

2 Kinsale Head DAS Application form and Attachments

This is a draft document and is subject to revision



Dumping at Sea Permit Application Form

EPA Ref. N°:
(Office use only)

Environmental Protection Agency

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Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V.1	07/09/2010	N/A	
V.2	08/11/2012	Amendments to Sections A.2, A.5, A.6, A.8, B, C, D, E, F and G.	To accurately reflect the requirements of the Habitats Regulations 2011 (S.I. No. 477 of 2011), the Dumping at Sea (Fees) Regulations 2012 (S.I. No. 270 of 2012), a new Excel form for submission of sediment chemistry results and various other formatting changes.
V.3	01/01/2014	Amendments to Sections A.4, A.7, B.2, C.1, D, E, F.1 and H.	To reflect changes to the citation of the Dumping at Sea Acts, the repeal of the Salmonid and Shellfish Regulations, the requirement for Marine Mammal Risk Assessment (MMRA) and various other formatting changes.
V.4	10/11/2015	Amendments to Section B.	To correct the numbering in section B.
V.5	26/07/2018	Amendments to Sections A, C, D, E, F, H & Annex 1.	To update legislative citations, include requirement for MMRA pre-consultation with NPWS (Section F.1), plus various other minor formatting changes.
V.6	16/05/2019	Amendment to Section F.1 and addition of new Annex 3 (NMS Forms 1 & 2).	To update requirements in relation to underwater archaeological impact assessment.
V.7	20/04/2020	Amendment to Table B.1 (ANNEX I).	To include reference to updated guidelines by the Marine Institute on the assessment of dredged material in Irish waters.
V.8	07/12/2020	Minor clerical updates.	To update relevant government department names, replace EIS with EIAR and other minor changes.

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ABOUT THIS APPLICATION FORM

This form is for the purpose of making an application for a Dumping at Sea permit under the Dumping at Sea Act 1996 as amended.

The application form **must** be completed in accordance with the instructions and guidance provided in the *Dumping at Sea Permit Application Guidance Note*. The guidance note gives an overview of Dumping at Sea permitting, outlines the permit application process (including the number of copies required) and specifies the information to be submitted as part of the application. The guidance note and application form are available to download from the Licensing page of the EPA's website at www.epa.ie.

A valid application for a Dumping at Sea permit must, as a minimum, contain the information set out in the First Schedule to the Dumping at Sea Act 1996 as amended. This application form is designed to set out the relevant questions in a structured manner and not necessarily in the order presented in the First Schedule. In order to help ensure a legally valid application in respect of these requirements, please complete the checklist provided in Annex 2.

This application form does not purport to be, and should not be considered, a legal interpretation of the provisions and requirements of the Dumping at Sea Act 1996 as amended. While every effort has been made to ensure the accuracy of the material contained in the application form, the EPA assumes no responsibility and gives no guarantee or warranty concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

Should there be any contradiction between the informational requirements set out in the application form and any clarifying explanation contained in the accompanying guidance note, then the requirements in this application form shall take precedence.

PROCEDURES

The procedure for making and processing of applications for Dumping at Sea permits is summarised below.

Within 21 days after the submission of an application to the Agency the applicant must publish in a newspaper circulating in the area, a notice of the application, in accordance with Section 5A of the Dumping at Sea Act 1996 as amended. Following publication of the aforementioned notice, any persons who wish to do so may make a submission or comment on the permit application. The permit application and all submissions by third parties shall be put on public display in electronic format on the EPA website and be open to inspection by any person, as soon as reasonably possible by the Agency.

An application for a permit must be submitted on the appropriate form (available from the Agency) with the correct fee and should contain relevant supporting documentation as attachments. The application should be based on responses to the information requested in the form and include supporting written text and the appropriate use of tables and drawings. Where multiple loading or dumping sites are proposed in a single application, a system of unique reference numbers should be used to denote each loading and dumping site. These should be simple, logical, and traceable throughout the application.

The application form is divided into a number of sections of related information. The purpose of these divisions is to facilitate both the applicant and the Agency in the provision of the information and in its assessment. **Please adhere to the format as set out in the application form and clearly number each section and associated attachments accordingly.** Attachments should be clearly numbered, titled and paginated and must contain the required information as set out in the application form. Additional attachments may be included to supply any further information supporting the application. Any references made to publications should be supported by a bibliography.

All questions must be answered. Where information is requested in the application form which is not relevant to the particular application, the words "not applicable" should be clearly written on the form. The use of abbreviations (e.g. N.A.) or dashes should be avoided.

Additional information may need to be submitted beyond that explicitly requested on this form. The Agency may request further information if it considers that its provision is pertinent to the assessment of the application. Advice should be sought from the Agency where there is doubt about the type of information required or the level of detail.

Applicants should be aware that disposing of a substance or material at sea without a permit, or contravening the conditions of a Dumping at Sea permit, are offences under the Dumping at Sea Act 1996 as amended. Offenders are liable upon conviction to a fine or imprisonment or both.

Note: Drawings and Charts: The following guidelines are included to assist applicants:

- All drawings submitted should be titled and dated.*
- All drawings should have a unique reference number and should be signed by a clearly identifiable person.*
- All drawings should indicate a scale and the direction of north.*
- All drawings should, generally, be to a scale of between 1:20 to 1:500, depending upon the degree of detail needed to be shown. Drawings delineating the loading boundary can be to a smaller scale of between 1:1000 to 1:10560, but must clearly and accurately present the required level of detail. All drawings should be A3 or less and of an appropriate scale such that they are clearly legible.*
- The applicant should provide legends on all drawings and maps as appropriate.*
- In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested by the Agency.*

A signed original and 1 additional hardcopy of the application and accompanying documents/particulars in hardcopy format plus 2 copies of all files in electronic searchable PDF format on CD-Rom (OCR'd) or other format agreeable to the Agency shall be submitted to the headquarters of the Agency.

It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.

SECTION A: GENERAL

Advice on completing this section is provided in the "Application Guidance Note".

A.1 Applicant's Details

Name and Address for Correspondence

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Company Name:	PSE Kinsale Energy Limited**
C.R.O.^a No.:	904997
Address:	Mahon Industrial Estate
	Blackrock
	Cork
	T12 PW92
Tel:	353 (0)21 4357301
Fax:	353 (0)21 4356209
e-mail:	

Nominated Contact Person

Name*:	M.V. Murray, Head of Engineering & Projects
Company Name:	As above
Address:	
Tel:	
Fax:	
e-mail:	mvmurray@kinsale-energy.ie

^a Company Registration Office.

* This should be the name of a person nominated by the applicant for the purposes of the application. This person may be a company employee or a suitably qualified external consultant.

**PSE Kinsale Energy Limited is referred to in this application as 'Kinsale Energy'.

A.2 Planning Authority and/or Public Authority

Planning Permission relating to the loading works which is the subject of this application: (tick as appropriate)

<i>has been obtained</i>	<i>is being processed</i>	
<i>is not yet applied for</i>	<i>is not required</i>	X

Local Authority Planning File Reference N^o:	Not applicable
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The Kinsale Head gas field facilities are located on the Foreshore (the inshore part of the export pipeline only) and Continental Shelf (remainder of the export pipeline, the other pipelines and the umbilicals) and are connected to land solely by means of the export pipeline. Planning

permission is not required. Refer to Section 225 of the Planning and Development Act 2000, as amended, which specifically excludes the following from the requirement to obtain permission:

“(b) development consisting of underwater cables, wires, pipelines or other similar apparatus used for the purpose of—

(i) transmitting electricity or telecommunications signals, or

(ii) carrying gas, petroleum, oil, or water,

or development connected to land within the functional area of a planning authority solely by means of any such cable, wire, pipeline or apparatus”.

Attachment A.2 should contain, where appropriate, **the most recent** planning permission, including a copy of **all** conditions, a copy of the planning inspector’s report, and where an EIAR was required, copies of any such EIAR and any certification associated with the EIAR should also be enclosed. If an application for planning permission pertaining to the operations to which this application relates is currently under consideration by a planning authority, outline details of the application should be submitted, including application file number, the date the application was submitted, a brief summary of the operation and, where an EIAR is required, copies of any such EIAR. Where planning permission / an EIA is not required for the development, explain why not and provide correspondence from the relevant planning authority confirming that planning permission / an EIA is not required.

Where applicable, provide a copy of any screening for Appropriate Assessment report and Natura Impact Statement (NIS) that was prepared for consideration by any planning/public authority as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended in relation to the activity. Where a determination that an Appropriate Assessment is required has been made by any planning/public authority in relation to the activity, a copy of that determination and any screening report and NIS, and any supplemental information furnished in relation to any such report or statement, which has been provided to the planning/public authority for the purposes of the Appropriate Assessment, shall be included in **Attachment A.2**.

Attachment A.2 included	Yes	No
		X

A.3 Other Authorities

A.3 (i) Shannon Free Airport Development Company (SFADCo) area

The applicant should tick the appropriate box below to identify whether the loading or dumping operations are located within the Shannon Free Airport Development Company (SFADCo) area.

Shannon Free Airport Development Company is not applicable.

Attachment A.3(i) should contain details of any or all operations located within the SFADCo area.

Attachment A.3(i) included	Yes	No
		X

A.3 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region(s)** where the loading and dumping operations are or will be located.

Name:	Area D/Area 4 South
Address:	HSE South Regional Director of Operations
	Cork Business and Technology Park
	Model Farm Rd, Cork
Tel:	Tel: 021-4928500
Fax:	
e-mail:	Rdo.south@hse.ie

A.3 (iii) Harbour Authority/Local Authority

The applicant should indicate the **Harbour Authority/Local Authority** where the loading and dumping operations are or will be located. In the event that loading and dumping operations take place in separate functional areas, please provide details of all relevant authorities.

Name:	Not applicable
Address:	
Tel:	
Fax:	
e-mail:	

Relevant Authorities Notified	Yes	No

The pipelines and umbilicals, which are the subject of this application, are not within the functional area of a Harbour Authority or Local Authority.

Attachment A.3(iii) should contain a copy of the correspondence issued to all relevant harbour authorities/local authorities.

Attachment A.3(iii) included	Yes	No
		X

A.4 Newspaper Advertisement

Section 5A of the Dumping at Sea Act 1996 as amended, requires all applicants to advertise the application in a newspaper (within 21 days following date of application). See *accompanying Guidance Note for full details*.

The newspaper notice will be published within twenty-one days after the date of submission of this application. The original page of the newspaper in which the notice is placed, will be sent to the EPA within 21 days after the notice is published.

Attachment A.4 The original page of the newspaper in which the advertisement was placed must be submitted within 21 days of the advertisement being published.

Attachment A.4 included	Yes	No

		X
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A.5 Application Fee

State the quantity of material proposed to be dumped and the appropriate fee, as per Columns 1 and 2 of the Dumping at Sea (Fees) Regulations 2012 (S.I. No. 270 of 2012). *See accompanying Guidance Note for full details.*

Quantities to be dumped (tonnes, wet weight)	Application Fee (€)
37,014	€3,500

Appropriate Fee Included	Yes	No
	X	

A.6 Foreshore Act Licence/Lease

Where applicable, provide a copy of any Foreshore Act licence/lease issued under the Foreshore Act 1933 as amended in relation to any dredging operations at the site relevant to the current application. If an application for a Foreshore Act licence/lease pertaining to the operations to which this application relates is currently under consideration by the Minister, outline details of the application should be submitted, including application file number, the date the application was submitted and a brief summary of the operation. Where an Environmental Impact Assessment (EIA) is required in relation to the proposed dredging operations, copies of any Environmental Impact Assessment Report (EIAR) prepared as part of the Foreshore licence/lease application should be provided. Where an EIA is not required for the proposed project, explain why not and provide correspondence from the relevant Foreshore Licensing Authority confirming that an EIA is not required.

The Kinsale Head gas fields and facilities comprises the Kinsale Head, Southwest Kinsale and Ballycotton gas fields and facilities. The Kinsale Head gas field and facilities are located on the Foreshore (the inshore part of the export pipeline only) and Continental Shelf (remainder of the export pipeline, the other pipelines and all umbilicals).

Petroleum Lease

The gas fields and facilities were operated under a lease granted under the Petroleum and Other Minerals Development Act, no 7 of 1960, as amended. Kinsale Energy has obtained consent to decommission certain elements of the Kinsale Head gas fields and facilities. The competent authority for the decommissioning application is the Minister for the Environment, Climate and Communications (DECC).

The decommissioning applications and consents were as follows:

- Application 1: Wells, Platform Topsides, Subsea Structures: submitted in June 2018, approved April 2019,
- Application 2: Platform Jackets: submitted in August 2019, approved in February 2020.

Application 3, for the decommissioning of the pipelines and umbilicals (which are the subject of this DaS application) and the retention and installation of protection materials, was made to the Minister for the Environment, Climate and Communications on 13th Oct. 2021.

Foreshore licence

The export pipeline on the Foreshore is the subject of a licence, under Foreshore Act 1933 (as amended), granted by the Minister on 14 September 1978 and amended on 27 March 1997 (Foreshore Licence Ref: FS005115). The licence requires the pipeline to be maintained to avoid injury to navigation, which requires the use of engineering materials to protect the pipelines and umbilicals in situ. It is not expected that a new consent under the Foreshore Act 1933 (as amended) will be required to leave the pipelines and umbilicals in place.

Continental Shelf Act

The construction of the gas field facilities was subject to consent under the Continental Shelf Act 1968 (as amended). A further application to alter the facilities by the installation of engineering materials (Rock Placement) was made to the Minister for the Environment, Climate and Communications on 13th October 2021

A copy of the consents to decommissioning application numbers 1 and 2 are provided in Attachment A.6.

Attachment A.6 should contain any relevant licence issued under the Foreshore Act 1933 as amended, including a copy of **all** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable. Outline details of any foreshore licence applications currently under assessment should be provided, if applicable, including copies of any EIAR submitted or any correspondence from the Foreshore Licensing Authority confirming that an EIAR is not required.

Attachment A.6 included	Yes	No
	X	

A.7 Current/Previous Permits

Provide details of any current or previous permits held by the applicant under the Dumping at Sea Act 1996 as amended.

Not Applicable. The applicant does not hold any current or previous Dumping at Sea permits.

Attachment A.7 should contain the most recent permit issued under the Dumping at Sea Act 1996 as amended, including any monitoring returns for the previous 12-month period, if applicable.

Attachment A.7 included	Yes	No
		X

A.8 Summary of Activities

Provide a short description (1-2 sentences) of the proposed activities, the location of the proposed loading area(s) (where applicable) and the location of the proposed dumping site(s).

Description of activities:	Kinsale Energy has received consent to decommission the Kinsale Head gas fields and facilities, which are at the end of their productive life. The gas wells are being plugged, the pipelines filled with seawater and the platforms and subsea structures are being removed. The proposed 'dumping at sea' activity is to retain in place the redundant gas export pipeline, the in-field gas pipelines, the in-field umbilicals and umbilical contents. In total, circa 92km of subsea steel pipelines, varying in size from 10inch (273mm) to 24inch (610mm), 21km of control umbilicals, varying in diameter from 82mm to 98mm, will be retained in place.
Location of loading area(s):	Not applicable
Location of dumping site(s):	The Kinsale Head gas fields are in the Celtic Sea, between approximately 32km and 47km south of the County Cork coastline. The export pipeline extends circa 53km south-south-east from the shoreline at Inch, Co. Cork to the Kinsale Alpha platform. The other facilities include the Bravo platform and an array of pipelines and control umbilicals and subsea infrastructure.

SECTION B: MATERIAL ANALYSIS

Advice on completing this section is provided in the accompanying Guidance Note.

B.1 Sediment Chemistry Results

At a minimum, sampling must be conducted for the physical and chemical parameters listed in Annex 1 to this application form.

Details of all sampling results of the substance or material to be dumped at sea **must** be supplied in Excel format using the **Dumping at Sea Material Analysis Reporting Form¹**, available to download from the EPA website www.epa.ie.

No sediment will be dumped.

The completed Excel form should be included as **Attachment B.1(I)**.

Attachment B.1(I) included	Yes	No
		X

Copies of the laboratory reports should also be submitted as part of the application, as **Attachment B.1(II)**.

Attachment B.1(II) included	Yes	No
		X

The results of the sediment chemistry analysis should also be summarised in tabular format with reference to the upper and lower Irish action levels, using Table B.1 in Annex 1. The completed Table B.1 should be included as **Attachment B.1(III)**.

Attachment B.1(III) included	Yes	No
		X

B.2 Characteristics and Composition of the Substance or Material for Disposal

Provide a report describing the particulars of the nature, composition and quantity of the substance or material to be disposed.

Applicants must also address the following criteria relating to the composition of the substance or material to be disposed:

- Amount and composition of the material;

¹ This information will be made publicly available on the EPA's Envision Map Viewer following the Agency's determination of the permit application.

- Material form, e.g., solid, liquid;
- Physical properties (especially solubility, specific gravity and density);
- Chemical and biochemical properties (e.g., oxygen demand, nutrients);
- Biological properties (viruses, bacteria, yeasts, parasites);
- Radioactivity;
- Toxicity;
- Persistence in the environment (physical, chemical and biological);
- Accumulation and biotransformation in biological materials or sediments;
- Chemical and physical changes of the substance or material after release, including formation of new compounds;
- Probability of production of taints or other changes reducing marketability of resources (e.g., fish, shellfish).

The information on the material properties of the pipelines and umbilicals, which will be retained in situ, is presented in attachment B.2.

A synthesis report on the characteristics and composition of the substance or material for disposal should be submitted, addressing all criteria listed above, and any supporting information, as **Attachment B.2**.

Attachment B.2 included	Yes	No
	X	

SECTION C: ALTERNATIVES TO DUMPING AT SEA

C.1 Alternative measures

Under the provisions of Section 5(2) of the Dumping at Sea Act 1996 as amended, the dumping of substances or material at sea is only acceptable when the Agency is satisfied there are no suitable alternative means of disposal. Provide details of all investigations into alternative means of disposal or reuse of the substance or material. Applicants must also demonstrate that all necessary steps have been taken to minimise the quantity of material to be dumped or to render the material less harmful for dumping at sea. A complete and full answer must be provided.

The alternative means of disposal of the pipelines and umbilicals, which were considered by the applicant, are described in Attachment C.1.

Attachment C.1 should contain reports and supporting documentation with regard to the investigations into alternative means of disposal, treatment or reuse. Any associated drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement) in Longitude and Latitude (WGS84 datum).

Attachment C.1 included	Yes	No
	X	

SECTION D: LOADING OPERATIONS

Advice on completing this section is provided in the accompanying guidance note.

Note: this section should only be completed where it is proposed to load a substance or material onto a vessel or aircraft for subsequent dumping at sea. Where no loading is proposed (e.g., in the case of plough dredging, water injection dredging or side-cast dredging), then this section should be left blank and all information on the proposed operations should be provided in Section E: Dumping Operations².

The pipeline and umbilicals are already in situ. No loading operation is proposed. Section D is not applicable.

D.1 Purpose of the operation

Provide details on the purpose of the loading operation, e.g., does the proposed loading activity relate to capital or maintenance dredging work. Details of any previous loading at the proposed site(s) should also be included.

Attachment D.1 should contain any supporting documentation on the purpose of the loading operation and details of any previous loading activity. Any associated drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement) in Longitude and Latitude (WGS84 datum).

Attachment D.1 included	Yes	No
		X

D.2 Loading Area(s)

Sets of coordinates for the loading area(s) must be given in in Longitude and Latitude (WGS84 datum; in degrees and decimal minutes), as follows.

	WGS84 datum	
	Latitude <<e.g. 51°43.00' N>>	Longitude <<e.g. 08°10.18' W>>
(a)		
(b)		
(c)		
etc.		

Tables with the coordinates for the loading area(s), and any associated drawings / maps of the loading area(s) provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement), should be submitted as **Attachment D.2**.

² Plough dredging, water injection dredging, side-cast dredging and other such dredging techniques are included in the definition of "dumping" in the Dumping at Sea Act 1996 as amended. These activities are therefore considered to be dumping activities and require a Dumping at Sea Permit.

Attachment D.2 included	Yes	No
		X

D.3 Details of the loading operation

Provide details on the following aspects of the loading operation:

D.3 (I) Date of commencement and duration of the loading operations;

D.3 (II) Location and method of loading of the substance or material;

D.3 (III) Total quantities (in tonnes (wet weight) and cubic meters) to be loaded:

- per day
- per week
- per month.

Attachment D.3 should also contain any additional supporting documentation on the details of the loading operations. Any associated drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement) in Longitude and Latitude (WGS84 datum).

Attachment D.3 included	Yes	No
		X

SECTION E: DUMPING OPERATIONS

Advice on completing this section is provided in the accompanying Guidance Note.

Note: Plough dredging, water injection dredging, side-cast dredging and other such dredging techniques are included in the definition of “dumping” in the Dumping at Sea Act 1996 as amended. These activities are therefore considered to be dumping activities and require a Dumping at Sea Permit.

E.1 Dumping Site Selection

Provide details of the dumping site selection process, including site description, suitability and rationale for final site selection. Full details of the dumping site selection process should be submitted as **Attachment E.1**

The pipeline and umbilicals are to be retained, at the locations in which they were installed and used as part of the gas field operations. No site selection process for the dumping site was necessary or undertaken. This section is not applicable.

Attachment E.1 included	Yes	No
		X

E.2 General Information

E.2 (I) Characteristics of the dumping site(s)

Provide a description of the characteristics of the dumping site(s), based on investigations carried out as part of this or previous permit applications. Including but not limited to:

- distance from nearest shore
- average, minimum and maximum depth of water (referenced to OD Malin);
- sediment characteristics;
- nature of seabed habitats;
- current/flow/tidal regime; etc.

Information on the characteristics of the dump site is submitted in Attachment E.2(I)

If the dumping site(s) has been used previously, provide details of tonnages dumped, duration of dumping and any investigations into the impact of the dumping operations on the environment at the dumping site(s). Please provide details of any previous Dumping at Sea permits relating to the dumping site(s), if applicable. Information on the characteristics of the dumping site(s) should be submitted as **Attachment E.2(I)**

Attachment E.2(I) included	Yes	No
	X	

E.2 (II) Location of the dumping site(s)

Sets of coordinates for the dumping site(s) must be given in Longitude and Latitude (WGS84 datum; in degrees and decimal minutes), as follows:

	WGS84 datum
--	-------------

	Latitude <<e.g. 51°43.00' N>>	Longitude <<e.g. 08°10.18' W>>
(a)		
(b)		
(c)		
(d)		
etc.		

