation for Economic Co-operation and Development (OECD) have been supervised and controlled according to Decision C(92)39 on the Control of Transfrontier Movements of Wastes, OECD (1992). The 1992 decision was revised in 2001 and amended in 2002, 2004, 2005 and 2008, OECD (2001). The OECD Decision provided a framework for the OECD member countries to control transboundary movements of recoverable wastes within the OECD area in an environmentally sound and economically efficient manner. Compared to the Basel Convention, it gave a simplified and more explicit means of controlling such movements of wastes. It also facilitated transboundary movements of recoverable wastes between OECD member countries in the case where an OECD member country is not a Party to the Basel Convention.

The OECD Decision includes lists of wastes, which have been harmonised to a large extent with the lists of wastes of the Basel Convention.

Ireland is a member of the OECD. OECD Council Decisions are legally binding for member countries.

Any waste generated by the KADP, which will be exported from Ireland, will be subject to the OECD Decision.

OSPAR Convention (1992)

The OSPAR Convention, OSPAR (1992), is the current legislative instrument regulating international cooperation on environmental protection in the North-East Atlantic. It replaces the 1972 Oslo Convention on dumping waste at sea and the 1974 Paris Convention on land-based sources of marine pollution. Ireland has ratified the Convention.

The Convention applies to the internal waters and the territorial seas of the Contracting Parties, the sea beyond and adjacent to the territorial sea under the jurisdiction of the coastal State to the extent recognised by international law, and to the high seas, including the bed of all those waters and its subsoil, situated within specified limits of the Atlantic and Arctic Oceans.

The convention requires all parties to take all possible steps to prevent and eliminate pollution and apply the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve maritime ecosystems and, when practicable, restore marine areas which have been adversely affected. Parties are required to, individually and jointly, adopt programmes and measures and to harmonise policies and strategies.

In addition, in order to meet their obligations, Article 2, paragraph 2(a) and 2(b) states that Parties to the Convention must apply the following two principles:

- *"the precautionary principle, by virtue of which preventive measures are to be taken when there are reasonable grounds for concern that substances or energy introduced, directly or indirectly, into the marine environment may bring about hazards to human health, harm living resources and marine ecosystems, damage amenities or interfere with other legitimate uses of the sea, even when there is no conclusive evidence of a causal relationship between the inputs and the effects;*

- *the polluter pays principle, by virtue of which the costs of pollution prevention, control and reduction measures are to be borne by the polluter."*

Annex II of the convention, which specifically addresses the prevention and elimination of pollution by dumping or incineration, states that *"No disused offshore installation or disused offshore pipeline shall be dumped and no disused offshore installation shall be left wholly or partly in place in the maritime area without a permit issued by the competent authority"* (Article 5, paragraph 1). The Annex further states that such permits shall not be issued if substances, which are likely to represent a hazard, are present (paragraph 2).

Article 8 of Annex II reinforces this, stating that "*No placement of a disused offshore installation or a disused offshore pipeline in the maritime area for a purpose other than that for which it was originally designed or constructed shall take place without authorisation or regulation by the competent authority of the relevant Contracting Party*".

For the purposes of the convention 'dumping' and 'wastes or other matter' are defined as follows:

Article 1 – Definitions

"(f) "Dumping" means

(i) any deliberate disposal in the maritime area of wastes or other matter

(1) from vessels or aircraft;

(2) from offshore installations;

(ii) any deliberate disposal in the maritime area of

(1) vessels or aircraft;

(2) offshore installations and offshore pipelines."

"(g) "Dumping" does not include:

(i) the disposal in accordance with the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, or other applicable international law, of wastes or other matter incidental to, or derived from, the normal operations of vessels or aircraft or offshore installations other than wastes or other matter transported by or to vessels or aircraft or offshore installations for the purpose of disposal of such wastes or other matter or derived from the treatment of such wastes or other matter on such vessels or aircraft or offshore installations;

(ii) placement of matter for a purpose other than the mere disposal thereof, provided that, if the placement is for a purpose other than that for which the matter was originally designed or constructed, it is in accordance with the relevant provisions of the Convention; and

(iii) for the purposes of Annex III, the leaving wholly or partly in place of a disused offshore installation or disused offshore pipeline, provided that any such operation takes place in accordance with any relevant provision of the Convention and with other relevant international law."

