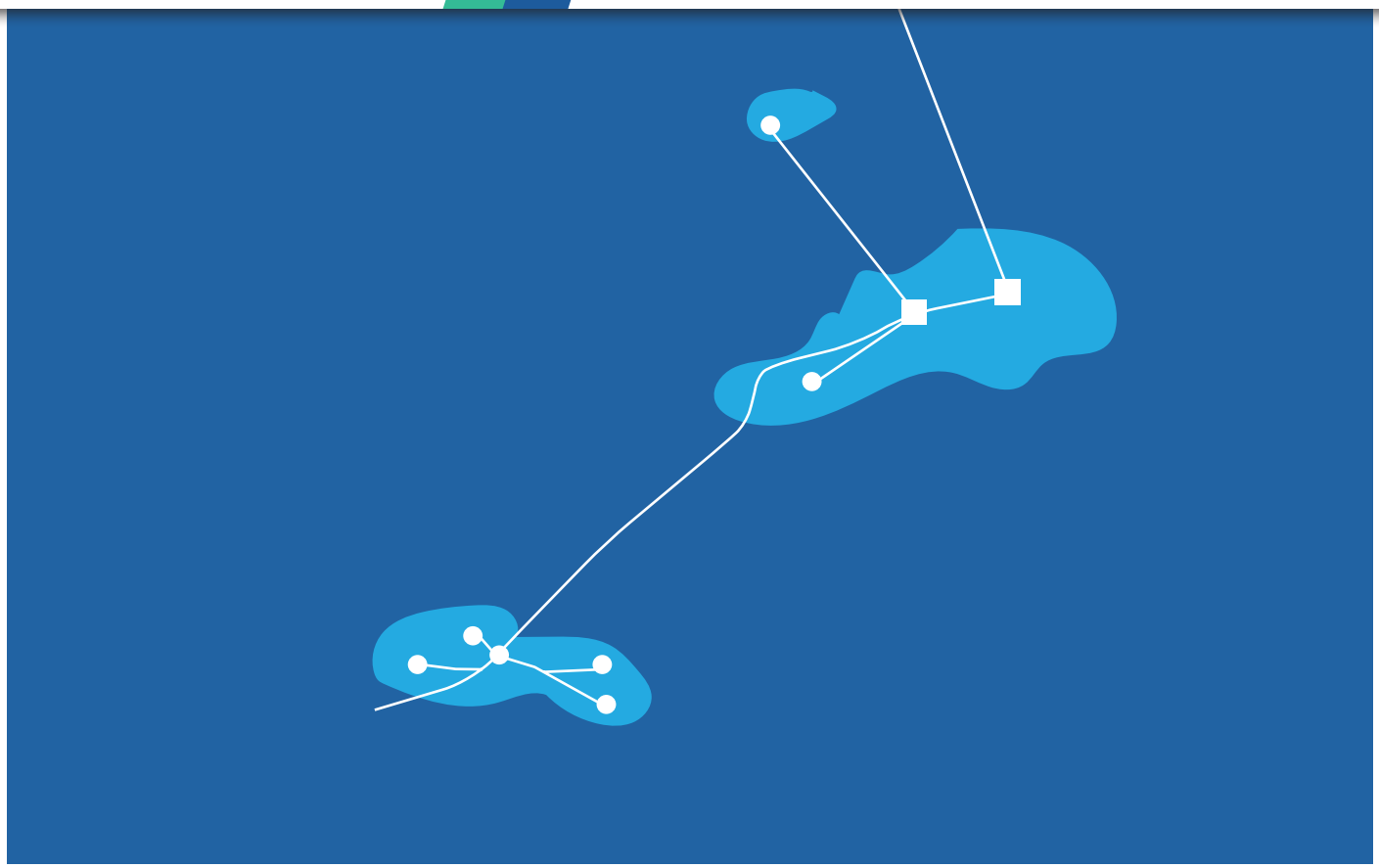
KINSALE ENERGY

Kinsale Area Decommissioning Project

Environmental Impact Assessment Report Addendum No.2



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Non-Technical Summary

Introduction and background

PSE Kinsale Energy Limited (Kinsale Energy) is progressing the decommissioning of the Kinsale Area gas fields and facilities (incorporating the Kinsale Head gas fields and facilities and the Seven Heads gas field and facilities), which have come to the end of their productive life. Together the decommissioning of the entirety of the Kinsale Area gas fields and facilities is collectively referred to as the Kinsale Area Decommissioning Project (KADP).