Location of the dumping site is submitted in Attachment E.2(II)

Tables with the coordinates for dumping site(s), and any associated drawings / maps of the dumping site(s) provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement), should be submitted as **Attachment E.2(II)**.

Attachment E.2(II) included	Yes	No
	X	

E.3 Details of the dumping operation

Provide details on the following aspects of the proposed dumping operation:

E.3 (I) Date of commencement and duration of the dumping operations;

E.3 (II) Name and address of operator contracted to carry out the dumping at sea (if known)

E.3 (II) Location and method of dumping;

E.3 (III) Total quantities (in tonnes (wet weight) and cubic meters) to be dumped per day/ week/month.

The pipelines and umbilicals are already in-situ at the dumping site. No dumping operation will be carried out.

Attachment E.3 should also contain any additional supporting documentation on the details of the dumping operations. Any associated drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement) in Longitude and Latitude (WGS84 datum).

Attachment E.3 included	Yes	No
		X

SECTION F: IMPACT ON THE RECEIVING ENVIRONMENT

Advice on completing this section is provided in the accompanying Guidance Note.

F.1 Assessment of Impact on the Environment

- Provide an assessment of the predicted impact on the receiving environment of the proposed loading and dumping at sea activities to which this application relates. This assessment should include the following, where applicable:
 - Initial dilution to be achieved by proposed method of release;
 - Methods of packaging and containment, if any;
 - Dispersal, horizontal transport and vertical mixing characteristics;
 - Existence and impact of current and/or previous dumping in the area (including accumulative effects);
 - Sea bottom characteristics, including topography, geochemical and geological characteristics and benthic micro-fauna and macro-fauna;
 - Water characteristics (e.g., temperature, pH, salinity, oxygen indices of pollution-dissolved oxygen (DO), nitrate, nitrite, ammonia, phosphate and suspended matter);
 - Interference with shipping, fishing, recreation, mineral extraction, desalination, fish spawning and nursery habitats, areas of special scientific importance, areas of natural or archaeological heritage importance, biological diversity (including diversity within species, between species, and of ecosystems) and other legitimate use of the sea.
- Submit an Underwater Archaeological Impact Assessment report or complete NMS Form 1 (Annex 3).
- Details of any previous sampling at the loading area(s) and dumping site(s), conducted either as part of this application, previous permit application or previous post-dumping monitoring programmes, should be supplied. If sampling has been conducted as part of an EIAR which has also been submitted with the application form, reference to the appropriate table(s) of results in the EIAR will be sufficient in this case. Results of the National Seabed Survey should be included, where available.
- Describe the existing environment at the loading area(s) and dumping site(s) in terms of water quality and sediment quality, with particular reference to environmental quality standards or other legislative standards.
- Undertake a screening for Appropriate Assessment and state whether the activity, either individually or in combination with other plans or projects is likely to have a significant effect on a European Site(s), in view of best scientific knowledge and in view of the conservation objectives of the site(s). Where it cannot be excluded, on the basis of objective scientific information, following screening for Appropriate Assessment, that an activity, either individually or in combination with other plans or projects, will have a significant effect on a European Site, provide a Natura Impact Statement, as defined in Regulation 2(1) of the European Communities (Birds and Natural Habitats) Regulations 2011 as amended. Where based on the screening it is considered that an Appropriate Assessment is not required, provide a reasoned response. The screening report and Natura Impact Statement, where applicable, shall be provided in **Attachment F.1**. You are furthermore advised to refer to the document 'Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities', issued in 2009 by the then Department of the Environment, Heritage and Local Government, and revised in 2010. This document is available at:
www.npws.ie/publications/archive/NPWS_2009_AA_Guidance.pdf.

- Submit a Marine Mammal Risk Assessment (MMRA), completed by a suitably qualified marine ecologist, evaluating the risk to marine mammals from the proposed activities. The risk assessment should be completed in accordance with the approach outlined in *Guidance to Manage Risk to Marine Mammals from Man-made Sound Sources in Irish Waters* published in January 2014 by the then Department of Arts, Heritage and the Gaeltacht. Applicants are required to consult with the National Parks and Wildlife Service (NPWS), via the Development Applications Unit, in relation to the preparation and completion of the MMRA, submit copies of any recommendations received from the NPWS and clearly show how these have been incorporated into the assessment (refer to EPA's Dumping at Sea Guidance Note for relevant contact details).
- Give details of any other designations under any Council Directive or Regulations that apply in relation to the loading area(s) and dumping site(s), including but not limited to:
 - The Bathing Water Directive 76/160/EEC,
 - The Water Framework Directive 2000/60/EC,

Indicate whether or not the loading and dumping of the substance or material, the loading and dumping methods employed, or other factors associated with such operations are likely to have a significant effect on a designated site.

- The assessment of the impact on the receiving environment should include details on how the loading and dumping operations will be managed to ensure that they will comply with, or will not result in the contravention of:
 - The Water Framework Directive 2000/60/EC,
 - The Marine Strategy Framework Directive 2008/56/EC,
 - The Priority Substances Directive 2008/105/EC.
- This section should also contain full details of any modelling of the impact on the receiving environment of the proposed loading and dumping operations.

Information on the impact of the dumping operation on the environment is presented in Attachment F.1

Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1**.

Attachment F.1 included	Yes	No
	X	

SECTION G: MONITORING

Advice on completing this section is provided in the accompanying Guidance Note.

G.1 Monitoring Programme

The pipeline and umbilicals are in situ. There is no loading area. There will be no dumping activity, and no disturbance of the seabed. Consequently, no archaeological monitoring is proposed.

The pipelines have corrosion protection coatings and the umbilicals are manufactured from materials which will not corrode readily in the marine environment. It will take a very long time for the pipelines and umbilicals to begin to oxidise. The oxidation products will be non-toxic to the marine ecosystem and/or the quantities will be extremely small relative to the dilution available. Consequently, no environmental monitoring is proposed.

One of the final decommissioning activities will be the placement of rock protection (rock berms) on the ends of the pipelines and umbilicals and on any freespans which might form a hazard to fishing activities. The condition of the rock berms will be checked through a number of post-decommissioning surveys, the timing of which will be agreed with the Department of the Environment, Climate and Communications.

Proposed programmes for environmental monitoring at both the loading area(s) and dumping site(s) should be submitted as part of the application. These programmes should be provided as **Attachment G.1**. Refer to the accompanying Guidance Note for further detail on the information required.

Attachment G.1 included	Yes	No
		X

G.2 Tabular data on Monitoring Points

Applicants should submit the following information for each proposed monitoring point:

PT_CD	WGS84 datum	
	Latitude (e.g. 52°39.470' N)	Longitude (e.g. 08°38.636' W)
Point Code (Referencing system outlined in guidance note)	Not applicable	Not applicable

An individual record (i.e., row) is required for each monitoring point. Acceptable file formats include Excel, Access or other upon agreement with the Agency.

SECTION H: DECLARATION

Declaration

I hereby apply for a Dumping at Sea permit, pursuant to the provisions of the Dumping at Sea Act 1996 as amended.

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.



Signed by: _____
(on behalf of the organisation)

Date: 20/10/2021

Print signature name: M.V. Murray

Position in organisation: Head of Engineering & Projects

ANNEX 1: TABLES

Table B.1 Results of sediment chemistry analysis of the material to be dumped at sea, with reference to Irish Action Levels ^{Note 1}

No sediment will be dumped. Annex I is not used.

Parameter	Units (dry wt) ^{Note 2}	Sampling points			
		L1-1	L1-2	L1-3	L1-4 etc.
Arsenic	mg kg ⁻¹				
Cadmium	mg kg ⁻¹				
Chromium	mg kg ⁻¹				
Copper	mg kg ⁻¹				
Lead	mg kg ⁻¹				
Mercury	mg kg ⁻¹				
Nickel	mg kg ⁻¹				
Zinc	mg kg ⁻¹				
Σ TBT & DBT ^{Note 3}	mg kg ⁻¹				
γ-HCH (Lindane) ^{Note 4}	μg kg ⁻¹				
HCB ^{Note 5}	μg kg ⁻¹				
PCB 028	μg kg ⁻¹				
PCB 052	μg kg ⁻¹				
PCB 101	μg kg ⁻¹				
PCB 138	μg kg ⁻¹				
PCB 153	μg kg ⁻¹				
PCB 180	μg kg ⁻¹				
PCB 118	μg kg ⁻¹				
PCB (Σ ICES 7) ^{Note 6}	μg kg ⁻¹				
PAH (Σ 16) ^{Note 7}	μg kg ⁻¹				
Total Extractable Hydrocarbons	g kg ⁻¹				

Note 1: Applicants should highlight in Table B.1 any results which exceed either the upper or lower Irish action levels. Action levels are published in: *Cronin et al., 2006, Guidelines for the Assessment of Dredge Material for Disposal in Irish Waters, Marine Environment & Health Series, No. 24, Marine Institute and Marine Institute, 2019, Addendum to 2006 Guidelines for the Assessment of Dredged material in Irish Waters (Cronin et al.).*

Note 2: Total sediment <2 mm

Note 3: Sum of tributyl tin and dibutyl tin

Note 4: 1α,2α,3β,4α,5α,6β-hexachlorocyclohexane

Note 5: Hexachlorobenzene

Note 6: ICES 7 polychlorinated biphenyls: PCB 028, 052, 101, 118, 138, 153, 180.

Note 7: Polyaromatic hydrocarbons (measured as individual compounds): Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Dibenzo(ah)anthracene, Benzo(ghi)perylene, Indeno(123-cd)pyrene.

ANNEX 2: APPLICATION CHECKLIST

This checklist is to assist the applicant in ensuring a valid and complete application is submitted to the Agency.

Section of Application Form		Checked by Applicant	Checked by Agency
A.2	Planning Permission / EIAR / NIS attached	X	
A.3(i)	SFADCo correspondence attached	-	
A.3(iii)	Harbour Authority / Local Authority correspondence attached	-	
A.4	Original newspaper notice included	-	
A.5	Appropriate fee paid	X	
A.6	Foreshore Licence / EIAR attached	X	
A.7	Current / previous permit attached	-	
B.1(I)	Material Analysis Reporting Form attached	-	
B.1(II)	Laboratory Reports attached	-	
B.1(III)	Table B.1 attached	-	
B.2	Description of material for disposal attached	X	
C.1	Alternative measures investigation attached	X	
D.1	Purpose of the loading operation attached	-	
D.2	Coordinates & maps/charts of loading area(s) attached	-	
D.3	Operational details of loading activity attached	-	
E.1	Dumping site selection report attached	-	
E.2(I)	Characteristics of the dumping site(s) attached	X	
E.2(II)	Coordinates & maps/charts of dumping site(s) attached	X	
E.3	Operational details of dumping activity attached	-	
F.1	Assessment of impact on the environment attached	X	
G.1	Programme for environmental monitoring attached	-	
G.2	Tabular data on monitoring points attached	-	
H	Signed declaration included	X	
Additional Checks			
All drawings / maps provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab or other upon agreement) in Longitude and Latitude (WGS84 datum).		X	
1 signed original application form (with attachments).		X	
1 additional application hardcopy (with attachments).		X	
2 copies of all files in electronic searchable PDF format on CD_ROM (OCR'd) or other agreed format.		X	
Include 1 copy of the Material Analysis Reporting Form in Excel format on the CD_ROM.		-	

ANNEX 3: NMS Forms 1 and 2

NMS FORM 1

REQUEST: applicant's case that no archaeological monitoring is required for the proposed dumping at sea (DAS) activity.

To note:

- See criteria for the assessment by the National Monuments Service of the request submitted by the applicant in the DAS Permit Application Guidance Note (Annex 3).

The following details need to be included as part of the DAS permit application to the EPA.

1. Maintenance loading/dumping activities have been undertaken for the area in question in recent times and to the same depth (i.e. not historic dredging works)

1a. Details:

Not applicable

1b. Location details: Supply separate map or chart if required, to indicate full extent of area.

Not applicable

2. Area (including loading area and/or dumping area) has been the focus of an Underwater Archaeological Impact Assessment (UAIA) and/or full-time archaeological monitoring previously with no archaeological findings/discoveries:

To note: Archaeological results to date will be taken into account when assessing this request, as well as the archaeological potential of the area.

Note: where no loading is proposed (e.g., in the case of plough dredging, water injection dredging or side-cast dredging which are included in the definition of "dumping" in the Dumping at Sea Act), Section 2a should be left blank and all information on the proposed operations should be provided in 2b Dumping area below.

2a. Loading area: Provide area, scale and summary of archaeological results:

Not applicable

2b. Dumping area: Provide area, scale and summary of archaeological results:

Dr Niall Brady, Archaeological Diving Company Ltd, prepared a Cultural Heritage Assessment of the Kinsale Field Decommissioning. The DaS application is to retain insitu existing pipelines and umbilicals. The recommendation of the Cultural Heritage Assessment was *"Given that the decommissioning works are restricted to ground that has already been disturbed, there should be no requirement for archaeological monitoring."*

The Cultural Heritage Assessment is Attachment C of the EIAR Addendum, which is provided in Appendix 2.

2c. Name and details of Archaeological Consultant who undertook the monitoring:

- Name of Archaeological Consultant:

Not applicable

- Archaeological Excavation Licence number:

Not applicable

2d. Date of Underwater Archaeological Impact Assessment (UAIA) if relevant and Archaeological Monitoring Report as submitted to the National Monuments Service:

Not applicable

3. Area is made ground/reclaimed/was excavated out to and now comprises rock/introduced/modern material only:

3a. Details:

Not applicable

3b. Date works done:

Not applicable

4. Area is predominantly boulder clay/bedrock/rock outcrop:

4a. Details:

Not applicable

5. Statement by applicant outlining case as to why no archaeological monitoring of loading and/or dumping works is necessary for this current programme of works:

There will be no loading activity. The pipelines and umbilicals are already in place. There will be no dumping activity and no physical intervention in the seabed. As recommended by Dr Niall Brady, Archaeological Diving Company Ltd, archaeological monitoring is unnecessary.

NMS FORM 2

REQUEST: by permit holder to scale down/suspend/cease the requirement for archaeological monitoring of dumping at sea (DAS) activities as per conditions of the DAS Permit as granted.

To note:

- See criteria for the assessment by the National Monuments Service of the request submitted by the permit holder in Application Guidance Note (Annex 3).
- Permit holders should submit requests electronically, by sending completed NMS Form 2 to: connie.kelleher@chg.gov.ie; if electronic referral is not possible, by post to: The Underwater Archaeology Unit,
- National Monuments Service, Department of Housing, Local Government and Heritage, Custom House, Custom House Quay, Dublin 1.

1. Maintenance loading/dumping activities have been undertaken for the area in question in recent times and to the same depth (i.e. not historic dredging works)

1a. Details:
Not applicable

1b. Location details: Supply separate map or chart if required, to indicate full extent of area.
Not applicable

2. Area has been the focus of full-time archaeological monitoring for a number of weeks/months:

To note: Archaeological results to date will be taken into account when assessing this request, as well as the archaeological potential of the area.

2a. Date commenced and duration to date:
Not applicable

2b. Name and details of Archaeological Consultant:

Not applicable

- Name of Archaeological Consultant:
- Archaeological Excavation Licence number:

2c. Date and details of previous Underwater Archaeological Impact Assessment (UAIA) carried out, if relevant:

Not applicable

3. Area is made ground/reclaimed/was excavated out and now comprises rock/introduced/modern material only:

3a. Details:

Not applicable

3b. Date works done:

Not applicable

4. Area is now predominantly boulder clay/bedrock/rock outcrop:

4a. Details:

Not applicable

5. Statement by applicant outlining case for the suspension or cessation of archaeological monitoring for this current programme of works:

Not applicable

Kinsale Area Decommissioning Plan
Kinsale Head Dumping at Sea Permit Application
Attachments

Table of Contents of Attachments

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Attachment A.6 Foreshore licence

Foreshore Licence ref FS 005115 for the export pipeline granted by the Minister on 14 September 1978 and amended on 27 March 1997.

Consents to decommissioning applications

- Application 1 – Consent received from the Minister (Department of Communications, Climate Action and Environment) in April 2019 to
 - The ‘Kinsale Head Decommissioning Plan – Kinsale Head Lease (OPL1)’ an addendum proposed by KEL to the Kinsale Head Plan of Development, pursuant to the Lease granted under Section 13 of the POMDA which covers the decommissioning of certain facilities in the Kinsale Gas Area and
 - That KEL may alter and remove facilities from the area designated pursuant to Section 2 of S.I. No. 92/1993 – Continental Shelf (Designated Area) Order, 1993, pursuant to Section 5(2) of the Continental Shelf Act 1968, as amended.
- Application 2 – Consent received from the Minister (Department of Communications, Climate Action and Environment) in February 2020 to
 - The ‘Kinsale Head Decommissioning Plan – Kinsale Head Lease (OPL1)’ an addendum proposed by KEL to the Kinsale Head Plan of Development, pursuant to the Lease granted under Section 13 of the POMDA which covers the decommissioning of certain facilities in the Kinsale Gas Area and
 - That KEL may alter and remove facilities from the area designated pursuant to Section 2 of S.I. No. 92/1993 – Continental Shelf (Designated Area) Order, 1993, pursuant to Section 5(2) of the Continental Shelf Act 1968, as amended.

✓ LICENCE made the

14th

day of September

one thousand nine

hundred and seventy-eight BETWEEN THE MINISTER FOR TOURISM AND TRANSPORT

Ireland

(hereinafter called "the Minister") of the one part and Marathon Petroleum

Corporation incorporated according to the laws of the State of Delaware, United

States of America having its principal office in the State at Canada House, 65/68

St. Stephen's Green, in the City of Dublin (hereinafter called "the Licensee" who

expression shall include its Successors and Assigns where the context so admits

requires) of the other part ✓ WHEREAS the Licensee has applied to the Minister to

grant it permission to use and occupy that part of the foreshore and bed of the sea

at Cork Harbour in the County of Cork hereinafter described for the purpose of laying

a pipeline (hereinafter called "the pipeline") to carry natural gas from the Kinsale

Head Gas Field or from any other gas field discovered or owned by the Licensee to

Inch Strand near Power Head in Cork Harbour. AND WHEREAS The Minister has agreed to

grant such permission subject as herein NOW THEREFORE THIS AGREEMENT WITNESSETH that

the Minister in exercise of the powers vested in him by the Foreshore Act, 1933 and

with the sanction of the Minister for Finance, hereby grants to the Licensee

(a) licence to use and occupy that part of the foreshore and bed of the sea at Cork

Harbour in the County of Cork as more particularly delineated and shown in red colour

on the map annexed hereto (hereinafter called "the licensed premises") for the purpose aforesaid

(b) licence to enter upon any part of the foreshore in the vicinity of the

licensed premises for the purpose of maintaining the pipeline.

AND IT IS HEREBY AGREED by and between the Minister and the Licensee as follows

that is to say:

1. This licence shall remain in force for the term of ninety-nine years from the first day of March, one thousand nine hundred and seventy-seven but subject to termination as hereinafter provided.
2. The Licensee shall pay to the Minister through the Superintendent of the Mercantile Marine Office 27 Eden Quay, Dublin the yearly rent of five hundred pounds (£500) on the first day of February in every year during the first seven years of this Licence the first payment to be made on the execution hereof in respect of the first year of the said term PROVIDED ALWAYS AND IT IS HEREBY AGREED that at the expiration of the said seven years and every seven years thereafter (the time being computed from the commencement of the said term and being hereinafter called "the Rent Review Date") the Minister shall have the right to review the yearly rent for the time being payable hereunder on giving to the Licensee three months' notice in writing prior to such Rent Review Date of his intention so to do and if the Minister shall give to the Licensee such notice as aforesaid then from and after such Rent Review Date the yearly rent payable hereunder following such Rent Review Date shall be the greater of
 - (a) the yearly rent payable immediately prior to the Rent Review Date, or
 - (b) the current fair market rent which shall be such a yearly amount as shall be agreed between the Minister and the Licensee having taken into account in determining same in addition to all other relevant factors



Foreshore

- ✓ (i) Any increase in value of coastal lands or foreshore in the vicinity of the licensed premises.
- ✓ (ii) The demand (if any) for deepwater anchorage facilities in the vicinity of the licensed premises.
- ✓ (iii) The increased value (if any) to the Licensee of the licensed premises.

✓ PROVIDED ALWAYS that if the Minister and the Licensee shall be unable to agree on the amount of such rent as aforesaid the same shall on application by either the Minister or the Licensee be determined on the basis aforesaid by a practising Surveyor to be agreed upon by the Minister and the Licensee or in default of agreement to be nominated by the Chairman or acting Chairman for the time being of the Irish (Republic of Ireland) Branch of the Royal Institution of Chartered Surveyors from the list of Fellows of that Institution and the decision of such Chartered Surveyor shall be final and conclusive and in so deciding such Chartered Surveyor shall be deemed to be acting as an expert and not as an arbitrator and accordingly the Laws relating to arbitration shall not apply and all fees and expenses of such Chartered Surveyor shall be borne jointly by the Minister and the Licensee.

- ✓ 3. The Licensee shall at all times during the continuance of this Licence keep the pipeline in a good and proper state of repair and in proper condition to the reasonable satisfaction of the Minister and so as to ensure that it will not be injurious to navigation the adjacent lands or the public interest.
- ✓ 4. The Licensee shall indemnify and keep indemnified Ireland the State, the Minister, his officers agents and employees against all actions loss claims damages expenses and demands arising in any manner whatsoever in connection with the laying maintenance and user of the pipeline or in the exercise of the Licence hereby granted.
- ✓ 5. The Minister may (subject to the provisions hereof) in the event of the breach non-performance or non-observance by the Licensee of any of the covenants or agreements hereinbefore contained determine this Licence by giving to the Licensee a Notice in writing of intention to determine the same at the expiration of three months from the date of such Notice and at the expiry of such Notice this Licence shall forthwith cease and determine.
- ✓ 6. Any notice to be given to the Licensee in pursuance of this Licence shall be transmitted through the Post Office by prepaid registered mail addressed to the Licensee at its principal office aforesaid.

IN WITNESS WHEREOF the Minister and the Licensee have caused their respective Seals to be hereunto affixed the day and year first herein WRITTEN.