"(o) "Wastes or other matter" does not include:

(i) human remains;

(ii) offshore installations;

(iii) offshore pipelines;

(iv) unprocessed fish and fish offal discarded from fishing vessels."

OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations

Decisions 98/3, OSPAR (1998), amended the Convention in 1998. Under paragraph 2 of the Decisions 98/3, the dumping, and leaving wholly or partly in place, of disused offshore installations is prohibited within the OSPAR maritime area. However, paragraph 3 of the Decision provides a derogation to the paragraph 2 prohibition, providing that following an assessment, the competent authority of the relevant Contracting Party may give permission to leave disused installations or parts of disused installations in place.

The categories where derogations may be considered are outlined in Annex 1 to the Decision, which states the following:

"The following categories of disused offshore installations, excluding their topsides, are identified for the purpose of paragraph 3:

a) *steel installations weighing more than ten thousand tonnes in air* [and placed in the maritime area before 9th February 1999]*;*

b) *gravity based concrete installations;*

c) *floating concrete installations;*

d) *any concrete anchor-base which results, or is likely to result, in interference with other legitimate uses of the sea."*

A disused offshore installation is defined as an offshore installation, which is neither *"(a) serving the purpose of offshore activities for which it was originally placed within the maritime area, nor (b) serving another legitimate purpose in the maritime area authorised or regulated by the competent authority of the relevant Contracting Party*".

The definition of disused offshore installation does not include "*(c) any part of an offshore installation which is located below the surface of the sea-bed, or (d) any concrete anchor-base associated with a floating installation which does not, and is not likely to, result in interference with other legitimate uses of the sea*." OSPAR Decision 98/3 also does not refer to subsea pipelines, umbilicals and their protective materials and therefore are not covered by Decision 98/3.

Decision 98/3 is reviewed every 5 years. The most recent review, in 2013, made no change to the information outlined above.

The Kinsale Area platforms, Alpha and Bravo, each weigh less than 10,000 tonnes. Consequently, the derogation will not be applicable.

International Convention for the Control and Management of Ships' Ballast Water and Sediments

The Ballast Water Management Convention, adopted in 2004 and entered into force in September 2017, aims to prevent the spread of harmful aquatic organisms from one region to another, by establishing standards and procedures for the management and control of ships' ballast water and sediments. Under the Convention, all ships in international traffic are required to manage their ballast water and sediments to a certain standard, according to a ship-specific ballast water management plan. All ships will also have to carry a ballast water record book and an international ballast water management certificate.

A1.3 Relevant European Legislation

Water Framework Directive (2000/60/EC)

The Water Framework Directive, EC (2000), sets the objectives for water protection for the future and applies to inland surface waters, groundwater, transitional waters and coastal waters. Coastal waters are defined in the Directive as *'surface water on the landward side of a line, every point of which is at a distance of one nautical mile on the seaward side from the nearest point of the baseline from which the breadth of territorial waters is measured, extending where appropriate up to the outer limit of transitional waters'*.

The aim of the directive is to prevent and reduce pollution, promote sustainable water use, protect the aquatic environment, improve the status of aquatic ecosystems and mitigate the effects of floods and droughts. The directive addresses the management of water quality and water resources and affects conservation, fisheries, flood defence, development planning and environmental monitoring. It requires Member States to control all impacts, including physical, polluting or otherwise, on our water resource.

The Directive has been transposed in Irish legislation through a number of measures, including the European Communities (Water Policy) Regulations, 2003 (S.I. No. 722 of 2003).

Most of the KADP activities will be located outside 'coastal waters', as defined in the Directive. The Directive requirements will apply only to near shore and onshore decommissioning activities.

Marine Strategy Framework Directive (2008/56/EC)

The 'Marine Strategy Framework Directive' was adopted in 2008, EC (2008a).

The Directive aims to achieve good environmental status for the EU's marine waters by 2020 and to protect the resource base upon which marine-related economic and social activities depend. It is the first EU legislative instrument related to the protection of marine biodiversity, as it contains the explicit regulatory objective that "biodiversity is maintained by 2020", as the cornerstone for achieving good environmental status.

In order to achieve its goal, the Directive establishes European marine regions and sub-regions on the basis of geographical and environmental criteria.

In order to achieve good environmental status by 2020, each Member State is required to develop a strategy for its marine waters, which will be updated every six years.