Kinsale Energy operated the Kinsale Area gas facilities under plans of development, which were submitted to and agreed with the then Minister, under the terms of the petroleum leases granted under Section 13 of the Petroleum and Other Minerals Development 1960 Act as amended (1960 Act). Pursuant to Section 13 of the 1960 Act, Kinsale Energy proposes to submit Decommissioning Plans as addenda to the existing plans of development. In accordance with the 1960 Act, an Environmental Impact Assessment Report (EIAR) was prepared to assess the KADP.

A staged consent application process for the Decommissioning Plans was proposed to reflect project scheduling requirements and to facilitate studies on the potential for any re-use options for the Kinsale Area facilities. The EIAR considers all of the activities required to complete the KADP and is therefore applicable to all consent applications.

Decommissioning Plans covering the first stage (Consent Application no. 1) were submitted on 28th June 2018 covering certain KADP activities relating to facilities preparation, well plug and abandonment, platform topsides and subsea structure removal. The EIAR was submitted with Consent Application No. 1. Following requests for further information from the Minister, Kinsale Energy submitted a comprehensive Response to Request for Further Information on 14th November 2018 (the RFI Response).

Further Decommissioning Plans covering the second stage relevant to the Kinsale Head Petroleum Lease only (Consent Application no. 2) were submitted on 8th August 2019 covering KADP activities related to the removal of the platform jackets. It was proposed that a subsequent consent application would be made to cover the remaining elements of the KADP, which are the decommissioning of the subsea pipelines and umbilicals. An addendum to the EIAR accompanied Consent Application no. 2 (the 2019 EIAR Addendum), for which Ministerial consent was received on 17th February 2020.

Ministerial consent for Consent Application no. 1 was received on 26th April 2019. Subsequent to this consent being granted, it became apparent that there was no viable option for future re-use of the Kinsale Head platform jackets. At the time of that application, there were ongoing studies by third parties that might have identified a future re-use of one or more of the subsea pipelines. No future re-use potential has been identified within the timeframe of the KADP. Therefore, this application (Kinsale Head Consent Application no. 3 and Seven Heads Application no. 2) is being made in relation to the decommissioning of the pipelines and associated umbilicals.

Document purpose

This EIAR Addendum has been produced to accompany the EIAR to reflect any additional information to that already presented in the EIAR as part of Application no. 1, and the Addendum included with Application no. 2. This document should be read in conjunction with the EIAR and the 2019 EIAR Addendum, which have also been submitted as part of this consent application.

Together, all three documents, along with all application documents, including the RFI Response, comprehensively assess all environmental impacts associated with the KADP.

Legal and Policy Framework

There have been a number of changes to the policy and legislative context of relevance to the KADP since the EIAR was prepared, some of which is in draft form but may be finalised in the timescale of the KADP.

More detail has become available on the approach to marine planning in Ireland since the EIAR was published. The Marine Area Planning Bill 2021 and the Marine Planning Policy Framework will provide a statutory basis for marine planning and marine policy for the Irish maritime area. Kinsale Energy has been monitoring and continues to monitor the progress of this legislation/policy throughout the application process. Additionally, Section 5(12) of the Dumping at Sea Act 1996 (the 1996 Act) has commenced, which provides the legislative basis for certain elements of the pipeline and umbilical decommissioning works.

None of these changes materially change the assessment made in the EIAR or its conclusions.

Characteristics of the Marine Environment

Updates to the description of the marine environment provided in the EIAR include updated information on bird and marine mammal distribution and abundance from recent survey effort in the Celtic Sea.

Seabirds and Marine Mammals

New data on seabirds and marine mammals was available from the 2019 and 2020 annual Celtic Sea Herring Acoustic Survey (CSHAS) and Irish Whale and Dolphin Group (IWDG) sightings data spanning the years 2008-2019.