PRESENT when the Seal of Office of the MINISTER FOR TOURISM AND TRANSPORT was affixed and was authenticated by the signature of:-

M. A. Hayes

SIGNATURE: Carmel Peggrove

ADDRESS: Dept. Tourism - Transport
Kildare St. Dublin 2

OCCUPATION: Civil Servant


A person authorised under Section 15(1) of the Ministers and Secretaries Act, 1924 to authenticate the Seal of the said Minister

SIGNED for and on behalf of
the Licensee by

[Signature]
Vice President
Marathon Petroleum Ireland Ltd.

in the presence of:

Richard T. [Signature]
Project Manager
Marathon Petroleum Ireland, Ltd.

E270-006

20/1/86

It is AGREED by and between the Minister for Communications (the successor-in-title to the within-named Minister for Tourism and Transport) and Marathon Petroleum Ireland Ltd., the within-named Licensee, that the yearly sum payable pursuant to the within Licence, for the seven years commencing on the 1st day of March, 1984 shall (following Arbitration) be £5,000 per annum, and the within Licence is hereby amended accordingly but otherwise remains in full force and effect.

Dated this 19th day of February 1986.

IN WITNESS whereof the Minister has caused his Seal to be hereunto affixed and the Licensee has hereunto set his hand the day and year first herein WRITTEN

PRESENT when the Seal of Office of the
MINISTER FOR COMMUNICATIONS was affixed
and was authenticated by the
signature of:-

N. McMAHON

SIGNATURE: [Signature]
ADDRESS: Department of Communications
Kildare Street, Dublin 2
OCCUPATION: Civil Servant

SIGNED for and on behalf of
the Licensee by

In the presence of:

A person authorised under Section 15(1) of
the Ministers and Secretaries Act, 1924 to
authenticate the Seal of the said Minister.

[Signature]
VICE PRESIDENT
MARATHON PETROLEUM IRELAND, LTD

[Signature]
SAFETY AND SERVICES CO-ORDINATOR
MARATHON PETROLEUM IRELAND, LTD



THE MINISTER FOR TOURISM AND TRANSPORT

to

MARATHON PETROLEUM IRELAND LIMITED

L I C E N C E

LIAM J. LYSAGHT,
CHIEF STATE SOLICITOR,
51 ST. STEPHEN'S GREEN,
DUBLIN 2.

21/6

Ms Hennessy
Mr Nugent
Rúnaí Aire Stáit

Decision Sought

The Minister of State approves:

- *The ‘Kinsale Head Decommissioning Plan – Kinsale Head Petroleum Lease (OPL1)’ an addendum proposed by PSE Kinsale Energy Limited (“KEL”) to the Kinsale Head Plan of Development, which covers the decommissioning of certain facilities known as the “Kinsale Gas Area”, pursuant to Petroleum Lease No.1 dated 7 May 1970 (the “Lease”), which was granted under Section 13 of the Petroleum and Other Minerals Development Act, 1960, as amended (“POMDA”); and*
- *That KEL may alter and remove facilities pursuant to Section 5(2) of the Continental Shelf Act 1968 (as amended) from the area designated pursuant to Section 2 of S.I. No. 92/1993 - Continental Shelf (Designated Areas) Order, 1993.*

Background

1. The Kinsale Gas Area is located in the Celtic Sea approximately 50km off the south coast of Ireland. An indenture of agreement hereinafter referred to as the Parent Agreement was entered into on 13th January, 1959 (“**Parent Agreement**”) between the then Minister for Industry and Commerce and Ambassador Oil Corporation/Ambassador Irish Oil Ltd (the Minister for Communications, Climate Action and Environment (the “**Minister**”) and PSE Kinsale Energy Ltd ((KEL) being the successors thereto) wherein, the Minister, inter alia, undertook to grant Ambassador Oil an Exploration Licence.
2. The Kinsale Gas Area was initially developed by Marathon Petroleum Company (Ireland) Ltd (“**Marathon**”) under a Petroleum Lease dated 7th May, 1970 between the Minister for Industry and Commerce, the Minister for Finance and Marathon Petroleum Company (Ireland) Ltd hereinafter referred to as the Petroleum Lease. Commercial production commenced in 1978.
3. The gasfield was enlarged in subsequent years to include the satellite “**Ballycotton Gasfield**” and the “**Southwest Kinsale Gasfield**”, which are both included by way of amendment to the Petroleum Lease. An addendum to the Lease dated 29th November, 2006 provided for the use of Southwest Kinsale gasfield as a gas storage facility. This operation ceased in April 2017 as it was no longer commercially viable.

4. In 2009, Marathon transferred its entire legal and 100% beneficial interest in the Lease to PETRONAS, Malaysia's national oil company. The gasfield is now operated by PSE Kinsale Energy Ltd (KEL), a wholly-owned subsidiary of PETRONAS.
5. The gasfield is currently producing approximately 10 million standard cubic feet per day ("MMscfd") of gas (approximately 4% of Ireland's current annual gas requirement). At its peak production in the 1990s, the gasfield produced over 300 MMscfd of gas. Upon cessation of gas production, decommissioning of the facilities will commence subject to the receipt of all necessary approvals. The cessation of production in the gasfield is expected to occur in April/May 2020 when continued production will no longer be viable.
6. Under Section 8.8 of the Department's Rules and Procedures Manual for Offshore Petroleum Production Operations (the "**Rules and Procedures Manual**"), the Operator must separately submit a Cessation of Operations application prior to the proposed date for the cessation of operations. A Cessation of Production application was submitted by the Operator on 26th June, 2019. The application was subsequently approved by the Minister of State on 28th November, 2019. This allows production operations to cease on or after 31st March 2020. Upon cessation of gas production, decommissioning of the facilities will commence subject to the receipt of all necessary regulatory and environmental approvals.

Application Process

7. The entire decommissioning scope of work for both the Kinsale Gas Area and the Seven Heads Gasfields is referred to in this submission as the Kinsale Area Decommissioning Plan ("**KADP**").
8. On 21 June, 2018, the Minister determined, pursuant to Section 13B (2) of the Petroleum and Other Minerals Development Act 1960, as amended (the "**POMDA**"), that an Environmental Impact Assessment ("**EIA**") was required for the KADP.

Previous Application ("PHASE 1")

9. On 26th April, 2019, the Minister of State consented to the "PHASE 1" application works, namely the plugging and abandoning of wells in both the Kinsale Gas Area and Seven Heads gasfields and the removal of the two platform topside structures located in the Kinsale gasfield.

Current Application ("PHASE 2")

10. On 8th August, 2019, KEL (the "Applicant") applied to the Minister of State to decommission certain facilities within the Kinsale Gas Area (**TAB 1**). The details of this "PHASE 2" application are set out in the Decommissioning Plan (**TAB 2**) accompanying the application. The scope of work ("**Relevant Works**") involved in the Decommissioning Plan relates to:
 - the complete removal of the offshore platform jackets (legs) in accordance with OSPAR Decision 98/3.

11. The application was accompanied by an 'Environmental Impact Assessment Report' ("**EIAR**") including a Non-Technical Summary (**TAB 3**) in accordance with section 13A and 13B of the POMDA 1960, as amended and a 'Report for the Purposes of Appropriate Assessment Screening and Article 12 Assessment Screening' ("**AA Screening Report**"). The EIAR and the AA Screening Report both cover the environmental impacts of the entire decommissioning of the facilities for both the Kinsale Gas Area and the Seven Heads Gas Field and all three phases, i.e., they cover the entire Kinsale Area Decommissioning Plan (KADP).

Future Applications ("PHASE 3")

12. A third and final application ("PHASE 3") is expected to be submitted in 2020 covering the decommissioning of the remaining facilities in both the Kinsale Gas Area and Seven Heads gasfields (i.e. the offshore pipelines and umbilicals (which transfer hydraulic and electric power) and the onshore terminal at Inch, Co Cork).
13. The KADP includes the Relevant Works, as defined above, and the following (the "**Remaining Works**"):
 - a. Offshore pipelines and umbilicals: rock cover of freespans and/or remaining exposed sections and remaining in situ protection materials;
 - b. Export pipeline (offshore and onshore section): fill onshore section with grout (if a viable re-use option is not identified) and rock cover of freespans and/or remaining exposed sections in offshore section;
 - c. The decommissioning of the onshore Inch Terminal and the return of the site to the original contours and agricultural use, in accordance with the planning consent.
14. On 13th February, 2020 the Minister determined:
 - a. that an Appropriate Assessment for the 'Kinsale Head Decommissioning Plan – Kinsale Head Petroleum Lease (OPL1) – Consent Application No. 2' is not required as it can be excluded on the basis of objective scientific information, following screening under the European Communities (Birds and Natural Habitats) Regulations, SI No. 477 of 2011 (as amended), that the Decommissioning Plan, individually or in-combination with other plans or projects, will have a significant effect on a European site, and;
 - b. that the assessment for Annex IV Species has been found to be of an acceptable standard to be satisfied that there would be no significant adverse effects on Annex IV species, should approval be granted for the Decommissioning Plan.

Ministerial considerations in assessing the application

15. Minister to be satisfied that the application is in line with OSPAR Convention¹ Decision 98/3, which states *“the dumping, and the leaving wholly or partly in place, of disused offshore installations within the maritime area is prohibited”*.
16. Minister to be satisfied with the Decommissioning Plan submitted in accordance with the Lease granted under Section 13 of the POMDA.
17. Minister to be satisfied that the applicant may alter and remove certain facilities from the area designated pursuant to Section 2 of S.I. No. 92/1993 - Continental Shelf (Designated Areas) Order, 1993, pursuant to Section 5(2) of the Continental Shelf Act 1968.
18. Parent Agreement
 - a. Minister to be satisfied that the Lessee will restore the surface of the land in accordance with good oil field practice in accordance with Article XIX of the Parent Agreement.
19. Petroleum Lease
 - a. Minister to be satisfied that the application and plans include all information and documents necessary to constitute a full explanation of the programme and its technical details to enable an informed judgement on the programme, in accordance with Clause III(6) (c).
 - b. Minister to be satisfied that the Lessee shall execute all operations in, or in connection, with the Leasehold Area in a proper and workman-like manner in accordance with methods and practice customarily used in good oilfield practice in accordance with Clause III (7)(a).
20. Environmental Impact Assessment
 - a. Minister to consider the EIAR under European Union Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU (which has yet to be transposed but has been administratively applied by the Minister since 16 May 2017), and in accordance with the requirements of section 13A and 13B of the POMDA.
 - b. In addition to the EIAR, Minister to have regard to relevant matters including the following:
 1. the particulars submitted with the plan seeking his or her approval for working of petroleum and any other material including maps and plans, in accordance with Section 13B(5)(a) of the POMDA;
 2. any additional material submitted in response to a request for further information, if any, in accordance with Section 13B(5)(b) of the POMDA; and

¹ OSPAR Convention - The Convention for the Protection of the Marine Environment of the North-East Atlantic

3. any submissions or observations validly made in relation to the effects on the environment of the proposed development including those made by other consent authorities, statutory consultees or members of the public, in accordance with Section 13B(5)(c) of the POMDA.
- c. Minister to attach such conditions to the decision as the Minister considers necessary to avoid, reduce and, if possible, offset the major adverse effects (if any) of the proposed working, in accordance with Section 13B(6) of the POMDA.
- d. Minister may have regard to, and adopt in whole or in part, any reports prepared by his or her officers or by consultants, experts or other advisors, in accordance with Section 13B(7) of the POMDA.

Assessment of application

Process and consultation

21. In assessing the application the Department engaged the support of RPS Consultants for independent environmental expertise in relation to the statutory assessment of the EIAR and also took advice on technical matters from Selgovia Limited ("**Selgovia**"), who provide petroleum engineering services to the Department.
22. The application together with the Decommissioning Plan, EIAR and AA Screening Report were posted on the Department's website on 12th August, 2019 and parties were invited to make comments on the submission by 13th September, 2019. The application was also posted in the EIAR portal hosted by the Department of Housing, Planning and Local Government.
23. The Applicant posted notice on 12th August, 2019 in the Irish Examiner that it had applied to the Minister for approval for an addendum to the Kinsale Head Plan of Development and to alter and remove certain facilities from the Continental Shelf and that the applications were accompanied by an EIAR and an AA Screening Report. The notices gave information on where the documents could be inspected and how to make submissions or observations to the Minister.
24. The Applicant also gave notice of the application in writing to a list of prescribed bodies² as set out in SI 141/1990 (POMDA) (Section 13A) Regulations, 1990 and a further list of bodies notified by the Minister to the Applicant in accordance with Article 6 of the EIA Directive (2014/52/EU) in writing on 12th August, 2019.

² Cork County Council, the Commissioners of Public Works, An Taisce, the Minister for Agriculture, Food and the Marine, the Minister for Housing, Planning and Local Government, the Minister for Culture, Heritage and the Gaeltacht (National Parks & Wildlife Service), the Minister for Transport, Tourism and Sport, the Health and Safety Authority, the Sea-Fisheries Protection Authority, Bord Iascaigh Mhara, the Marine Institute, the Environmental Pillar, the Irish Whale and Dolphin Group, the Heritage Council, and the Environmental Protection Agency.

25. Submissions were received from two parties (**TAB 4**), with those related to the EIA summarised in paragraph 34. Those responses related to the AA screening have been summarised in a separate submission to the Minister.
26. Taking a technical recommendation, further clarification was sought by the Department from the Applicant on 6th November, 2019 (**TAB 5**) in regard to the removal of the two offshore platform jackets (legs), specifically the methodology to determine whether the legs would be cut internally or externally and the depth of such cutting taking into account compliance with OSPAR Decision 98/3. The Applicant responded to the request for further clarification on 12th November, 2019 (**TAB 6**).
27. Having reviewed the application and submissions and observations submitted to the Minister, RPS prepared the *Kinsale Area Decommissioning Project Environmental Impact Assessment Technical Review* (**TAB 7**).
-

Consultation with the Minister for Transport, Tourism and Sport

28. On 30 September, 2019, the Department consulted (**TAB 8**) with the Minister for Transport Tourism and Sport ("**TTAS**") on KEL's application to alter and remove certain facilities from a designated area under Section 5(2) of the Continental Shelf Act 1968, as amended).
29. The Minister for TTAS advised on 14 November, 2019 (**TAB 9**) that they "*can see no adverse impact to the safety of navigation or fishing from the decommissioning activities as outlined. However just before the decommissioning works commence a **Marine Notice** will be required to be written by the Department of Communications, Climate, Action and Environment or the lead contractor highlighting the nature of the work involved and the approximate length of time the works will last*".
30. It is proposed that the Minister's consent to the application includes a requirement on the applicant to provide this information to the Minister for TTAS at the appropriate time in line with the request.
-

Environmental Impact Assessment

Measures to avoid, prevent and reduce adverse effects on the environment

31. The RPS technical review considered that the significant direct and indirect effects of the Decommissioning Plan on the environment are, and will be mitigated, as follows:
- The impacts of the physical presence in field and in transit of supply vessels, barge/or heavy lift vessels and drilling rig will be minimised, and all activities will be undertaken in adherence to relevant legally required standards and controls.
 - Potential significant negative effects from physical disturbance from the decommissioning including seabed disturbance will be mitigated by appropriate management measures.

- c. Potential effects arising from underwater noise will be mitigated through careful activity phasing to minimise vessel days and associated noise emissions.
- d. Potential impacts to known cultural heritage features will be avoided during all ground and seabed disturbance activities. Measures to deal with unexpected discoveries are outlined in the draft Environmental Management Plan (EMP) and additional measures to ensure no significant adverse effect on Cultural Heritage receptors are provided in the Environmental Conditions.
- e. Potential discharges to sea will be minor and will be subject to regulatory and policy controls including MARPOL³ and PUDAC⁴.
- f. Waste will be managed in accordance with relevant waste legislation and measures outlined in the draft Resource and Waste Management Plan (RWMP).
- g. To minimise potential effects from accidental events associated with the offshore decommissioning works, all activities will be undertaken in accordance with regulatory and policy controls.
- h. Measures envisaged to avoid, prevent or reduce and offset significant adverse effects on the environment are outlined in full in the draft EMP and the monitoring programme presented in Appendix B of the draft EMP.

Monitoring measures

- 32. The Draft EMP contains a monitoring programme, which RPS has concluded is adequate. RPS have recommended that a detailed EMP for the Relevant Works is to be prepared by the contractor(s) based on the draft EMP which must be approved by the Minister in advance of any works on site.
- 33. The Minister for Culture, Heritage and the Gaeltacht has set out its requirements in terms of archaeological monitoring and these requirements will be included as a condition of consent. The Department has agreed with the Underwater Archaeology Unit of the Department of Culture, Heritage and the Gaeltacht the exact conditions that should apply for this phase of decommissioning, which is set-out in condition C to the proposed consent further below.

Summary of results of consultation, information gathered and manner dealt with

- 34. Two responses were received in the consultation with the public and prescribed bodies, with one of them relevant to the EIAR. A summary of these responses is set out below:

³ The International Convention for the Prevention of Pollution from Ships

⁴ Permit for use and discharge of added chemicals

Observation / Submission	Response
Department of Culture, Heritage and the Gaeltacht (DCHG) Development Applications Unit (DAU) on behalf of National Parks and Wildlife Service (NPWS)	
Attention is drawn to this Department's published " <i>Guidance to Manage the Risk to Marine Mammals from Man-Made Sound Sources in Irish Waters</i> (2014) which may be of relevance to noise producing activities."	Noted in the deliberations of RPS
Department of Culture, Heritage and the Gaeltacht (DCHG) Development Applications Unit (DAU) on behalf of National Monuments Service (NMS)	
<p>The DCHG's submission on behalf of National Monuments Service (NMS) made reference to one specific area of the application for consent no.2, namely:</p> <ul style="list-style-type: none"> • Archaeology 	<p>The conditions stated in the letter from DCHG relating to the Inch terminal and the foreshore are not deemed relevant to the decommissioning activities associated with the platform jackets.</p> <p>If the Minister grants consent for Consent Application No.2, it is recommended that the proposed conditions that relate to the decommissioning activities for the platform jackets as set out in the submission by the DCHG be attached to any such consent.</p>

Environmental Conditions

35. RPS have recommended the following conditions for the Relevant Works be attached to the Minister's consent:

- a. A detailed Environmental Management Plan for the decommissioning of the platform jackets is to be submitted by the operator based on the draft Environmental Management Plan, which will be provided to DCCAE for approval in advance of works commencing. Final approval of the EMP for the works associated with Consent Application No.2 lies with the DCCAE.
- b. A detailed Resource and Waste Management Plan for the decommissioning of the platform jackets is to be submitted by the operator based on the draft Resource and Waste Management Plan and will be provided to DCCAE for approval in advance of works commencing. Final approval of the RWMP for the works associated with Consent Application No.2 lies with the DCCAE.
- c. The EMP must include conditions relating to Cultural Heritage as outlined below where these conditions are relevant to the decommissioning of the platform jackets:

- i. The services of a suitably qualified and suitably experienced maritime archaeologist is engaged to undertake agreed monitoring of the decommissioning works on the foreshore or at sea for works that are less than 300m from known wreck sites.
- ii. The applicant shall engage with the archaeologist by providing specifications in advance of the proposed decommissioning works, to allow the archaeologist to determine any mitigation strategies that may need to be put in place to protect identified shipwreck remains. In particular, and if relevant, the wrecks, including the UC-42, that are in closest proximity to the decommissioning works (including any impacts from plant and machinery), shall have an exclusion zone imposed to ensure there is no impacts on the known location of the wreck. The applicant shall be prepared to be advised by the consultant archaeologist in this regard.
- iii. Provision shall be made to accommodate the monitoring archaeologist on board the decommissioning vessels to enable them to successfully carry out their work.
- iv. The monitoring archaeologist shall have the power to have works suspended in a particular location or for a particular element of the decommissioning programme, should known or previously unknown cultural heritage, including underwater cultural heritage, be identified or impacted. The Underwater Archaeology Unit shall be contacted immediately in this event.
- v. The archaeological monitoring shall be licensed by the Department of Culture, Heritage and the Gaeltacht and a detailed method statement containing the monitoring strategy shall accompany the licence application.
- vi. Upon completion of the archaeological monitoring, a detailed monitoring report shall be forwarded to the National Monuments Services' Underwater Archaeology Unit.

Technical Assessment

36. On 28th November, 2019, Selgovia provided its review (**TAB 10**) on the application to decommission the facilities. Selgovia concluded that *"Options for the final method adopted for removal and disposal of the jackets as presented by KEL are reasonable and comply with the requirements of OSPAR Decision 98/3. Consenting to a multi-option approach also makes sense and will allow KEL to optimise the execution of the decommissioning works in terms of both time and cost."*
37. Selgovia note in their report that the proposed Decommissioning Plan is in accordance with OSPAR Decision 98/3. The elements that are subject to this application are neither being dumped nor left in wholly or partly in place.
38. Selgovia recommended that in granting Ministerial consent the following issues should be addressed through conditions to the Letter of Consent:

- a. Approval of the Consent Application No.2 should be conditional upon all platform legs being cut 'below the seabed' in order to comply with OSPAR Decision 98/3.
- b. Decommissioning cost estimates and reporting should follow good oilfield practice. The Consent Application states that a cost estimate will be provided to DCCAE separately. DCCAE should request an initial cost estimate for all proposed activities prior to the start of decommissioning works. DCCAE should also make it a condition of any consent that a monthly report of costs is provided, either as part of the proposed monthly activity reporting or else as a standalone report if including costs is a sensitive matter. The provision of cost information will assist DCCAE in the monitoring of activity levels and progress. Since the Seven Heads field is being decommissioned at the same time, the allocation of costs between the two leases should also be rigorous and transparent to DCCAE.
- c. The Decommissioning Close Out report proposed by KEL in section 7.3 should also explicitly include the following:
 - i. An Operations Report
 - ii. A Verification Report on Operations

39. The Petroleum Affairs Division ("PAD") Technical Division have reviewed the application and Selgovia's assessment and have concluded (**TAB 11**) as follows:

"PAD Technical is satisfied that Selgovia has carried out a comprehensive assessment of the Consent Application No. 2 and that the conclusions and recommendations of Selgovia are acceptable. PAD Technical is satisfied that there is no reason to withhold approval of the Consent Application No. 2, subject to the following conditions:

1. All platform legs shall be cut below the sea bed.
2. Technical conditions are met as previously set out in Consent letter for Application No.1, dated 26 April 2019.