The Directive applies to water on the seaward side of the baseline to the outmost reach of the area where a Member State has rights, under UNCLOS i.e. 200 nautical miles. The geographical scope of the Marine Spatial Framework Directive overlaps with the Water Framework Directive by one nautical mile.

The Marine Strategy Framework Directive has been transposed into Irish legislation by a number of measures, including the European Communities (Marine Strategy Framework) Regulations (S.I. No. 249 of 2011).

Most of the KADP activities will be located within the marine area, to which the Directive applies. The Directive requirements will apply to KADP activities.

Waste Framework Directive (2008/98/EC)

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (known as the Waste Framework Directive) has been effective since 12 December 2010, EC (2008b). The new Directive repealed the codified Directive 2006/12/EC on Waste, the Hazardous Waste Directive (91/689/EEC) and the Waste Oils Directive (75/439/EEC).

The Directive seeks to implement the provisions of the Basel Convention, sets the basic concepts and definitions related to waste management and lays down the following waste management principles:

- The "polluter pays principle" which requires costs of waste management to be borne by the original waste producer or by current or previous waste holders; and
- The "waste hierarchy" which is a five-step hierarchy of waste management options which must be applied by Member States when developing their national waste policies, as follows:
  - Waste prevention (preferred option);
  - Re-use;
  - Recycling;
  - Recovery (including energy recovery); and
  - Safe disposal, as a last resort.

The Directive defines 'waste' as *"any substance or object which the holder discards or intends or is required to discard"* (Article 3 (1)).

The Directive also addresses when waste ceases to be waste and becomes a secondary raw material and how to distinguish between waste and 'by-products' and includes recycling and recovery targets.

Article 6 of the Directive provides that certain specified waste can cease to be waste when it has undergone a recovery operation and complies with certain criteria. Regulation No 333/2001 establishes criteria determining when iron, steel and aluminium scrap, including aluminium alloy scrap, ceases to be waste.

Article 13 requires Member States to take the necessary measures to ensure that waste management is carried out without endangering human health, without harming the environment.

Article 23 specifies that Member States shall require any establishment or undertaking intending to carry out waste treatment to obtain a permit from the competent authority. Treatment is defined in Article 3 (14) as *"recovery or disposal operations, including preparation prior to recovery or disposal"*.

The provisions of the Waste Framework Directive have been transposed into Irish Law through the Waste Management Act, 1996 (No. 10 of 1996) as amended and associated regulations.

Waste activities arising from the KADP must comply with the Directive.

Commission Decision 2000/532/EC on the list of wastes, as amended by Commission Decision 2014/955/EU

Commission Decision 2000/532/EC established a list of wastes, in support of the implementation of the Waste Framework Directive. Decision 2000/532/EC has been amended several times. The most recent amendment was by Commission Decision 2014/955/EU, EU (2014b). This Decision establishes the classification system for wastes, including a distinction between hazardous and non-hazardous wastes.

Waste, arising from the KADP, must be classified in accordance with the Decision.

Regulation (EC) No 1013/2006 on Shipments of Waste

Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste (as amended) specifies conditions under which waste can be shipped between/through Member States and other countries. Its aim is to strengthen and simplify procedures for controlling waste shipments in order to improve environmental protection and reduce the risk of uncontrolled shipments. The Regulation addresses all types of wastes, with the exception of radioactive waste or waste types subject to separate control regimes. It controls procedures for two classes of waste, as follows:

- The 'Green listed' procedure applies to non-hazardous waste intended for recovery; and

- The ‘Amber list’ notification procedure applies to shipments of all waste intended for disposal and hazardous waste intended for recovery.

This Regulation is transposed into Irish legislation by the Waste Management (Shipments of Waste) Regulations, 2007 (S.I. No. 419 of 2007).

The management of waste, arising from the KADP, must comply with the requirements of the Regulation.

Aarhus Convention (Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters) (1998)

The Public Participation Directive (Directive 2003/35/EC) Directive implements the 1998 Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters. The Convention and Directive are intended to improve public access to environmental information and greater participation in the environmental decision-making process. The relevant requirements of the Aarhus Convention, in relation to public participation in decision making on environmental matters, have been incorporated into the EIA Directive 2011/92/EU.