In the 2019 and 2020 CSHAS, 107 and 126 hours of visual survey effort, respectively, by dedicated marine mammal observers recorded a similar diversity and relative abundance of marine mammals as was recorded in previous years. Common dolphins were seen throughout coastal and offshore waters, and were by far the most frequently sighted and numerous species. Fin whales were the second most numerous. Single sightings were recorded for each of harbour porpoise, bottlenose dolphin, humpback and minke whale and grey seal. IWDG sightings data covering 150km of adjacent coastline relevant to the Kinsale Area for the period 2008-2019 shows a similar relative abundance of marine mammal species to the CSHAS surveys. The general pattern of species composition and relative abundance is unchanged from that previously described and assessed in the EIAR. These new data confirm the high diversity of cetacean species off the south coast, along with the seasonal patterns for the area which previous data had suggested. Similarly, the composition and relative abundance of bird species observed in the CSHAS is consistent with that presented in the EIAR.

Consideration of Potential Effects

The following section summarises additional assessment undertaken for this addendum on the basis of new information which has become available since Consent Application no. 2 was submitted. This entirely relates to the consideration of the potential for cumulative effects.

No new projects or activities have been proposed since the publication of the EIAR and the 2019 EIAR Addendum which are considered to be a source of potential in-combination effects either for the decommissioning of the offshore facilities or the Inch Terminal. Two Foreshore Licences for site investigation works relating to potential wind farms have been applied for in territorial waters off Co. Cork which cover part of the export pipeline route. The offshore wind farms relating to these site investigations (Emerald and Inis Ealga) are presently at a conceptual stage; no consent for development has been made, and no approvals have been granted. Further information has become available for the Barryroe oil discovery for a survey relating to an appraisal well close to the Seven Heads field. While there is some spatial overlap with the Kinsale Area and these survey works, the timescales of the proposed works either preclude interaction, or can easily be avoided. It is concluded that no further sources of cumulative effect are available to assess, as interactions can be avoided, such that the conclusion of the EIAR remains unchanged.

Management of Residual Impacts and Conclusions

A number of mitigation measures and environmental management actions were identified in the consideration of potential effects of the EIAR which were reflected in a series of environmental management commitments and mitigation measures. These have informed the development of the KADP draft Environmental Management Plan which, in association with other relevant conditions to the consent, will ensure that potential residual impacts associated with the KADP are managed appropriately. In view of those conditions associated with the approval of Consent Application no. 1 and Kinsale Head Consent Application no. 2, it is anticipated that these would also be applied to any approval for Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2, and these are therefore reflected in the environmental management commitments where applicable to the EIAR (see Section 5).

Conclusion

This EIAR Addendum takes into account consideration of the following:

updates to the legal and policy framework and the characteristics of the marine environment. While there have been changes to the legal framework which are relevant to the decommissioning of certain aspects of the pipelines and umbilicals; neither these or the updated baseline information represent significant changes, such that they do not alter the conclusions of the EIAR, and the 2019 EIAR Addendum,

additional information including in relation to in-combination effects with other plans and programmes, which were not found to be a source of likely significant effect,

environmental management commitments and relevant expected consent conditions

The activities associated with the proposed KADP, when considered in the context of the EIAR, as updated by the information presented in this addendum and the 2019 EIAR Addendum, will not result, either directly or indirectly, in likely significant adverse effects on the environment, alone or cumulatively with other existing or approved projects.

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Kinsale Area Decommissioning Project

Section 1

Introduction

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1 Introduction

1.1 Introduction and background

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

The entire KADP plan consists of:

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

Kinsale Energy is submitting further plans for decommissioning to the Minister for the Environment, Climate and Communications (formerly the Minister for Communications, Climate Action & Environment) (the "**Minister**") for approval pursuant to Section 13 of the Petroleum and Other Minerals Development Act 1960 as amended (1960 Act), as addenda to the existing plans of development relevant to the Kinsale Area and Seven Heads Petroleum Leases.