Other Relevant Matters

40. KEL will submit a third application for the Remaining Works to decommission the Kinsale Gas Area facilities (the offshore pipelines and umbilicals (which transfer hydraulic and electric power) and the onshore terminal at Inch, Co Cork).). PAD's technical advisors have confirmed that the approval of this application will not prejudice the Minister's consideration of the third application which will be assessed and determined separately.
41. Under Article XIX of the Parent Agreement, the Minister may require the Licensee to restore the surface of the land to a reasonable condition in accordance with good oil field practice, which is defined as "oil field practices as used by a prudent operator when working under

conditions where modern conservation regulations prevail”. It is the Department’s view that the proposed Decommissioning Plan for the Relevant Works together with the proposed conditions to be included in the Ministerial consent for the Relevant Works (as set out in this submission) constitutes good oil field practices. However, until the application for the Remaining Works is received and the subsequent permitted decommissioning activities for the Remaining Works have been agreed and carried out, then the Minister cannot be satisfied that good oil field practice has been followed with respect to the KADP. It is therefore proposed to condition the consent to the Relevant Works to this effect.

42. In accordance with Sections 13A(8) and 13A(8A) of the POMDA, after taking a decision on an application, the Minister shall:

- c. publish a notice of the decision in the *Iris Oifigiúil* and in at least one daily newspaper published in the State;
- d. make the notice and information of the reasons for decision available for inspection on the Department’s website and the DEPHLGs portal; and
- e. the notice shall inform the public that a person may query the validity of a decision by way of an application for judicial review, and details where practical information on the review mechanism can be found.

43. The decision which has already been made separately by the Minister that no Appropriate Assessment is required will also be published alongside this decision.

Reasoned Recommendation

44. A comprehensive due diligence exercise has been carried out by the Department on the application including the receipt of external technical advice and the carrying out of a public consultation, as described above. The matters raised in the public consultation have been carefully considered and an analysis of the responses has been conducted.

45. In relation to the EIA, RPS have concluded that, subject to the implementation of the mitigation measures proposed, as set out in the KADP EIAR and the draft EMP, and subject to compliance with the conditions set out above, the proposed Relevant Works associated with the Decommissioning Plan will not result in significant adverse effects on the environment. The Department is satisfied with and agrees with this conclusion and the conditions proposed.

46. It is recommended that the Minister grant consent, subject to the Lessee’s compliance with the conditions set out further below.

Approval Sought

The Minister of State confirms that:

- a. having regard to this submission including the TABs attached to it;

- b. having considered the content of the EIAR and the further information provided and having determined that it adequately identifies, describes and assesses the direct and indirect effects of the Relevant Works;
- c. having considered the content of the AA Screening Report, the separate submission to the Minister on the AA Screening Report and the Annex IV species assessment and the separate determination that no AA is required and that the assessment for Annex IV Species have been found to be of an acceptable standard such that he can be satisfied that there would be no significant adverse effects on Annex IV species, should approval be granted for the Decommissioning Plan;
- d. having considered the reports prepared by technical consultants, RPS Consultants and Selgovia;
- e. having regard to the following matters:
 - i. the nature, scale, extent and location of the Relevant Works;
 - ii. the particulars submitted with the application seeking approval for the Relevant Works; and
 - iii. the submissions and observations made in relation to the effects on the environment of the KADP as described above;

The Minister to determine that he is satisfied:

- a. that the application is in line with OSPAR Convention Decision 98/3 which states *“the dumping, and the leaving wholly or partly in place, of disused offshore installations within the maritime area is prohibited”*;
- b. with the Decommissioning Plan submitted in accordance with the Lease granted under Section 13 of the POMDA;
- c. for the applicant to alter and remove certain facilities pursuant to Section 5(2) of the Continental Shelf Act 1968 from the area designated pursuant to Section 2 of S.I. No. 92/1993 - Continental Shelf (Designated Areas) Order, 1993;
- d. that, having carried out an EIA in relation to the Relevant Works, alone and in combination with other developments, he agrees with the conclusion of RPS Consultants that, subject to the implementation of the mitigation measures proposed, as set out in the KADP EIAR and the draft EMP, and subject to compliance with the conditions set out above, the Relevant Works will not result in significant adverse effects on the environment;
- e. that there will be no significant effects, individually or in combination with other plans or projects on any European sites protected under the Habitats Directive or the Birds Directive, having regard, *inter alia*, to the European Union (Environmental Impact

Assessment and Habitats) Regulations 2011 (SI No. 473 of 2011) and the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended) (SI 477/2011);

- f. that the Lessee will restore the surface of the land in accordance with good oil field practice in accordance with Article XIX of the Parent Agreement;
- g. that the application and plans include all information and documents necessary to constitute a full explanation of the programme and its technical details to enable an informed judgement on the programme, in accordance with Clause III (6) (c) of the Lease;
- h. that the Lessee shall execute all operations in or in connection with the Leasehold Area in a proper and work-manlike manner in accordance with methods and practice customarily used in good oilfield practice in accordance with Clause (7) (a) of the Lease; and,
- i. to accept and adopt the content and conclusions of the reports prepared by technical consultants, RPS Consultants and Selgovia.

Being satisfied regarding the matters outlined above, and having consulted with and received the consent of the Minister for Transport, Tourism and Sport in respect of safety of navigation, approve:

- i. The 'Kinsale Head Decommissioning Plan – Kinsale Head Petroleum Lease (OPL1)' an addendum proposed by KEL to the Kinsale Head Plan of Development, pursuant to the Lease granted under Section 13 of the POMDA as amended which covers the decommissioning of certain facilities in the Kinsale Gas Area; and
- ii. That KEL may alter and remove facilities from the area designated pursuant to Section 2 of S.I. No. 92/1993 - Continental Shelf (Designated Areas) Order, 1993, pursuant to Section 5(2) of the Continental Shelf Act 1968, as amended.

In giving such consent it is recommended that the Minister require that:

- a. The Operator (KEL) shall cut all platform legs 'below the seabed' in order to comply with OSPAR Decision 98/3;
- b. A detailed Environmental Management Plan (EMP) for the Relevant Works is to be prepared by the contractor(s) based on the draft EMP, which will be provided to DCCAE for approval by the Minister in advance of any works on site;
- c. The services of a suitably qualified and suitably experienced maritime archaeologist shall be engaged to monitor all subsea Relevant Works for identified wreck sites that are less than 300m to proposed decommissioning infrastructure. The archaeologist shall be licensed by the Department of Culture, Heritage and the Gaeltacht. The Applicant shall engage with the archaeologist by providing specifications in advance of the proposed Relevant, to allow the archaeologist to determine any mitigation strategies that may need to be put in place to protect identified shipwreck remains. The applicant shall follow the advice of the consultant archaeologist in this regard. Provision shall be made

to accommodate the monitoring archaeologist on board the decommissioning vessels to enable them to successfully carry out their work;

- d. A detailed Resource and Waste Management Plan (RWMP) for Relevant Works is to be prepared by the selected contractor(s) based on the draft RWMP will be provided to DCCAE and approval by the Minister in advance of any works on site;
- e. The Relevant Works should be completed no later than 4 years after cessation of operations;
- f. An initial decommissioning cost estimate should be provided to the Minister prior to commencement of Relevant Works. Subsequent to this, a monthly report should be provided to the Minister including costs, which should be clearly separated from those from the petroleum lease for the Seven Heads Gas Field;
- g. The Decommissioning Close-Out report proposed by KEL should also explicitly include an decommissioning operations report with a verification report on decommissioning operations;
- h. Verification reports should be prepared by an independent party acceptable to the Minister;
- i. That the Operator (KEL) facilitate any authorised officer appointed by the Minister in accordance with Section 1.10 of the Rules and Procedures Manual in order to exercise functions in accordance with Sections 49 and 50 of the Licensing Terms for Offshore Oil and Gas Exploration and Development⁵;
- j. All operations shall be conducted in accordance with the Department's Rules and Procedures;
- k. Before the Relevant Works commence, the applicant should provide a draft Marine Notice(s) to the Minister for TTAS highlighting the nature of the work involved and the approximate length of time the works will last;
- l. That all Relevant Works set out in the Decommissioning Plan are carried out in accordance with this consent and that a subsequent request for consent is submitted by KEL to the Minister for the Remaining Works in the area leased under the petroleum lease for the Kinsale Gas Area and that the works required under such subsequent consent be carried out in accordance with oil field practices as used by a prudent operator when working under conditions where modern conservation regulations prevail and any subsequent conditions that may reasonably be included by the Minister in the subsequent Minister's consent.

⁵ [Licensing Terms for Offshore Oil and Gas Exploration and Development](#)

Maria O'Brien

Petroleum Affairs Division - Policy and Regulation

17th February 2020

Attachment B.2 Characteristics and Composition of the Substance or Material for Disposal
Tables B.2.1 (a) to B.2.1 (e) below provides the information required by the First Schedule of the Dumping at Sea Act 1996, as amended.

The materials to be disposed of consist of a number of steel pipelines and control umbilicals (cables) which were formerly used in the production of natural gas from the Kinsale Head, Ballycotton and Southwest Kinsale gas fields.

The pipelines are made from carbon-steel, with protective anti-corrosion coatings and, for the large diameter 24" lines, concrete weight coatings. The umbilicals consist of bundled electrical cables and hydraulic hoses inside a protective sheath with steel-wire armouring; the umbilicals are generally laid alongside the pipelines.

Details of the materials of construction for each line are given in the following tables.

Table B.2.1(a) Kinsale Head Pipelines

Field Area	Size	Length (km)	Weight (tonnes)	Material
Export Pipeline	24-inch	54.37	31,217	Grade X60 steel Coal tar epoxy and concrete protective coatings Aluminium - Zinc bracelet anodes
Bravo to Alpha pipeline	24-inch	4.96	2,183	
Alpha to Bravo pipeline	12-inch	5.11	687	Grade X52 steel Three-layer polypropylene (3LPP) protective coating Aluminium - Zinc bracelet anodes
Ballycotton pipeline	10-inch	12.69	1083	
Greensands pipeline	12-inch	7.02	655	
South West Kinsale pipelines	12-inch	8.12	905	

Table B.2.1 (b) Kinsale Head Pipelines

Material	X60 grade steel (note 1)	Coal tar epoxy coating (note 2)	Concrete coating (note 3)	X52 grade steel (note 4)	Fusion bonded epoxy (note 5)	Copolymer adhesive (note 6)	Polypropylene (note 7)	(Mixture of aluminium and zinc) (note 8)
Amount (tonnes)	12,500	682	20,122	3,238	36	38 (note 9)		114 (note 10)
Composition	C < 0.28% Mn < 1.4% P < 0.03% S < 0.03% Nb + V + Ti ≤ 0.001% Fe = Balance	Talc 25-50% Refined Coal TarPitch 25-50% Xylene, mised ismers - 10 -16% Ethynlbenzene - 3% Tri(dimethylaminomethyl)phenol - 2.3% Triethylene Tertramine - 1%	CaO = 62 SiO2 = 22 Al2O3 = 5 CaSO4 =4 Fe2O3 = 3 MgO = 2 S = 1 Alkalines = 1	C = 0.16 Si = 0.45 Mn = 1.65 S = 0.01 P = 0.02 V = 0.07 Nb = 0.05 Ti = 0.04 Fe = Balance	Formaldehyde, polymer with (chloromethyl)oxirane and phenol 40 – 80% Bisphenol-A- (epichlorhydrin), epoxy resin 20 – 60% C13/C15- Alkylglycidylether 1 – 20% Methyl toluene-4- sulphonate 1 – 10% Reaction product: bisphenol-A- (epichlorhydrin), epoxy resin (number average molecular weight ≤ 700)	Proprietary blend of polyolefinic polymers	(-CHCH3 CH2-)n	Fe 0.09% Si 0.08 – 0.120% Cu 0.003% Zn 4.5 – 5.5% In 0.015 – 0.020% Others (each) 0.02% max Al Remainder
Material form	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Solubility	Not soluble in water	When set not soluble in water	Concrete solubility is related to time of exposure in water.	Not soluble	Not soluble	Insoluble	Not soluble	Insoluble in cold water
Specific gravity/density	7850 kg/m ³	1.34kg/m ³	2,400 kg/m ³	7850 kg/m ³	1.12kg/m ³	<1g/cm ³	0.88 – 0.91 g/cm ³	2700 - 2750 kg/m ³
BOD/COD	Non biodegradable	When set, non biodegradable	When set, non biodegradable	Non biodegradable	No data	Not expected to be biodegradable	Not readily biodegradable	Not available
Nutrients	Non biodegradable	When set, non biodegradable	When set, non biodegradable	Non biodegradable	No data	Not expected to be biodegradable	Not readily biodegradable	Not available
Biological properties	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites
Radioactivity	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive

Material	X60 grade steel (note 1)	Coal tar epoxy coating (note 2)	Concrete coating (note 3)	X52 grade steel (note 4)	Fusion bonded epoxy (note 5)	Copolymer adhesive (note 6)	Polypropylene (note 7)	(Mixture of aluminium and zinc) (note 8)
Toxicity	No known harmful effects	H411 -Toxic to aquatic life with long lasting effects. H422 - Harmful to aquatic life with long lasting effects (note 11)	Set concrete is not expected to be toxic to aquatic organisms.	N/a	H411 -Toxic to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effect (note 11)	Not classified	Not toxic	Not available. The products of degradation are less toxic than the product itself
Persistence in the environment (physical, chemical and biological)	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	H411 -Toxic to aquatic life with long lasting effects. H422 - Harmful to aquatic life with long lasting effects (note 11)	Sea water contains sulphates and could be expected to attack concrete because chlorides are also present, sea-water attack does not generally cause expansion of the concrete.	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	H411 -Toxic to aquatic life with long lasting effects. H412 - Harmful to aquatic life with long lasting effect (note 11)	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).	Not readily biodegradable.	Anode will erode in seawater due to galvanic action
Accumulation and biotransformation in biological materials or sediments	No data	No data	No data	No data	No data	This material is not expected to bioaccumulate.	No data	No data
Chemical and physical changes of the substance or material after release, including formation of new compounds	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	There are no expected chemical or physical changes after release	Sea water contains sulphates and could be expected to attack concrete because chlorides are also present, sea-water attack does not generally cause expansion of the concrete.	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	There are no expected chemical or physical changes after release	Not expected to decompose under normal conditions.	There are no expected chemical or physical changes after release	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise

Material	X60 grade steel (note 1)	Coal tar epoxy coating (note 2)	Concrete coating (note 3)	X52 grade steel (note 4)	Fusion bonded epoxy (note 5)	Copolymer adhesive (note 6)	Polypropylene (note 7)	(Mixture of aluminium and zinc) (note 8)
Probability of production of taints or other changes reducing marketability of resources (e.g., fish, shellfish)	Corrosion products are not expected to cause tainting and the dilution available will be considerable	If the epoxy breaks down eventually, the dilution available will be considerable	If the concrete breaks down eventually, the dilution available will be considerable	Corrosion products are not expected to cause tainting and the dilution available will be considerable	If the epoxy breaks down eventually, the dilution available will be considerable	If the copolymer breaks down eventually, the dilution available will be considerable	If the polypropylene breaks down eventually, the dilution available will be considerable	Anode will erode in seawater, the dilution available for degradation products will be considerable

Note 1: Data sheet for X60 steel <https://www.octalsteel.com/pdf/API-5L-X60-pipe-specification.pdf>;
<https://www.bsstainless.com/images/pictures/data-sheets/material-safety-datasheet-mild-steel.pdf?v=42c96ba6>

Note 2: Generic data sheet for coal tar epoxy
<https://www.paintdocs.com/docs/webPDF.jsp?SITEID=SWPCGPROT&doctype=SDS&prodno=035777472903&lang=2&cntry=US>

Note 3: Generic data for general purpose Portland cement concrete. Source [bing.com/images](https://www.bing.com/images)

Note 4: Generic data for grade X52steel source:
http://www.steelnumber.com/en/steel_composition_eu.php?name_id=690

Note 5: Generic data for general purpose epoxy resin: source <http://www.resin-supplies.co.uk/HSDS%20pdfs/ER%20RESIN%20MSDS.pdf>

Note 6: Data for hifax EP2015/60 version 1.3 rev date 05/22/2020 print date 07/29/2021 SDS No BE5486Lyondellbasel

Note 7: Generic data for polypropylene. Source: <https://www.technologysupplies.com/downloads/msds/SDS0217.pdf>

Note 8: Generic data for aluminium zinc anodes
http://www.nedmarine.com/_images/user/NMS%20MAGAZINE%20ANODES.pdf

Note 9: Weight of copolymer adhesive and polypropylene.

Note 10: The total anode weight is the weight when the anodes were installed, prior to any erosion.

Note 11: Coal Tar Epoxy and fusion bonded epoxy (FBE): Coal tar epoxy is made by the conversion of polyamide epoxy resin with coal tar, a by-product of the production of coke and coal gas from coal. Coal tar epoxy is suitable for sustained immersion in seawater and is widely used as a pipeline coating for corrosion protection. The material is applied onshore to pipeline sections and after evaporation of volatile constituents during drying, the coating is a stable solid. The solid material is considered inert, is not readily degradable and is not considered to be a marine pollutant.

Fusion bonded epoxy (FBE) is a protective coating applied to pipelines onshore. The coating is applied as a powder (consisting of polymer resins, a curing agent, extenders, fillers and pigments). FBE coatings are "thermoset polymers" which are applied at 180°-250°C, causing the powder constituents to melt. The liquid flows over the metal surface and during cooling transforms to a solid through element cross-linking "fusion bonding". The cross-linking that occurs in the chemicals cannot be reversed, further heating will not melt the coating. The solid material is considered inert, is not readily degradable and is not considered to be a marine pollutant.

Table B.2.1(c) Kinsale Area Umbilicals

Field Area	Description	Length (km)	Weight (tonne)	Material	Content of hoses m ³	
Ballycotton	Ballycotton well location to Bravo platform control umbilical (98.2mm diameter)	13	185	Outer Polypropylene Roving Bitumen bedding 2 layers of 3.15mm steel armour wire Inner PP Roving Adhesive tape 2 x 1/2" NB hose 2 x 1/4" NB hose 2 x 3/8" NB hose Adhesive tape PP string filler 2 x 4mm ² power pairs 2 x 4mm ² signal pairs PP String filler	MeOH	2.764
South West Kinsale (SWK)	SWK well 48/25-3 location to Bravo platform control umbilical (82.2mm diameter)	6.96	85	Outer Polypropylene Roving Sheath 2 layers of 3.15mm steel armour wire Inner PP Rovings 2 x 1/2" NB hose 2 x 1/4" NB hose 2 x 3/8" NB hose Rope filler 2 x 4mm ² power pairs 2 x 4mm ² signal pairs Binding tape String filler	HW-540	0.434
South West Kinsale (SWK)	SWK well 48/25-3 location to Western Drill Centre (WDC) control umbilical (82.2mm diameter)	1.16	14	Outer Polypropylene Roving Sheath 2 layers of 3.15mm steel armour wire Inner PP Rovings 2 x 1/2" NB hose 2 x 1/4" NB hose 2 x 3/8" NB hose Rope filler 2 x 4mm ² power pairs 2 x 4mm ² signal pairs Binding tape String filler"	HW-540	0.072

Table B.2.1(d) Ballycotton Umbilical (98.2mm diameter) Components

Components	Material
Hoses:	
Hose liner	Hytrel 6356 or Polyamid 11 Besno P40TL
Inner braid	Aramid 1670 D/TEX Kevlar or Aramid 3300 D/TEX Kevlar
Outer braid	Polyester 1220 Dacron T73 or Aramid 1670 D/TEX Kevlar or Aramid 3300 D/TEX Kevlar
Hose cover	Hytrel 6356 or Polyamid 11 Besno P40TL
Cables:	
Electrical core	Copper
Insulation	EPR Grade MR1 800
Inner sheath	EPR Grade MR3 814

Components	Material
Screen	Copper Tape
Outer sheath	HDPE Grade MTG 974 SN
Fillers	
	PVC Fillers REF: MPS/01/27
	Polypropylene filler
Armouring	
	Bitumen bedding
	3.15mm steel armour wires
	Black Synthetic Rubber (EPDM)
	High tenacity Polyester Tyre Cord
	Binding Tape

Table B.2.1(e) SWK Umbilical (82.2mm diameter) Components

Components	Material
Hoses:	
Hose liner	Polyamid 11
Inner braid	Aramid 1670 D/TEX Kevlar
Outer braid	Aramid 1670 D/TEX Kevlar
Hose cover	Hytrel 6356
Cables:	
Electrical core	Copper Copper wire R10 6th Ohm M.
Insulation	EPR grade MR1 800
Inner sheath	EPR grade MR3 814
Screen	Copper tape
Outer sheath	HDPE grade MTG 974 SN
Fillers	
	PVC fillers REF: MPS/01/27
	Polypropylene
Armouring	
	Bitumen bedding
	3.15mm steel armour wires
	Black synthetic rubber (EPDM)
	High tenacity polyester tyre cord
	Binding tape

Table B.2.1(f) Kinsale Head Umbilicals Part 1

Material	Hytrell 6356 (thermoplastic polyester elastomer) (note 1)	Aramid 1670 D/TEX Kevlar and Aramid 3300 D/TEX Kevlar (note 2)	Polyamid 11 Besno P40TL (note 3)	Polyester 1220 Dacron T73 (note 4)	Copper (note 5)	EPR Grade MR1 800 (ethylene propylene rubber) EPR Grade MR3 814 (note 6)	HDPE Grade MTG 974 SN (note 7)
Amount (tonnes)	Total umbilicals weight = 281						
Composition	Butylene/poly(alkylene ether) phthalate - >90%	Poly-para-phenylene terephthalamide (note 2)	Polyamide 11>84% N-Butylbenzenesulfonamide < 14% N-Stearoyl-p-aminophenol < 2%	Polymer (Polyethylene terephthalate) >92% Additives (Titanium dioxide, colourants, etc.) < 4% Spinfinish and coning oil < 4%	Copper	Ethylene propylene rubber	Polyethene >= 99% Additives 0 – 1%
Material form	Solid	Solid	Solid	Solid	Solid	Solid	Solid
Solubility	Insoluble in water	Insoluble in water	Negligible in water	Insoluble in water	Insoluble in water	Insoluble in water	Insoluble in water
Specific gravity/density	1220kg/m ³	1.44g/cm ³	1.0 – 1.5 g/cm ³	1.3 – 1.4 g/cm ³	8.94g/cm ³	0.86 – 0.87 g/cm ³	0.91 – 0.97 g/cm ³
BOD/COD	Due to the negligible solubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	Due to the negligible solubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	Due to the negligible solubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	The product is insoluble in water. Due to their negligible solubility in water and high molecular weight, they are expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	Due to the negligible solubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	Due to insolubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.	Due to the insolubility in water, it is expected to have a low BOD and will not cause oxygen depletion in aquatic systems.
Nutrients	Insoluble and non-biodegradable	Insoluble and non-biodegradable	Insoluble and non-biodegradable	Insoluble and non-biodegradable	Insoluble and non-biodegradable	Insoluble and non-biodegradable	Insoluble and non-biodegradable
Biological properties	No known presence of viruses, yeasts, bacteria, parasites	No known presence of	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts,	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites	No known presence of viruses, yeasts, bacteria, parasites