KINSALE ENERGY

Kinsale Area Decommissioning Project

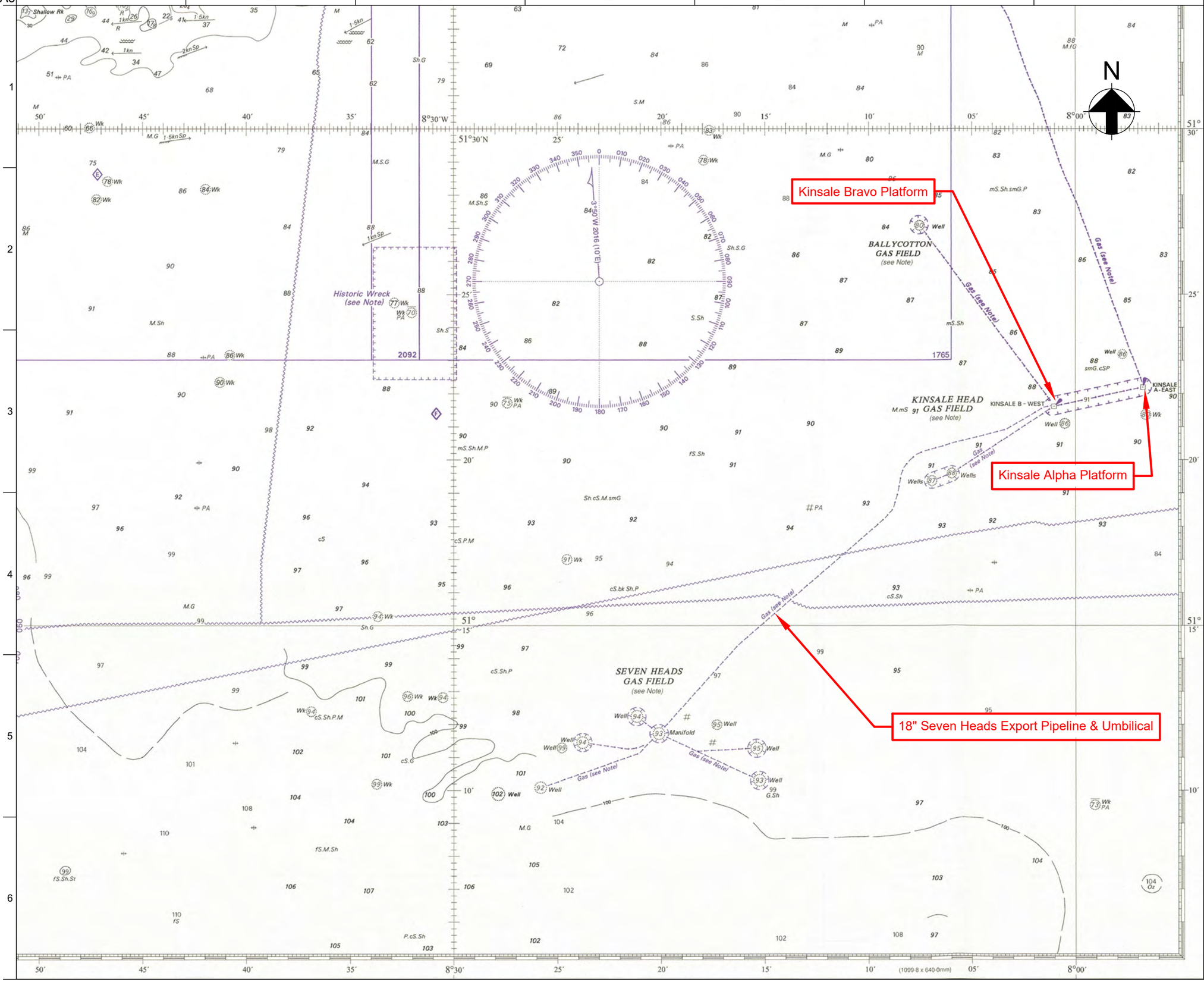
Annex A2

Layout Drawings

Hartley Anderson

ARUP

A3



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Rev	Date	By	Chkd	Appd
0	04/10/21	RC	RL	PB