1.2 Consent application process

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

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

- Facilities preparation: disconnect and degas process plant and pipelines (pipelines displaced with seawater, and inhibited seawater in the case of the 24" export pipeline and the 18" Seven Heads pipeline).
- Wells: plug and abandon all platform and subsea wells and removal of any surface component of these wells, including wellhead structures and platform conductors.
- Platform topsides: complete removal in accordance with OSPAR Decision 98/3.

- Subsea structures: (e.g. manifolds, wellhead protection structures): full removal in accordance with OSPAR Decision 98/3, including the removal of connecting spool pieces, umbilical jumpers and protection materials.

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

For Kinsale Head only, a subsequent application (Consent Application no. 2) was submitted on 8th August 2019 to cover the removal of the Kinsale Alpha and Bravo jackets. Consent Application no. 2 was approved on 27th February 2020.

1.3 Current application

Consent applications are now being made for the remaining works required to complete the KADP (Consent Application no. 3 for Kinsale Head Petroleum Lease (OPL 1) and Consent Application no. 2 for Seven Heads).

At the time of Consent Application no. 2 (for OPL1), Section 5 of the Dumping at Sea Act did not yet apply to "offshore installations" and there were ongoing studies by third parties that might have identified a future re-use of one or more of the offshore pipelines. Accordingly, Consent Application no.2 was limited to a request for approval for the decommissioning of the Kinsale Head platform jackets only. Consent Application no. 2 did not address the offshore pipelines and umbilicals. As no further use has been identified for any of the offshore pipelines or umbilicals, these are now the subject of this consent application.

Kinsale Head Consent Application no. 3 includes for the following facilities:

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

Seven Heads Consent Application no. 2 includes the following:

- To leave *in situ* all infield pipelines and umbilicals associated with the Seven Heads gas field
- To leave *in situ* 18" Seven Heads export pipeline and umbilical
- To use engineering materials to protect the pipelines and umbilicals *in situ*

1.4 Document Purpose and Scope: EIAR Addendum

In accordance with section 13A of the 1960 Act, an Environmental Impact Assessment Report (EIAR) was prepared to accompany Consent Application no. 1. The EIAR was updated, by way of Addendum, for Kinsale Head Consent Application no. 2. The EIAR has again been updated, by way of Addendum, for these applications.

This EIAR Addendum has been produced to reflect any additional information to that already presented in the EIAR as part of Application no. 1[1], and the 2019 EIAR

[1] https://www.gov.ie/en/consultation/814cb-decommissioning-of-certain-facilities-within-the-kinsale-head-and-seven-heads-petroleum-lease-areas/, https://www.gov.ie/en/publication/8a981-decision-on-kinsale-gas-field-application/, https://www.gov.ie/en/publication/23fae-decision-on-seven-heads-gas-field-application/

Addendum[2]. Any reference to EIAR shall mean a reference to the entire of the EIAR and these two Addendums, all of which should be read together.

Additional information covered in this addendum includes the updated legal and policy framework within which the application is being made, and any updates to baseline information and related assessment conclusions previously presented. The relevant conditions applied as part of Consent Applications no. 1 and Kinsale Head Consent Application no. 2 are also committed to as part of Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2. See Section 5 for the range of environmental management commitments for the KADP. The description of the project (**Section 3 of the EIAR**) is unchanged, and so is not repeated here.

Consistent with the previous KADP Consent Applications, this addendum has been produced to cover all consent applications, for both the Kinsale Head gas fields and Seven Heads gas field. The information in this EIAR Addendum is presented as follows:

- Legal and policy framework (**Section 2**)
- Characteristics of the marine environment (**Section 3**)
- Consideration of potential effects (**Section 4**)
- Management of residual impacts and conclusions (**Section 5**)

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

1.5 Compilation of data or information to support the assessment

As previously submitted as part of the response to the Request for Further Information in November 2018, and noted again in Kinsale Head Consent Application no. 2, there were no major difficulties in compiling the relevant information to inform the assessment presented in the EIAR and there were no major difficulties in compiling the relevant information to inform the assessment in this addendum. This is in part a reflection of the large amount of historical data available resulting from some 40 years of operations and the studies and assessments made for subsea developments tied back to the Kinsale Head platforms or for exploration wells drilled in the region by Kinsale Energy and others. In addition, over this period there has been significant new regional information generated through for example the Marine Institute surveys and the Irish Offshore Oil and Gas Strategic Environmental Assessment (IOSEA) programme. Gaps in environmental information and details of the project design were identified early in the EIA process, which were addressed through additional seabed survey, baseline data collection, and information in the form of technical reports and discussion on the project basis of design.