Material	Hytrel 6356 (thermoplastic polyester elastomer) (note 1)	Aramid 1670 D/TEX Kevlar and Aramid 3300 D/TEX Kevlar (note 2)	Polyamid 11 Besno P40TL (note 3)	Polyester 1220 Dacron T73 (note 4)	Copper (note 5)	EPR Grade MR1 800 (ethylene propylene rubber) EPR Grade MR3 814 (note 6)	HDPE Grade MTG 974 SN (note 7)
		viruses, yeasts, bacteria, parasites		bacteria, parasites			
Radioactivity	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive
Toxicity	Aquatic toxicity: No information is available. Toxicity is expected to be low based on insolubility in water.	Contains no substances known to be hazardous for the environment.	No ecological effect studies have been conducted on this material and no information was found in a search of the scientific literature. Under normal conditions of use the component(s) of this material are contained within the polymer matrix. Butylbenzenesulfonamid and N-Stearoyl-p-aminophenol toxic in some tests.	Low toxic to aquatic organisms	Copper metal is relatively insoluble in water and, therefore, generally has low bioavailability. However, long-term exposure in aquatic and terrestrial environments or processing of the product can lead to the release of the constituent copper in more bioavailable forms. These more bioavailable forms have the potential to yield toxic effects under specific chemical conditions (e.g., low pH). The mobility of the copper compounds in soluble forms is also media-dependent. They can bind with inorganic and organic ligands, reducing their mobility and bioavailability in both soil and water. Bioavailability is also regulated by other factors in the aquatic environment, such as hardness and dissolved organic carbon content	Not considered either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative.	Material is not expected to be harmful to aquatic organisms
Persistence in the environment (physical, chemical and biological)	Not soluble in water, persistent in the environment	Not readily biodegradable.	Not readily biodegradable.	The product is non- biodegradable	Copper metal is relatively insoluble in water	Not considered either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative.	Material is not volatile, insoluble in water, and resistant to biodegradation
Accumulation and biotransformation in biological	No data	No data	No data	They are expected to be non- biodegradable	Refer to 'toxicity' above	Not considered either persistent, bioaccumulative and toxic (PBT), or very	No data

Material	Hytrel 6356 (thermoplastic polyester elastomer) (note 1)	Aramid 1670 D/TEX Kevlar and Aramid 3300 D/TEX Kevlar (note 2)	Polyamid 11 Besno P40TL (note 3)	Polyester 1220 Dacron T73 (note 4)	Copper (note 5)	EPR Grade MR1 800 (ethylene propylene rubber) EPR Grade MR3 814 (note 6)	HDPE Grade MTG 974 SN (note 7)
materials or sediments				and unlikely to bio-concentrate		persistent and very bioaccumulative.	
Chemical and physical changes of the substance or material after release, including formation of new compounds	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release
Probability of production of taints or other changes reducing marketability of resources (e.g., fish, shellfish)	Low – if the Hytrel 6356 breaks down eventually, the dilution available will be considerable	Low – if the aramid breaks down eventually, the dilution available will be considerable	Low – if the polyamid breaks down eventually, the dilution available will be considerable	Low – if the polyester breaks down eventually, the dilution available will be considerable	Low – if the copper breaks down eventually, the dilution available will be considerable	Low – if the EPR breaks down eventually, the dilution available will be considerable	Low – if the HDPE breaks down eventually, the dilution available will be considerable

Note 1: data for thermoplastic polyester elastomer <https://www.phmolds.com/wp-content/uploads/2016/09/TPE-DuPont-Hytrel-6356-Natural.pdf>; http://sds.chemtel.net/webclients/safariland/raw_materials/Hytrel.pdf

Note 2: Data for generic aramid/Kevlar material https://www.dupont.com/content/dam/dupont/amer/us/en/safety/public/documents/en/Kevlar_Technical_Guide_0319.pdf; Data for generic aramid material: <https://www.finitefiber.com/images/pdf/Aramid-SDS.pdf>

Note 3: <https://www.b2bcomposites.com/msds/ted/76097.pdf>

Note 4: Data for generic polyester material https://www.recron.com/pdf/recron_ptv_msds.pdf

Note 5: Copper https://www.teck.com/media/2015-Products-Copper_Metal_SDS_-_2.1.1.pdf

Note 6: Data for ethylene propylene rubber Grade MR1 800 not available. Generic data for ethylene propylene rubber (non-oil grades). https://www.sumitomo-chem.com.sg/wp-content/uploads/2019/09/SDS_EPDM_PRIME_505A_512E_552E_5206.pdf

Note 7: Data sheet for HDPE Grade MTG 974 SN not available. Data for generic HDPE pipes: [SDS-PE-204-SM5508 \(Rev.01\).pdf \(chandra-asri.com\)](https://www.chandra-asri.com/SDS-PE-204-SM5508%20(R%20Rev.01).pdf)

Table B.2.1(f) Kinsale Head Umbilicals Part 2

Material	PVC Fillers REF: MPS/01/27 (note 8)	Polypropylene (note 9)	Bitumen (note 10)	Steel wires (note 11)	Black Synthetic Rubber (EPDM) (note 12)	High tenacity polyester tyre cord (note 13)	MeOH (note 14)	OCEANIC HW 540 V3 (note 15)
Amount (tonnes)	Total umbilicals weight: See Part 1 of this table						2.18	0.536
Composition	Polyvinylchloride	(-CHCH ₃ CH ₂ -) _n	Solvent naphtha (petroleum), medium aliph.	Fe with additives	Ethylene propylene diene monomer	Polyethylene Terephthalate	Methanol	Ethanediol: ≥25-≤50% 2-butoxyethanol ≤3% Reaction products of paraformaldehyde and 2-hydroxypropylamine (ratio 3:2); [MBO] 0.21% Molybdenum trioxide, reaction products with bis[O,O-bis (2-ethylhexyl)] hydrogen dithiophosphate ≤0.3%
Material form	Solid	Solid	solid	Solid	Solid	Solid	Liquid	Liquid
Solubility	Insoluble in water	Not soluble	Insoluble in cold water	Not soluble	No data	Insoluble	Miscible in any proportion	Not available
Specific gravity/density	1.4g/cm ³	0.88 – 0.91 g/cm ³	0.9 g/cm ³	7850 kg/m ³	1.1 – 1.2 g/cm ³	1.35 g/cm ³	0.79g/cm ³	1.06g/cm ³ @ 15.6°C
BOD/COD	N/A Not readily biodegradable in water	N/A Not readily biodegradable	No data	N/A non biodegradable	This product is not expected to be readily biodegradable.	N/A does not contain organic matter	BOD: 1.236 mg/g at 5d	Not determined
Nutrients	Not readily biodegradable in water	N/A Not readily biodegradable	No data	N/A non biodegradable	This product is not expected to be readily biodegradable	No data	N/a Readily biodegradable, does not contain nitrogen or phosphorus compounds	Not determined
Biological properties	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites	N/A - no known presence of viruses, yeasts, bacteria, parasites
Radioactivity	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive	Not radioactive
Toxicity	Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008	Not toxic	H411 -Toxic to aquatic life with long lasting effects. (Note 16)	N/a	No data	No data	Not classified as hazardous to the aquatic environment	H412 Harmful to aquatic life with long lasting effects., H413 May cause long lasting harmful effects to aquatic life. (Note 17)

Material	PVC Fillers REF: MPS/01/27 (note 8)	Polypropylene (note 9)	Bitumen (note 10)	Steel wires (note 11)	Black Synthetic Rubber (EPDM) (note 12)	High tenacity polyester tyre cord (note 13)	MeOH (note 14)	OCEANIC HW 540 V3 (note 15)
Persistence in the environment (physical, chemical and biological)	Not readily biodegradable in water. Due to insufficient data no statement can be made whether the substance fulfils the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.	Not readily biodegradable.	No data	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	This product is not expected to be readily biodegradable	No data	Readily biodegradable	PBT and vPvB not applicable
Accumulation and biotransformation in biological materials or sediments	Not bioaccumulative	N/a	No data	N/a	No data	No data	Does not significantly accumulate in organisms	Low potential to bioaccumulate
Chemical and physical changes of the substance or material after release, including formation of new compounds	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	Once the protective coating breaks down, the steel will corrode to give iron oxide and hydroxide compounds.	There are no expected chemical or physical changes after release	There are no expected chemical or physical changes after release	Expected to biodegrade	Readily biodegradable
Probability of production of taints or other changes reducing marketability of resources (e.g., fish, shellfish)	Low – if the PVC breaks down eventually, the dilution available will be considerable	Low – if the polypropylene breaks down eventually, the dilution available will be considerable	Low – if the bitumen breaks down eventually, the dilution available will be considerable	Low - the corrosion products are not expected to cause tainting and the dilution available will be considerable	Low – if the EPDM breaks down eventually, the dilution available will be considerable	Low – if the polyester tyre cord breaks down eventually, the dilution available will be considerable	Low – the dilution available will be considerable	Low – the dilution available will be considerable

Note 8: Generic data for PVC https://www.vynova-group.com/hubfs/02_Website_Pages/Products/PVC/Documents/vynova_polyvinylchloride_GB_rev0100_2015-830.pdf?hsCtaTracking=1b4e11ef-1379-48c1-af73-2e07fcedcab6%7C53beaf85-8f40-4c2c-bbcb-71dd2f9547bc

Note 9: Generic data for polypropylene. Source: <https://www.technologysupplies.com/downloads/msds/SDS0217.pdf>

Note 10: Generic data for bitumen. Source [JOHNSTONES-PERFORMANCE-Black-Bitumen-17000DUP009-v1-01.pdf](https://www.johnstonestrade.com/JOHNSTONES-PERFORMANCE-Black-Bitumen-17000DUP009-v1-01.pdf) (johnstonestrade.com)

Note 11: Assume the same as grade X52 steel

Note 12: <https://www.arbo.co.uk/wp-content/uploads/2019/04/Arbo-EPDM-MSDS.pdf>

Note 13: Generic data for Treated and Non-Treated Polyester Products, including tire cord: http://www.firestonefibers.com/MSDS_Poly_English.pdf

Note 14: Generic data for methanol [Safety Data Sheet: Methanol \(carlroth.com\)](#)

Note 15: MacDermid Offshore Solutions Oceanic HW 540 Safety Data Sheet, date of revision 1/28/2019.

Note 16: Bitumen (asphalt) is a dark semisolid or solid which is naturally occurring but mainly produced through the distillation of crude oil. Bitumen has a complex chemical makeup, predominantly higher molecular weight maltene and asphaltene compounds which are resistant to biodegradation and dissolution (hence the use of bitumen as a road building material). Fresh bitumen also contains small amounts of a range of lower molecular weight hydrocarbons such as 3-5 ringed alkyl polycyclic aromatic hydrocarbons, and naphthenic acids. These have differing aqueous solubilities and potential toxicity to marine organisms but given the decades the umbilical associated bitumen has been in the sea, the material can be considered inert and not to pose a hazard to marine life.

Note 17: As part of the decommissioning programme, most of the contents of the umbilicals were displaced into a well, which was then plugged and sealed, or were recovered at the platform and disposed of onshore. The umbilicals to be left in situ contain residual water based hydraulic fluid, Oceanic HW540 v3 which was used to operate valves on subsea production wells in the Southwest Kinsale, Ballycotton and Greensands fields. At least 95% of the constituents of Oceanic HW540 v3 are on the OSPAR PLONOR list (considered to pose little or no risk to the environment) and over 99% of the components are OCNS E rated. The product has been identified for substitution due to three components, molybdenum trioxide, ethanediol (=ethylene glycol) and 2-butoxyethanol not meeting pre-screening requirements. A review of the Safety Data Sheets and European Union Risk Assessment Reports for the 3 components indicates that molybdenum trioxide has a relatively low toxicity (PNEC for marine sediment of 2.37 g/kg dry wt), does not biomagnify in aquatic food chains and, under normal environmental conditions, transforms to molybdenum disulphide, a ubiquitous non-toxic naturally-occurring mineral. The other 2 compounds are readily biodegradable, with a low bioaccumulation potential and moderate to low toxicity to marine species.

Attachment C.1 Alternative Measures

C.1.1 Introduction

The alternatives to retaining in place the pipelines and umbilicals, which were considered by Kinsale Energy, are described in this attachment.

C.1.2 'Do Nothing' Alternative

The Kinsale Head gas fields and facilities, part of the Kinsale Area gas fields and facilities, were operated in accordance with a petroleum lease, Petroleum Lease No 1 (OPL 1 - 1970): Kinsale Head, Southwest Kinsale and Ballycotton Gas Fields.

It was a requirement of the lease that the facilities be decommissioned, and the decommissioning plans had to be submitted to the Minister for approval. In the context of the Kinsale Area gas fields and facilities therefore, the 'do nothing' alternative was not an alternative which would have complied with the petroleum lease.

C.1.3 Alternatives to retaining the Pipelines and Umbilicals in place

Introduction

There were a number of alternative approaches to decommissioning of the Kinsale Area pipelines and umbilicals. The decommissioning alternatives considered for the pipelines and umbilicals were full removal, partial removal or leave in situ. In order to decide on the best approach, a Comparative Assessment (CA) of different options was undertaken. The CA followed a systematic process, in which the safety, environmental, technical, social aspects and cost of the various options were evaluated. The process was documented in a CA report¹ (refer to Appendix 1), which includes the scoring methodology and scoring matrices for each of the options, and a narrative expanding upon the implications of each of the options.

Comparative Assessment

The framework for the CA drew on OSPAR 98/3 and Oil and Gas UK (OGUK 2015²) guidance, with a scoring system to assess each of the proposed decommissioning options covering safety, environment, technical, societal and economic criteria. The technical feasibility of any option was also considered in relation to industry experience to date, including from proposed approaches to the decommissioning of pipelines for fields in the North Sea, and related summary reports of experience to date (e.g. OGUK 2013).

Initially a set of 45 individual option considerations relating to each individual pipeline and umbilical were evaluated as part of the CA process, including various combinations of full removal, partial removal and leave in situ. On review of the initial results from this CA process it was considered that certain pipelines and umbilicals could be grouped and assessed together in view of their similarity (e.g. type and burial status). Additionally, with the exception of Ballycotton, all umbilicals are laid next to their associated pipelines and share the same protection materials (e.g. rock or concrete mattresses). In practice, it is unlikely that the decommissioning of the umbilicals would take place separately and it was regarded that these could be assessed alongside their respective pipelines.

¹ Kinsale Area Decommissioning Project Comparative Assessment Report, Hartley Anderson and Arup, 2018

² OGUK (2015). Guidelines for Comparative Assessment in Decommissioning Programmes. Issue 1, 49pp.

Moreover, the similarity in the decommissioning options for each pipeline and umbilical resulted in initial CA scoring which was either not significantly different or the same for multiple options. For these reasons, umbilicals and pipelines were considered together.

The grouping resulted in two types of offshore pipeline/umbilical being defined along with their associated options:

- pipelines which are surface laid or exposed along much of their length and,
- pipelines and umbilicals which are largely under protective materials or buried.

In addition to refining the process by grouping similar pipelines/umbilicals, the initial consideration also allowed for the further definition of options for these groups.

For example, the consideration of partial removal for those pipelines largely under protective materials or buried was not considered to be appropriate (e.g. as the results would not be appreciably different to the full removal option), and the results from the initial consideration also noted that the additional safety, technical and environmental risks from partial removal did not result in significant risk reduction, for example, compared to the equivalent option using rock cover. The following options were taken forward for further consideration in the final CA:

For surface laid pipelines and those exposed along much of their length:

- fully remove,
- leave in situ and rock cover those sections which are >50% exposed as well as pipe ends,
- leave in situ and rock cover pipe ends and any free spans

For pipelines and umbilicals largely under protective materials or buried:

- fully remove,
- leave in situ and rock cover pipe ends and any free spans (where applicable)

Criteria for evaluating the potential impact of the various options were developed for safety, environment, technical feasibility, society and cost categories. The CA used a scoring matrix (see OGUK 2015). For each of these categories, a number of sub-categories were incorporated. The sub-categories were scored using a five-point classification based on the relative risk or expected magnitude of effect from each option. The criteria and scoring matrix is shown in Table C.1.1.

The sub-criteria were scored on a five-point scale ranging from 1 (Very Low) through to 5 (Very High), where 1 represents best performance/least significant impact/lowest risk and 5 worst performance/largest significant impact/highest risk. Scores for the sub-criteria were then weighted according to the level of definition and understanding of methods, equipment and hazards (“uncertainty”).

Table C.1.1: Comparative Assessment Relative Risk and Impact Criteria Scoring

Criteria	Sub Criteria	Very Low	Low	Medium	High	Very High
		1	2	3	4	5
Safety	Risk to personnel offshore during decommissioning operations (Potential Loss of Life (PLL))	>0.00001	>0.0001	>0.001	>0.01	>0.1
Safety	Risk to personnel onshore during decommissioning operations	No risk. No onshore disposal elements	Minor/first aid. Handling <500 tonnes of material	Medical aid/lost time injury. Handling >500 tonnes of material.	Permanent disability/fatality	Multiple fatalities
Safety	Risk to divers during decommissioning operations (PLL)	>0.00001	>0.0001	>0.001	>0.01	>0.1
Safety	Risk to 3rd parties and assets during decommissioning operations	No risk	Loss of access to operational area	Interference with 3 rd party operations altering safety risk	Damage to 3 rd party asset/damage to vessel	Damage to 3 rd party asset requiring remediation/loss of vessel
Safety	Residual risk to 3 rd parties	No risk	Potential snagging risk	Damage/loss of fishing gear	Damage to vessel	Loss of vessel
Environment	Chemical discharge	None	PLONOR* chemicals only	No warnings or substitution labels RQ<1	Warning labels RQ>1	Warnings and substitution labels RQ>1
Environment	Seabed disturbance and/or habitat alteration including cumulative impact	0 - 1% of existing footprint	1 - 10% of existing footprint	10% - 50% of existing footprint	>50% - 100% of existing footprint	>100% of existing footprint
Environment	Total CO2 Emissions (resulting from energy consumption associated with vessels, treatment of recovered material and rock cover)	<1000t	1,000-5,000t	>5,000-10,000t	>10,000-25,000t	>25,000t
Environment	Proportion of potential recyclable material returned	>80%	50% - 80%	30% - <50%	10% - <30%	<10%
Environment	Proportion of total landfill material returned	<10%	10% - <30%	30% - <50%	50% - 80%	>80%

Criteria	Sub Criteria	Very Low	Low	Medium	High	Very High
		1	2	3	4	5
Environment	Conservation sites and species (including noise effects)	No impact	Potential effects but unlikely to be detectable as within normal variability	Minor detectable effects with rapid recovery	Effects detectable, not affecting site integrity or species population	Significant effects on site integrity or population
Environment	Loss of containment to the environment of chemicals, hydrocarbons	None	Slight Impact Reportable spill	Minor Impact/ Localised Impact Spill requiring Tier 1 response	Major Impact Spill requiring Tier 2 response	Massive Impact Spill requiring Tier 3 response
Technical	Technical feasibility	Routine operations with high confidence of outcomes Very low risk of failure. Low technical complexity	Routine operations with good confidence of outcomes Low risk of failure.	Non-routine operations but with good experience base Low risk of failure. Medium technical complexity	Non-routine operations with limited experience base Moderate risk of failure.	Untried technique Higher risk of failure. High technical complexity
Technical	Weather sensitivity	Operations not weather sensitive	Operations are little affected by weather	Requires good weather window	Requires typical summer good weather window	Requires long good weather window
Societal	Residual effect on fishing, navigation or other access (including cumulative)	No effect	Access to area unrestricted	Access to area with charted obstructions	Access to area with uncharted debris and obstructions	Closed access to area
Societal	Coastal communities	No impact	Impacts within normal variability of onshore operations	Short term nuisance during onshore operations	Medium term nuisance during onshore operations	Long term nuisance during onshore operations
Economic	Total cost	<€2million	€2-5 million	€5-10 million	€10-20 million	>€20 million
Economic	Residual liability including monitoring and remediation if necessary	No residual liability	Surveys and remediation unlikely to be required	Survey requirement anticipated but at declining frequency	Surveys and remediation likely to be required in each 5 year period	Annual survey and potential for remedial work

*PLONOR: Pose little or no risk

The overarching conclusion of the CA process was that the full removal options had the highest potential impact (reflected in these scoring worst using the CA criteria, particularly in respect of environment and health and safety, but also in technical and economic criteria) and were therefore least preferable with key findings summarised as follows:

- The full removal option represented the highest safety risk to personnel involved in the removal and recycling of the infrastructure and greatest technical risk due to relatively limited experience to date, particularly in the removal of large pipelines.
- While the methods for removing pipelines are transferrable from standard procedure elsewhere in the oil and gas industry, their implementation at the scale proposed by the option is not, and therefore it entails greater technical and safety risks.
- The snagging risks to fisheries have been assessed as being very low for the leave in situ options (Anatec 2017; even though it is noted that these risks would be removed by the complete removal of the facilities which could represent a long-term snagging hazard to fisheries).
- The environmental risks were highest for full removal as this option would generate an area of seabed disturbance greater than that occupied by the pipeline, and at least as great as that which would have been associated with installation. There would also be greater volumes of CO₂ emissions from longer vessel times in the field for the full removal option.
- Though full removal provides substantial returns to shore of recyclable material which could offset future emissions from products using the recycled materials, this was largely counteracted by emissions from vessels involved in removal, and the uncertainty relating to the recyclability of the concrete, in addition to greater onshore risks of material handling.

Figures 3.11a to 3.11c (from Environmental Impact Assessment Report³ (EIAR)) below, summarise the average option scoring of the CA. Note: Lower score = lowest risk (best scoring option); higher score = highest risk (worst scoring option).

³ Kinsale Area Decommissioning Project Environmental Impact Assessment Report, Hartley Anderson and Arup 2018.