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Client

KINSALE ENERGY

Project Title

Seven Heads Decommissioning Plan - Application No. 2

Drawing Title

Seven Heads Chart 1
Seven Heads Gas Field Overview

Scale at A3: 1:250,000

Role: Planning

Suitability: Information

Arup Job No: **253993-00**

Rev: **0**

Name

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Do not scale

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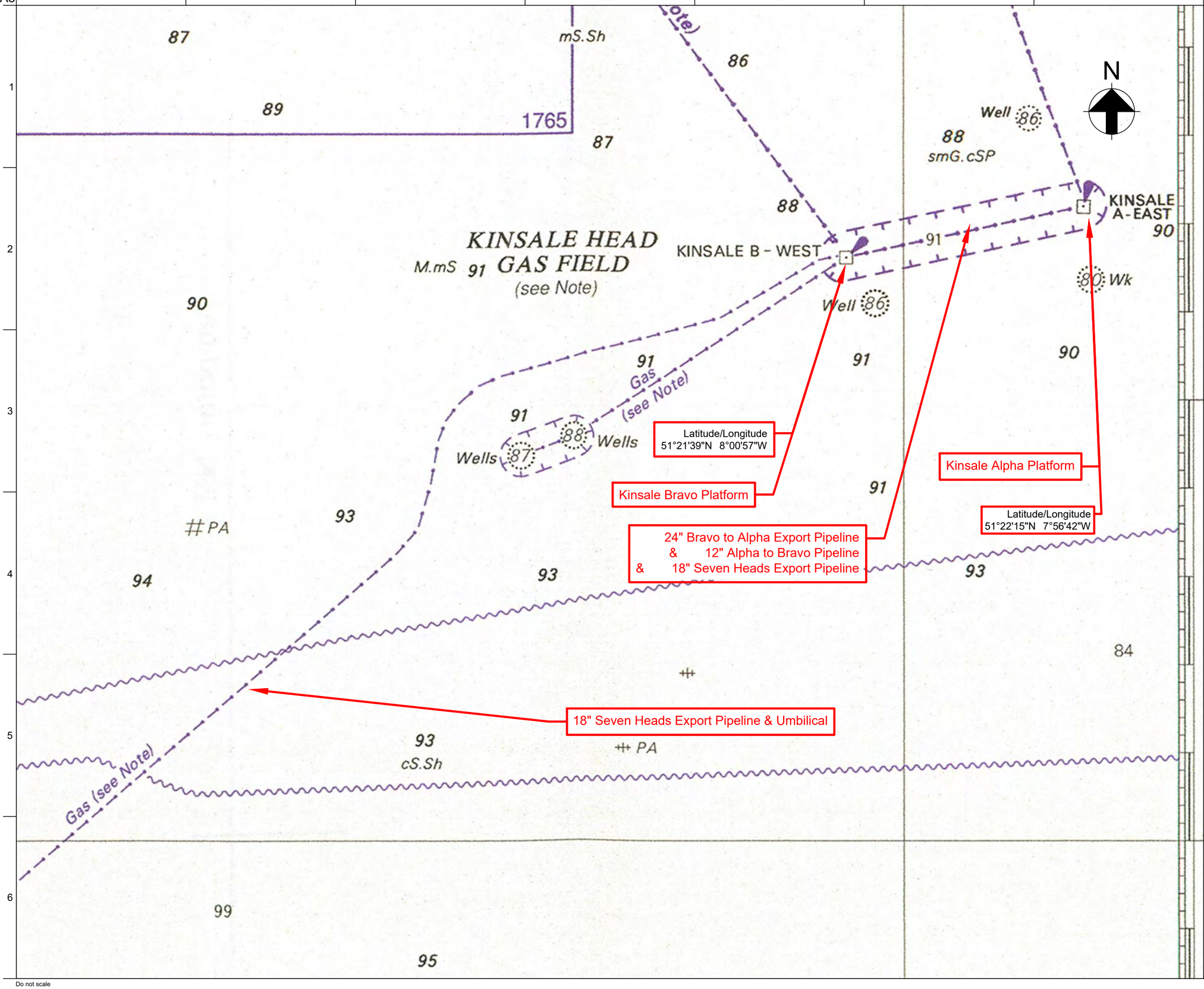

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KINSALE ENERGY

Project Title

Seven Heads Decommissioning Plan - Application No. 2

Drawing Title

Seven Heads Chart 2
Kinsale Alpha & Bravo Platforms
& Seven Heads Export Pipeline

Scale at A3: 1:100,000

Role: Planning

Suitability: Information

Arup Job No: **253993-00**

Rev: **0**

Name

KEL-ARUP-DAS-DR-32

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A3 | A | B | C | D | E | F | G