Information on the baseline environment, technical aspects of the proposed project and the potential nature of effects were kept under review during the preparation of the EIAR, and any relevant updates since the time of Application no. 2 are reflected in this document (Sections 3 and 4).

At the time of preparation of the EIAR, contracting for decommissioning services was not yet completed so actual vessel names could not be given. Therefore, technical details of the rig, heavy lift vessel and other vessels used in the assessment were based on typical vessels operating in the North Sea region, where conditions are similar to the Celtic Sea.

[2] https://www.gov.ie/en/publication/14b2d-decision-documentation-decommissioning-of-certain-facilities-within-the-kinsale-head-petroleum-lease-area/

The reports prepared for Kinsale Energy that underpin each of the remaining technical solutions provided sufficient detail such that information on representative vessels could be used, along with worst case estimates of timing in the field (plus a 25% contingency) to calculate the related emissions and duration of potential interactions. The nature and timings of vessel operations were scrutinised within Kinsale Energy and are regarded to provide a robust input to the assessment and further information was not considered necessary.

1.6 Consultation

During the preparation of the EIAR, discussions were had and/or correspondence made with statutory and non-statutory bodies and other interested parties to ensure that issues relating to the proposed KADP were considered as appropriate in the EIAR process. This process was outlined in **Section 1.8 of the EIAR** and further detail was provided in the form of a summary in **Appendix A** to the 2019 EIAR Addendum. The summary includes comments, views and feedback received from interested parties, and indicates how these were used to scope and inform the EIAR.

1.7 List of Contributors

This EIAR Addendum was prepared by a team of competent experts on behalf of Kinsale Energy. The team members are tabulated below, and are a subset of those involved in the preparation of the EIAR.

Name	Qualification	Relevant Experience	Contribution to EIAR
Hartley Anderson Limited – Offshore/marine environmental consultants			
Dr DM Borthwick	MA (Hons) Geography, PhD	Dr DM Borthwick has over ten years of experience in environmental assessment for offshore energy involving work at the strategic (SEA) and project (EIA) levels, including screening and Appropriate Assessment under the Habitats Directive. He has led or participated in Environmental Impact Assessments for offshore projects (oil and gas and carbon dioxide transport and storage) in the North Sea. He has technical expertise in geology, substrates and coastal processes, seascape, marine archaeology and climate, Geographic Information Systems (GIS) marine spatial data and analysis.	Sections 1, 2, 3, 4 and 5
Dr RJ Trueman	BSc (Hons) Environmental Biology, PhD	Dr RJ Trueman has over 15 years of relevant experience, worked on EIAs for offshore projects in the North and Irish Seas, for oil and gas production and carbon dioxide transport and storage. He has also been involved in Strategic Environmental Assessment (SEA) for energy related plans and programmes in the marine and terrestrial environment, and related Appropriate Assessments.	Section 3 and review of EIAR