Figure 3.11a-f: The average option scoring of the Comparative Assessment for all pipelines and umbilicals

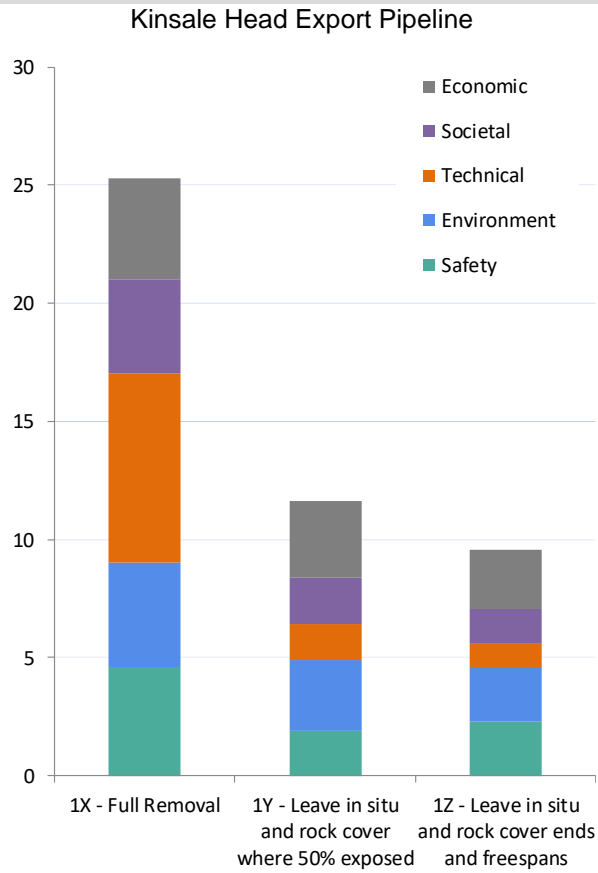


Figure 3.11a

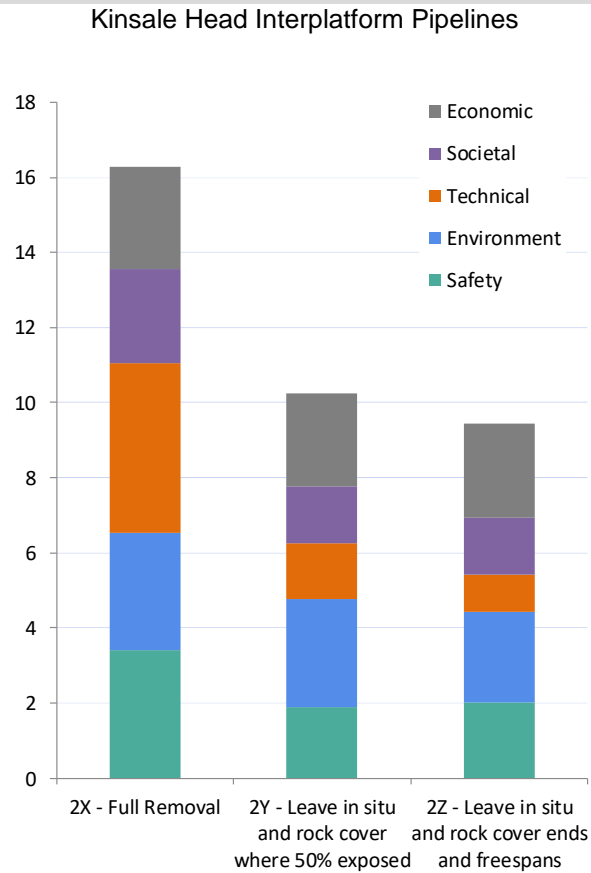


Figure 3.11b

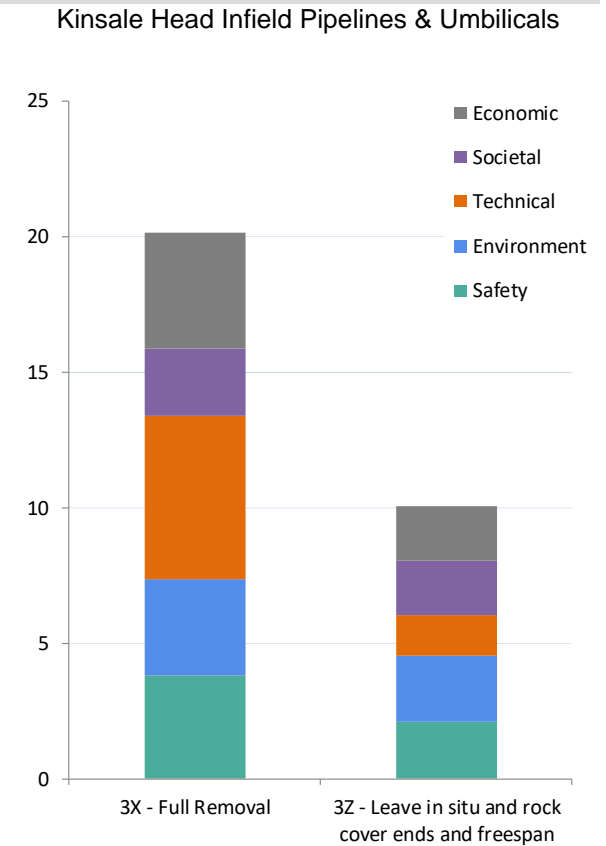


Figure 3.11c

Comparative Assessment Conclusion

Based on the results of the CA, the most favourable option for the offshore pipeline infrastructure is to leave the pipelines and umbilicals in situ and to remediate free spans and cover the ends, using rock cover, to reduce future risks to 3rd parties. This option scores favourably for all the categories assessed, and the majority of sub-categories, including being the preferred option in terms of the environmental criteria considered. While additional rock placement may reduce 3rd party risk even further, this did not change the overall results of the CA. Nevertheless, to ensure a conservative assessment of possible impacts, two in situ decommissioning options were assessed in the EIAR:

- rock cover remediation of pipe ends and freespan only (CA preferred option)
- rock cover the full length of pipelines, which are currently not buried or under protective material

The final option chosen for the decommissioning of the pipelines and umbilicals is to retain them in place and rock cover the pipe ends and free spans only. After considering all alternatives and taking into account environmental, safety, technical and related matters, it was determined that there was no suitable alternative.

The Comparative Assessment report, Kinsale Area Decommissioning Project Comparative Assessment of Pipelines and Umbilicals, is attached in Appendix 1.

Attachment E.2 (I) Characteristics of the Dumping Site(s)

E.2(I).1 Distance from Shore

The export pipeline extends from the high water mark at Inch, Co Cork, 54.37km to the Alpha platform. The Kinsale Head pipelines and umbilicals are located between approximately 46km and 50km south of the County Cork coastline.

E.2(I).2 Average, Minimum And Maximum Depth Of Water (Referenced To OD Malin);

The average, minimum and maximum water depths re given in Table E.2(I).2 1 below.

Water Depth	mLAT	mOD Malin*
Minimum	+3.75** (the export pipeline at the mean high water mark, the landward limit of the Foreshore)	+1.2
Average	-88	-85
Maximum	-93	-90

*Conversion from Chart datum (LAT) to OD Malin Head for Ballycotton Harbour -1.474mOD Malin Head = 1.092m LAT (<http://www.marine.ie/Home/site-area/data-services/real-time-observations/tidal-observations> accessed 27-5-2021. Ballycotton Harbour is closest point for which Marine Institute data given.)

** MHW is circa +3.75LAT (4.2+3.3)/2, the average of high water spring tides and neap tides at Cobh, according to Tide Tables 2021, published by Ciaran O'Carroll, Mizenmaps.

E.2(I).3 Sediment Characteristics

The seafloor is generally flat in the area encompassing the Kinsale Area fields with gentle slopes across the region. Rig site and pipeline route surveys undertaken around the Seven Heads, South West Kinsale and Greensand developments all showed mosaics of high and low reflectivity (AquaFact 2003, 2004). The high reflectivity was interpreted as gravelly sands with megaripples of up to 0.3m height and 1.5m wavelength. The low reflectivity areas comprised muddy sand (station KG 12 in Figure 4.1 shows slightly muddy sand recorded from the 2002 survey). At the prevailing water depths of 90-100m, the megaripples are indicative of a high energy environment. Ribbons of mobile sands lie in a southwest to northeast orientation. Outcrops of hard substrate – the underlying Cretaceous chalk bedrock – are also exposed intermittently with a variable covering of muddy sands. A distinctive feature of the sediments in the Kinsale Area is the apparent frequent juxtaposition of clean sand with mud. This mixture of sediment types is reflected in the fauna present, so that a single sample may contain species characteristic of both muds and clean sands.

Sidescan sonar records from the Kinsale Area indicate the presence of distinctive Holocene sand, together with exposures of older Quaternary sand and gravel linear patches, all within spatial scales of a few hundred metres.

Refer to Section 4.1 of the EIAR in Appendix 2.

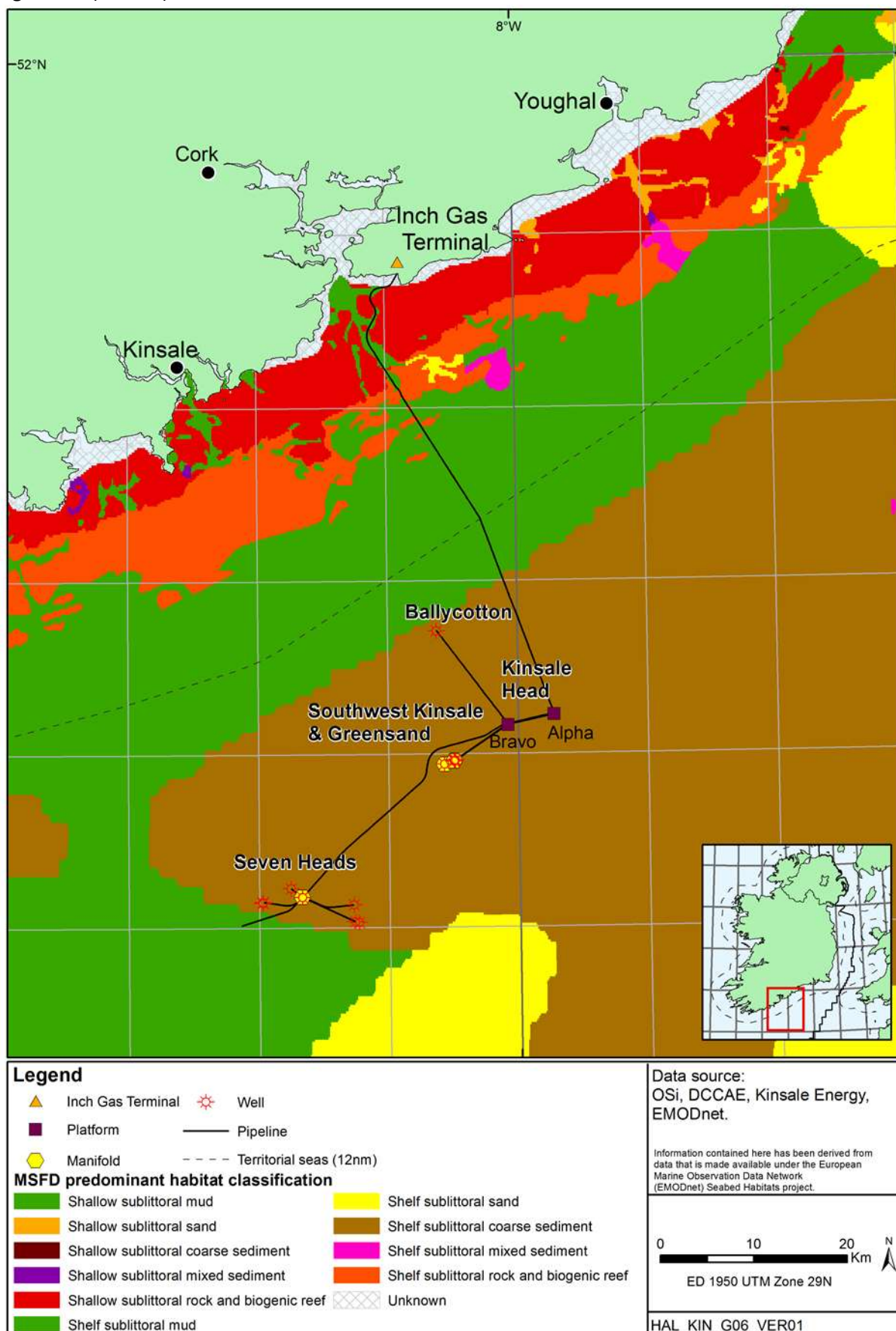
E.2(I).4 Nature of Seabed Habitats

According to the EUNIS habitat classification, the underlying habitat is circalittoral coarse sediment (Figure 4.4 of the attached EIAR). These are characteristically found in tidal channels of marine inlets, along exposed coasts and offshore and particle sizes range through coarse sands, gravel and shingle.

Deep circalittoral sand is defined as fine sands or non-cohesive muddy sands which are likely to be more stable due to their depth. Existing seabed surveys of the area (Figure 4.5 of the attached EIAR) generally support the EUNIS habitat descriptions and mapped distribution in the area.

The dynamic nature of the sedimentary environment of the area presents a range of relatively impoverished heterogeneous benthic habitats. Figure 4.4 of the EIAR is included below. Refer also to Section 4.1 of the attached EIAR.

Figure 4.4 (of EIAR) Predicted Seabed Habitats



E.2(I).5 Current/Flow/Tidal Regime, Etc.

The Celtic Sea is particularly susceptible to rough seas due to strong to gale force south westerly winds. The highest frequency of rough to high seas over the open ocean to the south is associated with winds between south-south-east and north-west (UKHO 1997).

Swell distributions are dominated by swells from a south-west and west direction throughout the year, with mean significant wave heights varying between 1-1.5m in summer to 3m in winter (data for 15 July 2016 and 15 January 2016 respectively from Marine Institute monthly model means). Estimates of 100-year extreme metocean conditions for the Kinsale Area indicate a significant wave height of up to 13.8m, a maximum wave height of 24.7m, and a current speed of 1.13m/s, all from a southwesterly direction (Fugro 2015).

Semi-diurnal tidal components dominate short-term current velocities at the Kinsale Area, with typical spring velocities of around 0.5m/s and a north-easterly flood and south-westerly ebb orientation (UKHO 1997).

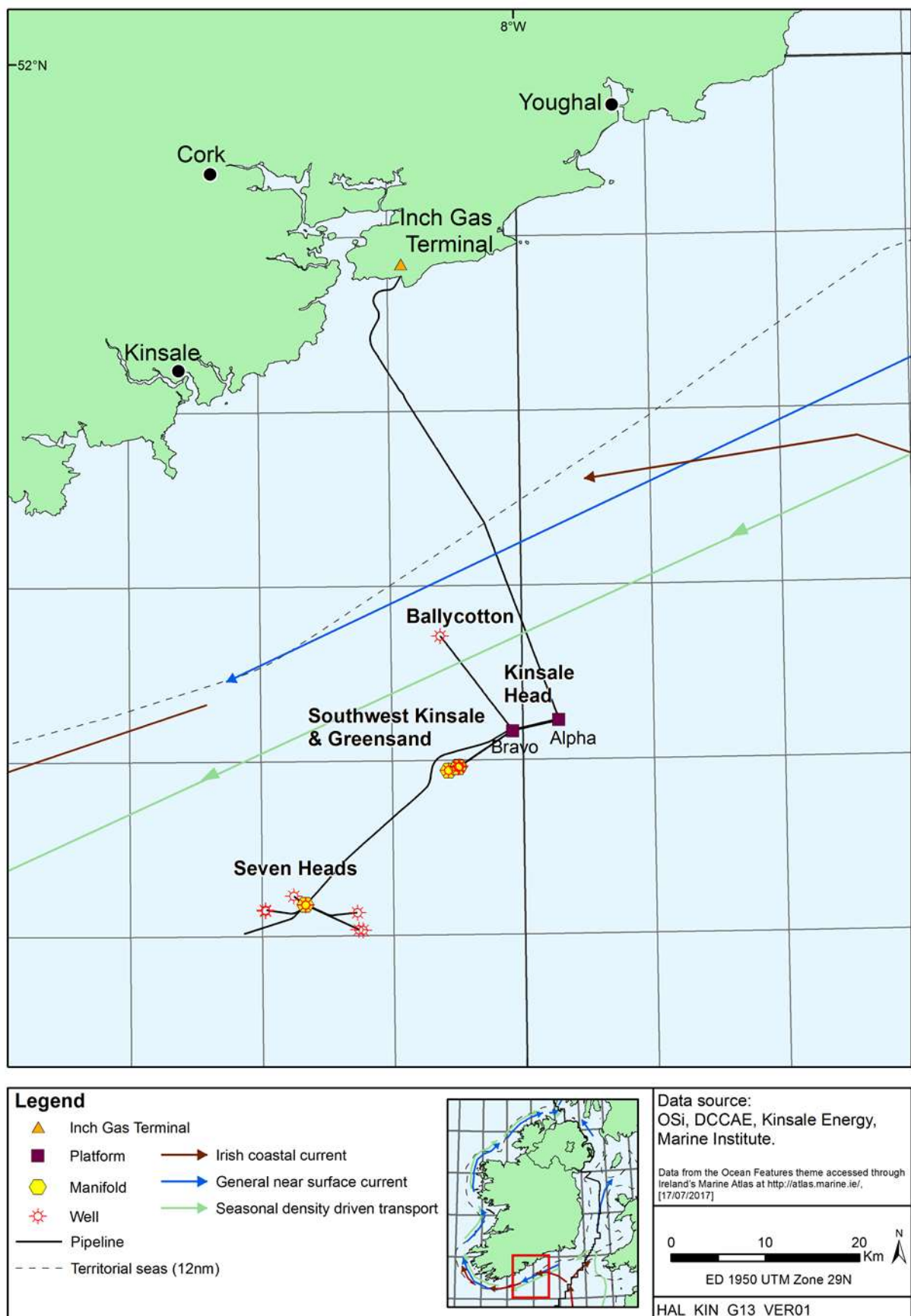
The general pattern of transport of water into the Celtic Sea was reviewed by Pingree & Le Cann (1989), who identified a weak, variable but persistent flow, with typical mean speeds of 0.03m/s, moving northwards along the Brittany coast and across the mouth of the English Channel. North of the Scilly Isles, part of this flow diverges to the west and is deflected southwards around the south coast of Ireland, and there is generally a strong clockwise flow around the Irish coast caused by easterly winds and the Irish Coastal Current (Fernand et al. 2006). See Figure 4.6 for a schematic of the currents in the Kinsale Area.

Surface water temperatures range from 8-10°C in winter to 15-16°C in summer, while bottom temperatures show less variation and remain at around 8-10°C throughout the year (Connor et al. 2006). Thermal stratification of the water column develops in spring, with a thermocline between warm surface waters and colder deeper waters. Stratification breaks down to an extent through autumn, although the area remains frontal throughout winter (Connor et al. 2006). Mean sea surface salinity at the Kinsale Area during the summer is 34.75‰ increasing in winter to 35.10‰, reflecting stratified and mixed conditions respectively (BODC 1998).

The Marine Framework Strategy Directive (MFS) initial assessment (Marine Institute 2013) provides an overview of water quality in the Irish marine environment. Monitoring results of water sampling (in addition to sediment and organism sampling) indicate that the concentrations of monitored non-synthetic chemicals (e.g. trace metals, hydrocarbons) and synthetic contaminants (e.g. PCBs, flame retardants, TBT) are within internationally acceptable ranges or standards and at levels unlikely to cause adverse effects on marine life.

The OSPAR Intermediate Assessment 2017 provides an assessment of the eutrophication status of NE Atlantic waters, drawing on data from 2006-2014 (OSPAR 2017). Results for Republic of Ireland waters are very similar to previous assessments, with the vast majority (> 99.9% by area) of assessed areas classified as non-problem areas for eutrophication. Problem (n = 20) and potential problem (n = 16) areas are restricted to small inshore and coastal areas; these include some estuaries and embayments on the south coast of Ireland. Offshore waters, such as the Kinsale Area, do not show elevated nutrient concentrations (OSPAR 2017). Refer also to Section 4.3 of the EIAR.

Figure 4.6 (of the EIAR) Currents in the Kinsale Area



Attachment E.2 (II) Location of the dumping site(s)

The coordinates for the pipelines and umbilicals dumping site(s) are given in Longitude and Latitude (WGS84 datum; in degrees and decimal minutes) in Table E.2 (II).1 below:

The co-ordinates are shown at intervals along the length of the pipelines and umbilicals.