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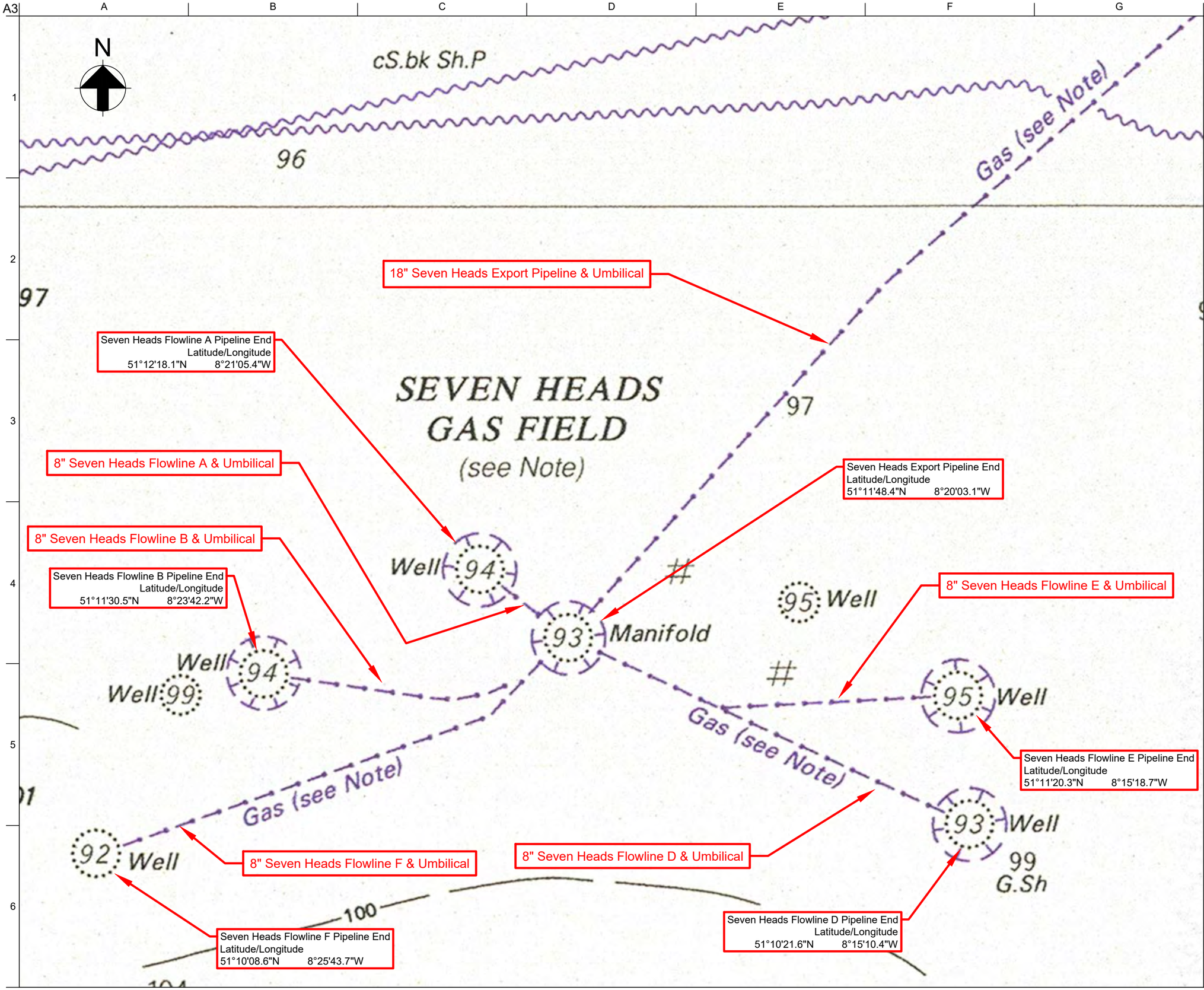

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KINSALE ENERGY

Project Title

Seven Heads Decommissioning Plan - Application No. 2

Drawing Title

Seven Heads Chart 3
Seven Heads Gas Field

Scale at A3 1:100,000

Role Planning

Suitability Information

Arup Job No **253993-00** | Rev **0**

Name

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Do not scale

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