Name	Qualification	Relevant Experience	Contribution to EIAR
Mr KM Carey	BSc Zoology, MSc Applied Geospatial Information Systems	KM Carey has seven years Geographic Information System (GIS) applied experience in map production and data management for a range of marine environmental assessments, including national scale SEA and project specific EIA and permit applications.	All figures and support to colleagues with spatial inputs.
Dr JP Hartley	BSc (Hons) Zoology with Marine Zoology, PhD	Dr JP Hartley is a marine environmental consultant scientist with over 35 years of environmental assessment (EIA, SEA, HRA), applied marine research and environmental management experience in Ireland, the UK and internationally. He is technical Director of the independent environmental consultancy Hartley Anderson Ltd, which he co-founded. He is joint project director for the UK Offshore Energy Strategic Environmental Assessment programme from 1999 to date. He is a regular contributor to university Masters programmes. He has served on a range of marine scientific research and management steering groups for Renewables, Aggregate, Climate Change and Environmental Monitoring.	Review of EIAR Addendum.
Arup – Onshore/terrestrial environmental consultants			
Ria Lyden	BE, MBA, CEng, FIEI, MIStructE	Ria Lyden has a Bachelor of Engineering degree in civil engineering and a Master of Business Administration degree. She is a fellow of the Institution of Engineers of Ireland and has over 20 years' experience as an environmental consultant. Ria has prepared or supervised the preparation of sixty environmental impact statements for a wide range of industrial, commercial, energy and infrastructure projects.	Review of EIAR Addendum.

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Section 2

Legal and Policy Framework

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2 Legal and Policy Framework

The following summarises changes to the policy context of relevance to the KADP since the submission of the EIAR and the 2019 EIAR Addendum. Some of this policy and legislation is presently in draft form, but may be finalised in the timescale of the KADP.

Marine Planning Policy Statement

The Marine Planning Policy Statement (MPPS)[3] applies to all facets of marine planning and was introduced on a non-statutory basis, pending the introduction of legislation (see the *Marine Planning and Development Management (MPDM) Bill*) that will provide for the preparation, adoption and review of statutory marine planning policy statements on six-yearly cycles. The MPPS sets out core principles to inform the evolving marine planning and development management process, including:

- Ensuring that developments consider as a matter of course ways to reduce the emission of greenhouse gases and that they have due regard to the impacts of a changing climate.
- Taking into account land-sea interactions broadly described as either being related to land-sea natural processes, or interactions among land and sea uses and activities.
- Integrating environmental, economic and social considerations, as well as supporting safety at sea.
- Ensuring the marine environment is used sustainably and in a manner that is consistent with the Good Environmental Status requirements of the Marine Strategy Framework Directive and the requirements of relevant national, European and OSPAR Convention standards.
- Supporting the maintenance and restoration of biodiversity as a necessary prerequisite for healthy and resilient marine ecosystems and the sustainable development of our maritime and coastal areas.
- Supporting the preservation and enjoyment of Ireland's rich marine heritage – both natural and cultural – and our marine-related cultural and heritage assets.
- Supporting the maintenance and sustainable development of the seafood industry.
- To treat all marine interests in a fair and transparent manner when decisions are being made, and to ensure that early and effective public engagement with the public and all marine stakeholders is undertaken across all forward planning, development management and enforcement elements of the system.

National Marine Planning Framework

Marine Spatial Planning (MSP) in Ireland is underpinned by the European Marine Spatial Planning Directive (Directive 2014/89/EU) (MSPD), transposed into domestic legislation through the Planning and Development (Amendment) Act 2018. The Minister for Department for Housing, Local Government and Heritage formally established the National Marine Planning Framework (NMPF) on 20th May 2021. The plan is intended to serve as a parallel to the National Planning Framework, setting out the Government's long-term planning objectives and priorities for the management of the seas to 2040.

[3] https://www.gov.ie/en/publication/3e262-marine-planning-policy-statement/

The NMPF is the framework within which consideration of decisions will be made, such that all applications for activity or development in Ireland's maritime area, including those made within the management system proposed in the Marine Area Planning Bill 2021 (see below), will be considered in terms of their consistency with the objectives of the plan.