Table E.2 (II).1 Coordinates of Dumping Site(s)

Pipeline/Umbilical Description	Latitude	Longitude
24" Export Pipeline Alpha Platform to Inch HWM	51° 22' 15" N	7° 56' 42" W
	51° 22' 20.086" N	7° 56' 40.273" W
	51° 22' 28.153" N	7° 56' 45.749" W
	51° 22' 46.124" N	7° 56' 55.219" W
	51° 22' 59.536" N	7° 57' 4.136" W
	51° 23' 27.707" N	7° 57' 20.153" W
	51° 23' 47.515" N	7° 57' 30.889" W
	51° 23' 58.744" N	7° 57' 38.021" W
	51° 24' 5.780" N	7° 57' 41.786" W
	51° 24' 14.000" N	7° 57' 45.969" W
	51° 24' 21.609" N	7° 57' 50.783" W
	51° 24' 46.375" N	7° 58' 5.429" W
	51° 25' 5.429" N	7° 58' 17.607" W
	51° 25' 24.432" N	7° 58' 27.849" W
	51° 25' 40.153" N	7° 58' 37.384" W
	51° 25' 49.787" N	7° 58' 42.773" W
	51° 26' 4.826" N	7° 58' 52.161" W
	51° 26' 17.507" N	7° 58' 59.303" W
	51° 26' 34.173" N	7° 59' 8.839" W
	51° 26' 44.569" N	7° 59' 14.773" W
	51° 27' 3.604" N	7° 59' 25.943" W
	51° 27' 20.959" N	7° 59' 35.788" W
	51° 27' 43.097" N	7° 59' 48.917" W
	51° 27' 51.460" N	7° 59' 53.694" W
	51° 28' 11.541" N	8° 0' 5.463" W
	51° 28' 27.855" N	8° 0' 15.640" W
	51° 28' 50.111" N	8° 0' 29.077" W
	51° 29' 12.229" N	8° 0' 42.408" W
	51° 29' 36.337" N	8° 0' 56.359" W
	51° 30' 4.491" N	8° 1' 13.087" W
	51° 30' 25.711" N	8° 1' 26.201" W
	51° 30' 47.118" N	8° 1' 37.891" W
	51° 31' 11.499" N	8° 1' 52.210" W
	51° 31' 40.990" N	8° 2' 9.252" W
	51° 32' 3.060" N	8° 2' 22.174" W
	51° 32' 21.487" N	8° 2' 32.928" W
	51° 32' 40.710" N	8° 2' 43.787" W
	51° 33' 0.126" N	8° 2' 55.593" W
	51° 33' 26.700" N	8° 3' 11.339" W
	51° 33' 48.907" N	8° 3' 27.378" W
	51° 34' 13.838" N	8° 3' 51.795" W

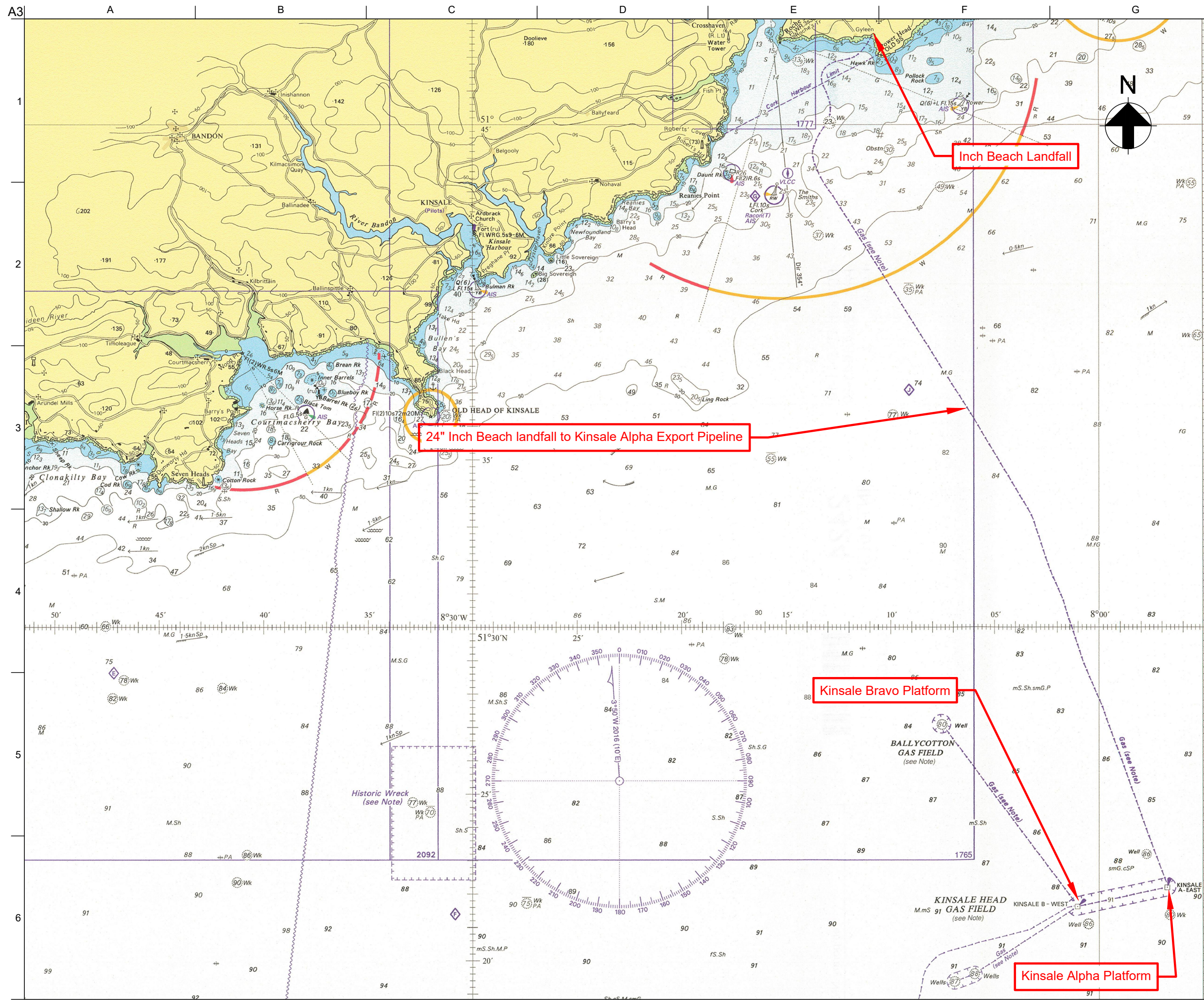
	51° 34' 32.384" N	8° 4' 10.851" W
	51° 34' 49.814" N	8° 4' 28.673" W
	51° 35' 15.041" N	8° 4' 53.915" W
	51° 35' 37.230" N	8° 5' 16.098" W
	51° 35' 55.388" N	8° 5' 34.273" W
	51° 36' 20.378" N	8° 5' 59.647" W
	51° 36' 38.469" N	8° 6' 17.646" W
	51° 37' 0.323" N	8° 6' 39.354" W
	51° 37' 13.143" N	8° 6' 52.809" W
	51° 37' 32.085" N	8° 7' 10.992" W
	51° 37' 50.717" N	8° 7' 29.670" W
	51° 38' 3.574" N	8° 7' 42.580" W
	51° 38' 22.865" N	8° 8' 2.634" W
	51° 38' 37.472" N	8° 8' 17.350" W
	51° 38' 49.188" N	8° 8' 29.120" W
	51° 38' 58.225" N	8° 8' 37.695" W
	51° 39' 5.659" N	8° 8' 44.955" W
	51° 39' 14.266" N	8° 8' 53.847" W
	51° 39' 24.062" N	8° 9' 3.452" W
	51° 39' 33.390" N	8° 9' 12.561" W
	51° 39' 46.235" N	8° 9' 26.442" W
	51° 40' 0.113" N	8° 9' 39.367" W
	51° 40' 12.367" N	8° 9' 52.330" W
	51° 40' 30.827" N	8° 10' 10.783" W
	51° 40' 40.689" N	8° 10' 20.255" W
	51° 40' 47.118" N	8° 10' 25.999" W
	51° 40' 53.063" N	8° 10' 29.990" W
	51° 41' 0.592" N	8° 10' 34.942" W
	51° 41' 6.123" N	8° 10' 40.377" W
	51° 41' 11.142" N	8° 10' 47.046" W
	51° 41' 16.019" N	8° 10' 54.531" W
	51° 41' 23.833" N	8° 11' 3.566" W
	51° 41' 31.491" N	8° 11' 10.865" W
	51° 41' 37.369" N	8° 11' 16.126" W
	51° 41' 42.903" N	8° 11' 21.403" W
	51° 41' 49.353" N	8° 11' 28.980" W
	51° 42' 9.963" N	8° 11' 49.899" W
	51° 42' 31.156" N	8° 12' 11.657" W
	51° 42' 49.480" N	8° 12' 29.982" W
	51° 43' 1.179" N	8° 12' 41.361" W
	51° 43' 15.876" N	8° 12' 55.356" W
	51° 43' 27.877" N	8° 13' 8.226" W
	51° 43' 45.521" N	8° 13' 25.234" W
	51° 44' 15.505" N	8° 13' 36.284" W
	51° 44' 43.145" N	8° 13' 24.869" W
	51° 45' 10.057" N	8° 13' 0.851" W
	51° 45' 36.945" N	8° 12' 45.975" W
	51° 45' 53.457" N	8° 12' 53.197" W
	51° 46' 2.963" N	8° 13' 2.186" W

	51° 46' 18.719" N	8° 13' 14.440" W
	51° 46' 31.582" N	8° 13' 14.847" W
	51° 46' 54.308" N	8° 12' 51.628" W
	51° 47' 1.709" N	8° 12' 11.079" W
	51° 47' 5.051" N	8° 11' 33.208" W
	51° 47' 8.075" N	8° 11' 24.322" W
	51° 47' 44" N	8° 10' 42.87" W
Alpha platform to Bravo platform 12" inter-platform pipeline	51° 22' 15" N	7° 56' 42" W
	51° 22' 20.195" N	7° 56' 41.562" W
	51° 22' 16.936" N	7° 57' 0.606" W
	51° 22' 14.721" N	7° 57' 15.129" W
	51° 22' 11.412" N	7° 57' 40.407" W
	51° 22' 9.354" N	7° 57' 55.638" W
	51° 22' 6.358" N	7° 58' 17.552" W
	51° 22' 2.338" N	7° 58' 47.106" W
	51° 21' 59.718" N	7° 59' 5.845" W
	51° 21' 57.022" N	7° 59' 25.682" W
	51° 21' 53.687" N	7° 59' 52.026" W
	51° 21' 50.261" N	8° 0' 17.047" W
	51° 21' 47.976" N	8° 0' 33.495" W
	51° 21' 46.138" N	8° 0' 46.812" W
	51° 21' 43.998" N	8° 0' 54.786" W
	51° 21' 39" N	8° 0' 57" W
Bravo platform to Alpha platform 24" inter-platform pipeline	51° 21' 39" N	8° 0' 57" W
	51° 21' 43.807" N	8° 0' 54.013" W
	51° 21' 47.107" N	8° 0' 31.163" W
	51° 21' 50.926" N	8° 0' 1.032" W
	51° 21' 55.352" N	7° 59' 28.744" W
	51° 21' 59.219" N	7° 58' 58.424" W
	51° 22' 2.545" N	7° 58' 34.635" W
	51° 22' 4.989" N	7° 58' 16.557" W
	51° 22' 6.576" N	7° 58' 4.430" W
	51° 22' 8.821" N	7° 57' 48.405" W
	51° 22' 12.056" N	7° 57' 21.441" W
	51° 22' 14.631" N	7° 57' 0.334" W
	51° 22' 17.620" N	7° 56' 43.657" W
	51° 22' 15" N	7° 56' 42" W
10" Ballycotton to Bravo platform pipeline	51° 21' 39" N	8° 0' 57" W
	51° 21' 43.855" N	8° 0' 55.155" W
	51° 21' 56.437" N	8° 1' 10.104" W
	51° 22' 6.980" N	8° 1' 22.515" W
	51° 22' 16.142" N	8° 1' 33.403" W
	51° 22' 22.442" N	8° 1' 40.958" W
	51° 22' 29.609" N	8° 1' 49.533" W
	51° 22' 37.771" N	8° 1' 59.259" W
	51° 22' 45.291" N	8° 2' 8.399" W
	51° 22' 52.733" N	8° 2' 17.355" W
	51° 23' 8.219" N	8° 2' 36.169" W
	51° 23' 20.090" N	8° 2' 50.750" W

	51° 23' 43.291" N	8° 3' 18.566" W
	51° 24' 9.424" N	8° 3' 48.837" W
	51° 24' 30.780" N	8° 4' 14.508" W
	51° 24' 54.798" N	8° 4' 43.167" W
	51° 25' 17.821" N	8° 5' 10.608" W
	51° 25' 43.485" N	8° 5' 41.862" W
	51° 26' 9.474" N	8° 6' 12.566" W
	51° 26' 35.168" N	8° 6' 43.627" W
	51° 26' 59.456" N	8° 7' 13.230" W
	51° 27' 11.101" N	8° 7' 27.021" W
	51° 27' 07" N	8° 7' 27.021" W
Ballycotton Umbilical	51° 21' 39" N	8° 0' 57" W
	51° 21' 43.661" N	8° 0' 55.651" W
	51° 21' 57.779" N	8° 1' 13.866" W
	51° 22' 10.827" N	8° 1' 29.611" W
	51° 22' 20.021" N	8° 1' 40.492" W
	51° 22' 28.100" N	8° 1' 50.162" W
	51° 22' 36.462" N	8° 2' 0.186" W
	51° 22' 43.985" N	8° 2' 9.295" W
	51° 22' 57.424" N	8° 2' 25.275" W
	51° 23' 14.859" N	8° 2' 46.370" W
	51° 23' 40.473" N	8° 3' 17.562" W
	51° 24' 5.764" N	8° 3' 47.337" W
	51° 24' 28.088" N	8° 4' 14.478" W
	51° 24' 52.301" N	8° 4' 43.745" W
	51° 25' 17.645" N	8° 5' 12.954" W
	51° 25' 40.029" N	8° 5' 41.122" W
	51° 26' 5.199" N	8° 6' 11.544" W
	51° 26' 30.334" N	8° 6' 40.277" W
	51° 26' 55.638" N	8° 7' 11.478" W
	51° 27' 10.767" N	8° 7' 28.733" W
	51° 27' 07" N	8° 3' 18.566" W
12" South West Kinsale(SWK) Pipeline to Bravo and SWK Umbilical	51° 21' 39" N	8° 0' 57" W
	51° 21' 43.612" N	8° 0' 55.927" W
	51° 21' 27.595" N	8° 1' 35.907" W
	51° 21' 9.695" N	8° 2' 18.834" W
	51° 20' 51.663" N	8° 3' 1.679" W
	51° 20' 33.845" N	8° 3' 44.648" W
	51° 20' 15.964" N	8° 4' 27.734" W
	51° 19' 57.992" N	8° 5' 10.573" W
	51° 19' 40.409" N	8° 5' 52.511" W
	51° 19' 37" N	8° 5' 54" W
12" SWK to Western Drill Centre and Umbilical	51° 19' 37" N	8° 5' 54" W
	51° 19' 38.953" N	8° 5' 54.182" W
	51° 19' 35.244" N	8° 6' 5.043" W
	51° 19' 32.400" N	8° 6' 16.899" W
	51° 19' 30.587" N	8° 6' 29.426" W
	51° 19' 29.282" N	8° 6' 42.112" W
	51° 19' 28.476" N	8° 6' 50.012" W

	51° 19' 25.4" N	8° 6' 51.1" W
10" Greensand to Bravo platform pipeline	51° 21' 39" N	8° 0' 57" W
	51° 21' 43.687" N	8° 0' 55.967" W
	51° 21' 29.041" N	8° 1' 35.711" W
	51° 21' 11.151" N	8° 2' 18.682" W
	51° 20' 53.161" N	8° 3' 1.554" W
	51° 20' 35.224" N	8° 3' 44.568" W
	51° 20' 17.237" N	8° 4' 27.542" W
	51° 19' 59.261" N	8° 5' 10.352" W
	51° 19' 42.054" N	8° 5' 54.153" W
	51° 19' 41.217" N	8° 5' 56.352" W
	51° 19' 35.1" N	8° 5' 56.7" W

Kinsale Head Charts 1 to 4 show the location of the pipelines and umbilicals.



- Notes**
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Rev	Date	By	Chkd	Appd

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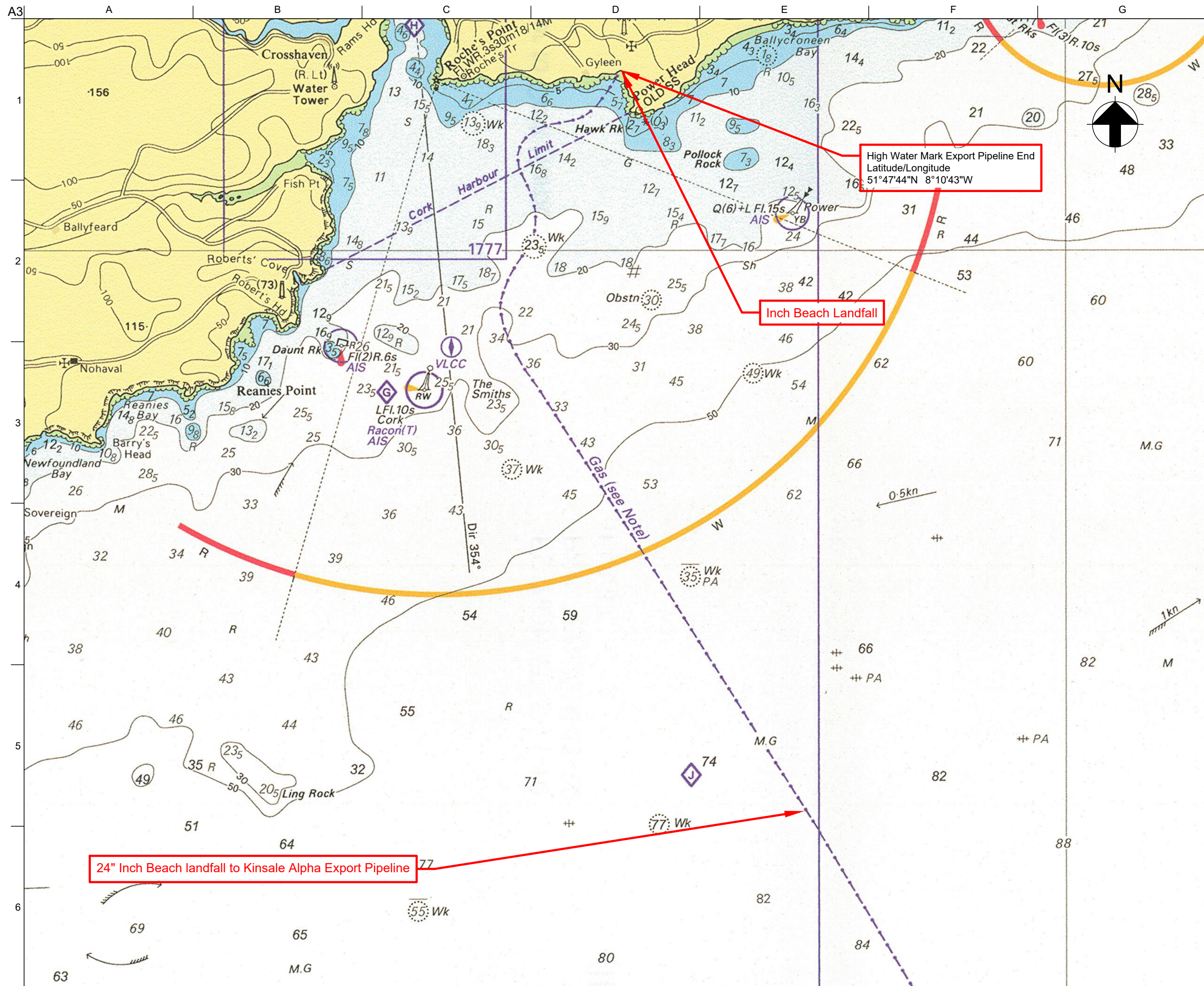
Client

KINSALE ENERGY

Project Title
Kinsale Head Dumping at Sea Permit Application

Drawing Title
**Kinsale Head Chart 1
Kinsale Head Gas Field Overview**

Scale at A3	1:200,000
Role	Planning
Suitability	Information
Arup Job No	253993-00
Rev	0
Name	KEL-ARUP-DAS-DR-01



Notes

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Client



Project Title

Kinsale Head Dumping at Sea
Permit Application

Drawing Title

Kinsale Head Chart 2
Inch Beach Landfall

Scale at A3
1:100,000

Role
Planning

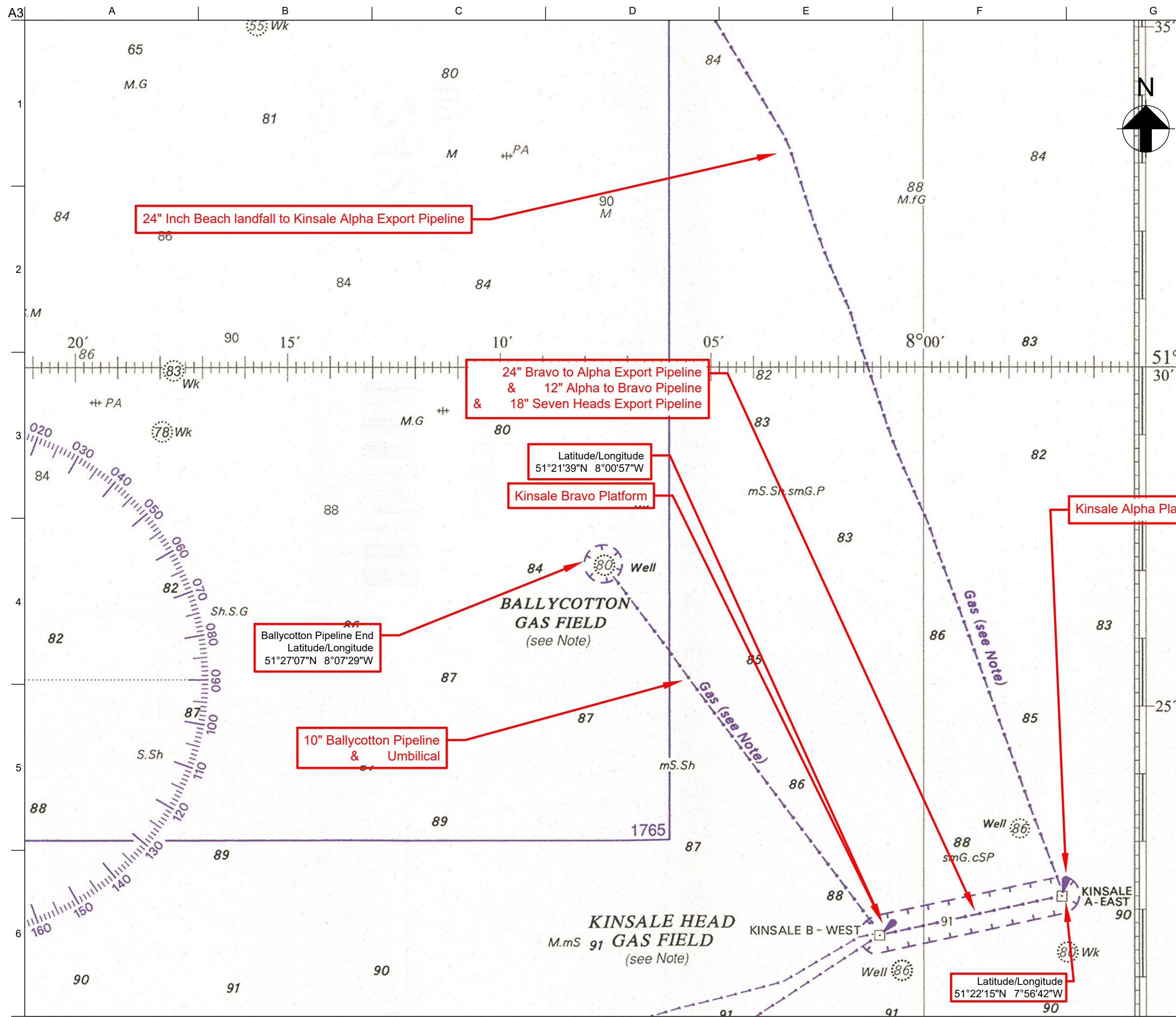
Suitability
Information

Arup Job No
253993-00

Rev
0

Name

KEL-ARUP-DAS-DR-02



Attachment F.1 Assessment of Impact on the Environment

F.1.1(a) Introduction

The following sections provide an assessment of the predicted impact on the receiving environment of the proposed dumping at sea activities to which this application relates.

F.1.1(b) Initial dilution to be achieved by proposed method of release

There will be no release activity and no initial dilution. The pipelines and umbilicals will be retained in situ.

F.1.1(c) Methods of packaging and containment, if any

No packaging or containment methods are proposed. The pipelines and umbilicals will remain in situ and there will be no release activity.

F.1.1(d) Dispersal, horizontal transport and vertical mixing characteristics

There will be no release activity and no dispersal, horizontal transport or vertical mixing of the pipelines and umbilicals in the water column. The residual contents of the umbilicals, MeOH and HW-540, will disperse in the water column over time. Both materials are biodegradable.

F.1.1(e) Existence and impact of current and/or previous dumping in the area (including accumulative effects)

There is no current dumping and there has been no previous dumping in the area. The nearest dredge material disposal site is in use by the Port of Cork. This site is located 5km to the east of the export pipeline. Refer to Figure 4.17 of the EIAR, which indicates the location of this site and three disused dumping sites.

F.1.1(f) Sea bottom characteristics, including topography, geochemical and geological characteristics and benthic micro-fauna and macro-fauna

The sea bottom characteristics, including topography and geological characteristics are described in Section E.2(l).3 and E.2(l).4, above, and in Section 4.1 of the EIAR.

Sampling of the sediments in the area of the dump site, where the pipelines and umbilicals are located, was undertaken and the sampling locations and results were presented in the EIAR, in Section 4.1, Table 4.1.

F.1.1(g) Water characteristics (e.g., temperature, pH, salinity, oxygen indices of pollution-dissolved oxygen (DO), nitrate, nitrite, ammonia, phosphate and suspended matter)

Table F.1.1(g) presents the results of water sampling undertaken by the Marine Institute, from 2013 to 2018, in the Western Celtic Sea, in which the Kinsale Area pipelines and umbilicals are located. While the sampling locations are to the north of the Kinsale Area, and at a shallower depth, the results are considered representative of the water quality in the vicinity of the Kinsale Area pipelines and umbilicals.

Table F 1.1 (g) Water Characteristics in Western Celtic Sea

Year	Sample	Station	WFD Water Body	Date	Time (hhmm)	Survey	Latitude	Longitude	Water Depth (m)	Depth (m)	ammonia (umol/l)	dissolved inorganic carbon (umol/kg)	dissolved oxygen by CTD (umol/l)	nitrate + nitrite (-N) (umol/l)	nitrite (NO2-N) (umol/l)	phosphate (PO4-P) (umol/l)	salinity (CTD measured) (PSU)	salinity (lab salinometer) (PSU)	silicate (SiO4-Si) (umol/l)	temperature (degC)	total alkalinity (umol/kg)
2011	274	IA32E1825	Western Celtic Sea (HAs 18;19;20)	03/02/11	1059	CV11020	51.7497	-8.2778	18	3				14.8	0.2	0.49		33.993	7.32		
2011	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	03/02/11	1042	CV11020	51.7502	-8.2492	26	3.98			308.27	13.1	0.17	0.48	34.178	34.197	6.83	7.68	
2011	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	03/02/11	1042	CV11020	51.7502	-8.2492	26	21.9			300.66	8.28	0.11	0.41	34.912	34.912	5.2	8.23	
2011	276	IA32E1852	Western Celtic Sea (HAs 18;19;20)	03/02/11	0721	CV11020	51.7497	-8.1968	27	3				11.1	0.15	0.5		34.464	6.41		
2011	277	IA32E1855	Western Celtic Sea (HAs 18;19;20)	03/02/11	0707	CV11020	51.7497	-8.1487	31	3				9.19	0.12	0.49		34.768	5.75		
2011	278	IA32E188		03/02/11	0654	CV11020	51.7498	-8.1015	42	3				8.86	0.12	0.49		34.844	5.21		
2011	279	IA32E188		03/02/11	0637	CV11020	51.7497	-8.0493	50	3				9.65	0.12	0.47		34.71	5.65		
2011	282	IA32E1598	Western Celtic Sea (HAs 18;19;20)	03/02/11	0951	CV11020	51.697	-8.35	31	3				7.73	0.11	0.49		34.927	5.09		
2011	283	IA32E1832	Western Celtic Sea (HAs 18;19;20)	03/02/11	1006	CV11020	51.6995	-8.3007	35	3				7.78	0.09	0.48		34.98	4.87		
2011	284	IA32E1838	Western Celtic Sea (HAs 18;19;20)	03/02/11	1018	CV11020	51.7003	-8.2522	40	3				7.97	0.08	0.49			5.06		
2011	285	IA32E186		03/02/11	0743	CV11020	51.702	-8.2008	52	3				8.16	0.11	0.5		34.863	5.3		
2011	324	IA32E1825	Outer Cork Harbour	03/02/11	1126	CV11020	51.7592	-8.2667	27	3				23.7	0.29	0.54		32.717	9.25		
2011	463	IA32E1816	Outer Cork Harbour	03/02/11	1111	CV11020	51.7788	-8.2668	17	3				19.1	0.25	0.54		33.513	8.09		
2013	274	IA32E1825	Outer Cork Harbour	04/02/13	0937	CV13001	51.7518	-8.2833	16.48	3				23.4	0.23	0.74		32.809	9.59		
2013	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	04/02/13	0917	CV13001	51.7503	-8.2527	23.15	1.6		2134.47	262.26	12.4	0.14	0.48	34.056	34.081	5.38		2292.97
2013	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	04/02/13	0917	CV13001	51.7503	-8.2527	23.15	23.59		2152.11	258.49	9.77	0.11	0.68	35.02		5.84		2326.39
2013	276	IA32E1852	Western Celtic Sea (HAs 18;19;20)	04/02/13	0859	CV13001	51.7503	-8.1995	24.37	3				10.5	0.12	0.69		34.842	6.16		
2013	277	IA32E1855	Western Celtic Sea (HAs 18;19;20)	04/02/13	0842	CV13001	51.7502	-8.1527	24.22	3				10.5	0.11	0.68		34.926	6.13		
2013	278	IA32E188		04/02/13	0825	CV13001	51.7498	-8.1062	36.91	3				9.79	0.1	0.68		35.029	5.85		
2013	279	IA32E188		04/02/13	0807	CV13001	51.7508	-8.0535	49.33	3				9.93	0.1	0.68		35.002	6.02		
2013	280	IA32E188		04/02/13	0747	CV13001	51.7502	-8.0015		3				10.2	0.08	0.67		35.012	5.89		
2013	282	IA32E1598	Western Celtic Sea (HAs 18;19;20)	06/02/13	1224	CV13001	51.6998	-8.3492	27.31	3				10	0.1	0.66		35.109	5.59		
2013	283	IA32E1832	Western Celtic Sea (HAs 18;19;20)	06/02/13	1208	CV13001	51.7003	-8.2987	34.46	3				9.83	0.07	0.7		35.093	5.58		
2013	284	IA32E1838		06/02/13	1056	CV13001	51.6977	-8.2457	39.12	3				10.1	0.12	0.7		34.993	5.86		
2013	324	IA32E1815	Outer Cork Harbour	04/02/13	1231	CV13001	51.8107	-8.2687	26.97	3				33.9	0.3	0.81		30.91	12.6		
2013	463	IA32E1816	Outer Cork Harbour	04/02/13	1019	CV13001	51.7797	-8.2667	16.38	3				19.2	0.2	0.73		33.458	8.29		
2015	274	IA32E1825	Western Celtic Sea (HAs 18;19;20)	25/01/15	0542	CV15001	51.7513	-8.2777		3	0.77			18.6	0.21	0.79		34.089	7.12		
2015	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	25/01/15	0555	CV15001	51.751	-8.2483		1.82	1.83	2123.5	262.571	20.7	0.22	0.83	34.163	34.198	7.03	8.992	2288.5
2015	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	25/01/15	0555	CV15001	51.751	-8.2483		20.21	1.28	2150	256.854	15.4	0.16	0.79	35.025	35.037	5.54	9.3421	2323.7
2015	277	IA32E1855	Western Celtic Sea (HAs 18;19;20)	24/01/15	1852	CV15001	51.749	-8.1498		3	0.97			13.5	0.13	0.75		34.958	5.61		
2015	278	IA32E188		24/01/15	1839	CV15001	51.7493	-8.1013		3	1.63			16.8	0.15	0.77		34.988	5.58		
2015	279	IA32E188		24/01/15	1826	CV15001	51.7498	-8.0495		3	1.41			17.5	0.15	0.76		35.018	5.53		
2015	280	IA32E188		24/01/15	1814	CV15001	51.7498	-8.001		3	1.2			14.9	0.12	0.8		35.041	5.61		
2015	282	IA32E1598	Western Celtic Sea (HAs 18;19;20)	25/01/15	0457	CV15001	51.701	-8.3502		3	1.06			14.4	0.19	0.77		34.754	6.11		
2015	283	IA32E1832	Western Celtic Sea (HAs 18;19;20)	25/01/15	0509	CV15001	51.7002	-8.2983		3	0.67			14.5	0.18	0.78		34.764	6.15		
2015	284	IA32E1838	Western Celtic Sea (HAs 18;19;20)	25/01/15	0521	CV15001	51.7027	-8.2493		3	0.38			15.9	0.17	0.79		34.522	6.37		
2015	285	IA32E186		24/01/15	1916	CV15001	51.6978	-8.198		3	1.55			15.8	0.19	0.8		34.695	6.13		
2015	324	IA32E1815	Outer Cork Harbour	25/01/15	0653	CV15001	51.8117	-8.2665		3.58	0.93	2131.8	256.993	17.8	0.18	0.81	34.319	34.339	6.73	9.0484	2297.2
2015	324	IA32E1815	Outer Cork Harbour	25/01/15	0653	CV15001	51.8117	-8.2665		23.95	1.6	2138.2	258.921	17.1	0.2	0.79	34.577	34.623	6.26	9.1223	2308.1
2015	463	IA32E1816	Outer Cork Harbour	25/01/15	0637	CV15001	51.783	-8.2658		3	1.65			23.8	0.23	0.84		33.355	8.28		
2018	274	IA32E1825	Western Celtic Sea (HAs 18;19;20)	04/02/18	0108	CV18001	51.7511	-8.2791	13.94	3				18.821	0.1565	0.783		33.933	7.2835		
2018	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	04/02/18	0054	CV18001	51.7498	-8.2502	19	3.696		2146.15		19.257	0.1685	0.796		34.251	7.28		2305.926
2018	275	IA32E1828	Western Celtic Sea (HAs 18;19;20)	04/02/18	0054	CV18001	51.7498	-8.2502	19	19.066		2145.19		14.0525	0.122	0.715		34.605	5.816		2314.29
2018	276	IA32E1852	Western Celtic Sea (HAs 18;19;20)	03/02/18	1950	CV18001	51.7491	-8.201	26.13	3				12.1175	0.098	0.699		34.887	5.753		
2018	277	IA32E1855	Western Celtic Sea (HAs 18;19;20)	03/02/18	1937	CV18001	51.7498	-8.1506	28.17	3				11.3925	0.085	0.5295		35.703	5.4865		
2018	278	IA32E189		03/02/18	1925	CV18001	51.7504	-8.1011	39.05	3				10.6715	0.0685	0.6235		35.008	5.52		
2018	279	IA32E189		03/02/18	1912	CV18001	51.7506	-8.0498	52.6	3				10.517	0.048	0.6445		35.023	5.526		
2018	280	IA32E189		03/02/18	1901	CV18001	51.7496	-8.0081	60.09	3				10.8285	0.04	0.505		35.042	5.302		
2018	282	IA32E1598	Western Celtic Sea (HAs 18;19;20)	04/02/18	0157	CV18001	51.6998	-8.35	24.87	3				14.5785	0.1335	0.6915		34.511	6.1485		
2018	283	IA32E1832	Western Celtic Sea (HAs 18;19;20)	04/02/18	0144	CV18001	51.7003	-8.3006	31.5	3				14.6495	0.1305	0.7715		34.613	6.1485		
2018	284	IA32E1838	Western Celtic Sea (HAs 18;19;20)	04/02/18	0130	CV18001	51.7	-8.2498	35.92	3				13.041	0.103	0.7165			5.753		

Source: Marine Institute under licence agreement for use of digital data

F.1.1(h) Interference with Legitimate Use of the Sea

Shipping, Fishing, Recreation, Mineral Extraction and Desalination

The pipelines and umbilicals will remain in situ and there will be no dumping activity. There will be no initial or long-term interference with shipping, fishing or recreation users of the area. Protection materials will be placed on the pipelines and umbilicals, as part of the decommissioning activity, to ensure there will be no risk to fishing activity. There is no mineral extraction from the area and no known mineral deposits. There is no known desalination in the area, other than possible use of desalination plant on shipping transiting the area. It is extremely unlikely that retaining the pipelines and umbilicals in place would interfere in any way with such desalination.

Fish Spawning and Nursery Habitats

The Kinsale Area, in which the pipelines and umbilicals are located, is within spawning areas for herring, sprat, cod, whiting, plaice, lemon sole and Nephrops (Coull et al. 1998), as well as haddock, megrim, mackerel and horse mackerel (Marine Institute data). Mackerel, cod, whiting, lemon sole, blue whiting (*Micromesistius poutassou*), ling (*Molva molva*), European hake and Nephrops all use the area as a nursery area at low intensity, while the area is a high intensity nursery area for monkfish (Ellis et al. 2012). The Marine Institute has also identified nursery grounds for herring, haddock, megrim and horse mackerel, in addition to whiting and mackerel. The Kinsale Area is not located within any known elasmobranch spawning grounds but was identified as being within low intensity nursery grounds for spurdog and common skate (Ellis et al. 2012). The potential impact of the retention of the pipelines and umbilicals on fish spawning and nursery habitat is addressed in the Section 7.3 of the EIAR.

Areas of Special Scientific or Natural Importance

There are no areas of special scientific importance or natural importance, or Natura 2000 sites in the Kinsale Area, in which the pipelines and umbilicals are located. The closest Natura 2000 sites are described in Section 4.4.8 of the EIAR and in the NIS. The potential effects of the retention of the pipelines and umbilicals materials on Natura 2000 sites is addressed in Section 7.3 of the EIAR and in the Appropriate Assessment Screening Report. There will be no direct effect on such areas.

Areas of Archaeological Heritage Importance

There are no areas designated as being of archaeological heritage importance in the vicinity of the Kinsale Area, in which the pipelines and umbilicals are located. A number of shipwrecks are known in the area, particularly in coastal waters and at the mouth of Cork Harbour, including two sunken U-boats (UC42 and U-58) which were highlighted by the INtegrated Mapping FOR the Sustainable Development of Ireland's MARine Resource (INFOMAR) (<http://infomar.ie/>) survey (Figure 4.18 of the EIAR). The closest of these wrecks is UC42 which is designated by UHO and located within 200m of the export pipeline to the Inch Terminal and 5.5km south east of Roches Point. The shipwreck of the Elizabeth Jane, sunk in 1916, is also noted to be located approximately 560m from the export pipeline (Ramboll, 2017b). Additionally, a number of other charted shipwrecks are located throughout the wider Celtic Sea area, as are a number of other wrecks, the positions of which are approximate. No prehistoric or archaeological remains are known in the immediate vicinity of the Kinsale Area infrastructure.

The cultural heritage features in the vicinity of the Kinsale Area, in which the pipelines and umbilicals are located, are described in Section 4.6 of the EIAR.

Appendix C of the EIAR Addendum, which is attached in Appendix 2, presented a Cultural Heritage Assessment of the Kinsale Area Decommissioning Project. The Cultural Heritage Assessment was prepared Dr Niall Brady of the Archaeological Diving Company Ltd (ADCO). ADCO has more than 20 years' experience in maritime archaeology.

As the dumping will involve no physical activities and no interference with the seabed, no interference with archaeological heritage is expected. The ADCO report recommended that *“Given that the decommissioning works are restricted to ground that has already been disturbed, there should be no requirement for archaeological monitoring.”*

Biodiversity

The baseline biodiversity of the Kinsale Area, in which the pipelines and umbilicals are located, is described in Section 4.4 of the EIAR, which addresses plankton, benthos, cephalopods, fish and shellfish, marine reptiles, birds and marine mammals. The potential impact of the retention of the pipelines and umbilicals biodiversity is addressed in the Section 7.3 of the EIAR.

F.1.2 Underwater Archaeology Impact Assessment

The cultural heritage features in the vicinity of the Kinsale Area, in which the pipelines and umbilicals are located, are described in Section 4.6 of the EIAR. As the dumping activity will involve no physical activities, no interference with archaeological heritage is expected.

F.1.3 Sediment Sampling of the Dumping Site

Sampling of the sediments in the area of the dump site, where the pipelines and umbilicals are located, was undertaken and the sampling locations and results were presented in the EIAR, in Section 4.1, Table 4.1.

F.1.4 Existing Environment at the Dumping Site

The existing water quality in the Kinsale Area, in which the pipelines and umbilicals are to be retained, is addressed in Section 4.3 of the EIAR and Section F.1.1(g) above.

Bathing Water Directive 76/160/EEC Bathing Water Quality

The EPA mapping <https://gis.epa.ie/EPAMaps/>, accessed May 2021, gave the following information on the results of the monitoring of bathing water quality in the bathing areas closes to the Kinsale Area. Table F.1.4.1 shows the bathing water quality in the bathing areas closest to the Kinsale Area.

Table F.1.4.1 Bathing Water Quality in the Bathing Areas.

Beach	Code	Location relative to Kinsale Area dump site	Bathing Water Quality 2020
Garryvoe	IESWBWC040_0000_0100	Ca 16km northeast of Inch	Sufficient Water Quality
Fountainstown	IESWBWC050_0000_0100	At mouth of Cork Harbour, ca 9km west of Inch	Excellent Water Quality
Garrylucas White Strand	IESWBWC090_0000_0300	Ca 32km southwest of Inch	Excellent Water Quality
Garretstown	IESWBWC090_0000_0200	Ca 33km southwest of Inch	Excellent Water Quality
Coolmaine	IESWBWC090_0000_0100	Ca 38km southwest of Inch	Good Water Quality

Source: <https://gis.epa.ie/EPAMaps/>, accessed May 2021

The Water Framework Directive 2000/60/EC Waterbodies

The EPA mapping <https://gis.epa.ie/EPAMaps/>, accessed May 2021, gave the following information on the Water Framework Directive 2000/60/EC (WFD) status of the coastal waterbodies in the vicinity of the Kinsale Area. Table F.1.4.2 shows the Water Framework Directive 2000/60/EC (WFD) status of the coastal waterbodies in the vicinity of the Kinsale Area

Table F.1.4.2 Water Framework Directive 2000/60/EC (WFD) Status of the Coastal Waterbodies

WFD Waterbody	Code	Location relative to Kinsale Area dump site	WFD Waterbody Status (SW 2013 - 2018)
Western Celtic Sea (Hs18;19;20)	IE_SW_010_0000	Inshore from the Kinsale Area, waterbody extends from Ardmore to Barley Cove	unassigned
Youghal Bay	IE_SW_020_0000	Ca 24km northeast of Inch	Moderate
Cork Harbour (Lower Harbour from Monkstown to narrows at Rams Head)	IE_SW_060_0000	Ca 6km northwest of Inch	Moderate
Outer Cork Harbour (From Narrows at Rams Head to Power Head)	IE_SW_050_0000	Inch located in this waterbody	Good
Kinsale Harbour	IE_SW_080_0000	Ca 25km southwest of Inch	Good
Courtmacsherry Bay	IE_SW_090_0000	Ca 32km southwest of Inch	Good

Source: <https://gis.epa.ie/EPAMaps/>, accessed May 2021

Sampling of the sediments in the area of the dump site, the Kinsale area in which the pipelines and umbilicals are to be retained, was undertaken and the sampling locations and results are summarised in Section E.2(I).3 above and were presented in the EIAR, in Section 4.1, Table 4.1. There will be no release activity and no dispersal, horizontal transport or vertical mixing of the pipelines and umbilicals in the water column.

F.1.5 Appropriate Assessment Screening and Appropriate Assessment

Appropriate Assessment screening was undertaken in 2018 for the consent applications for the Kinsale Area Decommissioning Project, which included the retention in situ of the pipelines and umbilicals. The Appropriate Assessment screening and Article 12 screening report⁴ was submitted to the Minister for Communications, Climate Action and the Environment (now the Minister for the Environment, Climate and Communications). The Appropriate Assessment screening has been reviewed and an addendum prepared. The Report for the purposes of Appropriate Assessment Screening and Article 12 Screening (2018) and the 2019 and 2021 addenda to this report are provided in Appendix 3 to this application. The conclusion of the Appropriate Assessment screening report is that the activities associated with the proposed Kinsale Area Decommissioning Project are not considered to result in likely significant effects (alone or in-combination) on the Conservation Objectives of any relevant Natura 2000 site within the Zones of Influence of the project.

F.1.6 Marine Mammal Risk Assessment

An assessment of the effects of the Kinsale Area Decommissioning Project, which include the retention in situ of the pipelines and umbilicals, on the marine mammal species listed in Annex IV of the Habitats Directive was undertaken and included in the Appropriate Assessment screening report, referred to in Section F.1.5 above. The assessment has been updated. The Report for the purposes of

⁴ Kinsale Area Decommissioning Project Report for the purposes of Appropriate Assessment Screening and Article 12 Screening, Hartley Anderson and Arup, 2018

Appropriate Assessment Screening and Article 12 Screening (2018) and the 2019 and 2021 addenda to this report are provided in Appendix 3 to this application. The Article 12 screening assessment concluded that while Annex IV species may be present in the vicinity of the proposed Kinsale Area Decommissioning Project, the localised scale and duration of the works will not result in the deliberate disturbance or destruction of any of the species listed in Annex IV of the Habitats Directive which may be present in the study area. The 2021 addendum concluded that no further sources of likely significant in-combination effect have been identified in relation to Annex IV species, and that the conclusion of the Article IV Species Screening remains unchanged.

F.1.7 Other Designations of Dumping site

Refer to Section F.1.4 above in relation to the Bathing Water Directive 76/160/EEC and the Water Framework Directive 2000/60/EC. No other designations apply.

F.1.8 Assessment of impact on receiving environment

An assessment of the effects of the Kinsale Area Decommissioning Project, which includes the retention in situ of the pipelines and umbilicals, were assessed in the EIAR which was submitted to the Minister for Communications, Climate Action and the Environment (now the Minister for the Environment, Climate and Communications), and which is attached. Refer to Chapter 7 of the EIAR.