Marine Area Planning Bill 2021

The Marine Planning and Development Management Bill 2021 will:

- Establish a statutory basis for the preparation of a MPPS (see above), and Marine Spatial Plans, for which the Minister for Housing, Local Government and Heritage would be the competent authority.
- Introduce powers to put in place statutory marine planning guidelines.
- Establish the Marine Area Regulatory Authority (MARA), which has responsibility for considering, granting, revoking and suspending Maritime Area Consents (MACs), and other enforcement functions.
- Provide for the creation of MACs for certain activities in the maritime area (as defined in Section 3 of the Bill), noting a number of exclusions set out in Schedule 3 which includes, amongst others, the operation of upstream pipelines under the Gas Act 1976 and certain aspects covered under the Petroleum and Other Minerals Development Act 1960.
- Eliminate the unnecessary duplication of development management processes (including environmental assessments) for activities or developments that are currently assessed under both the foreshore and planning regimes. MARA may enter into an arrangement with a public body for the purposes of avoiding such duplication, amongst others.
- Provide a licensing regime for certain activities within the maritime area (as defined in Schedule 7 of the Bill) which may also be exempt under certain circumstances (e.g. due to their size, nature or limited effect on the maritime area), this part is not applicable to activities which require EIA or AA.

Dumping at Sea Act 1996

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

Offshore installations means "any man-made structure, plant or vessel or parts thereof, whether floating or fixed to the seabed, placed in the sea for the purpose of offshore activities". Offshore activities mean "activities carried out in the sea for the purpose of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons".

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

The applications to the Agency under the Dumping at Sea Act and to the Minister under the Continental Shelf Act request consent for the specific parts of the KADP relevant to the functions and sphere of competence under that legislation. The application to the Minister under the 1960 Act is broad: it applies to the entire of the extent of this proposal to complete the KADP, both onshore and offshore, but excluding the onshore terminal.

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

2.1.1 Implications for EIAR

The changes described above provide additional planning and legislative context, particularly in relation to the decommissioning the pipelines and umbilicals covered by Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2. However, there have been no changes to the legislative framework for the KADP which would materially change the assessment made in the EIAR or its conclusions.

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Section 3

Characteristics of the Marine Environment

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3 Characteristics of the Marine Environment

Introduction

There have been limited updates to the baseline environmental information set out in the EIAR and the 2019 EIAR Addendum. Relevant updates include additional survey effort which provides recent information on the relevant abundance of marine mammals and birds in the Celtic Sea, and new project proposals are of relevance to KADP.

3.1 Updated marine mammal, bird and turtle observations

There are several key data resources on the species composition and relative abundance of the marine mammal fauna in the area around Kinsale and the wider Celtic Sea, and there have been several updates to these data since Kinsale Head Consent Application no. 2 was submitted. The annual Celtic Sea Herring Acoustic Surveys (CSHAS) cover waters off the south coast of Ireland, typically over a three week period each October, and extend from 2-3km off the coast to over 100km offshore (e.g. O'Donnell *et al.* 2019, 2020). Dedicated marine mammal observers recorded sightings when light and environmental conditions permitted. The combined data from 13 years of surveys from 2008-2020 are provided in Table 3.1. Since the publication 2019 EIAR Addendum, data is available for two further annual Celtic Sea Herring Acoustic Surveys (CSHAS) covering 2019 and 2020 (O'Donnell *et al.* 2019, 2020). In the 2019 and 2020 CSHAS, 107 and 126 hours of visual survey effort, respectively, by dedicated marine mammal observers recorded a similar diversity and relative abundance of marine mammals as was recorded in previous years. Common dolphins were observed throughout coastal and offshore waters, and were by far the most frequently sighted and numerous species (141 sightings, including a total of 1,672 individuals in 2019 and 240 sightings, including a total of 2,174 individuals in 2020). Fin whales were the second most numerous (3 sightings of 3 individuals, and 11 sightings, including a total of 12 individuals, respectively). Sightings were also made of harbour porpoise, bottlenose dolphin, humpback and minke whale.

Table 3.1 also includes data extracted from the Irish Whale and Dolphin Group's (IWDG) Casual Cetacean Sightings database, which includes sightings submitted by IWDG members, researchers and the general public and validated by the IWDG (IWDG 2018). These extracted data include all sightings from January 2008 to December 2019 (12 years) within an area spanning ~150km of the south coast of Ireland, approximately bounded by Ardmore in the east, Kedge Island in the west and south to 51ºN (the typical offshore extent of the CSHAS) (Refer to Figures 3.1 and 3.2). The IWDG casual sightings data are not effort corrected, and are biased towards busier and more accessible coastal waters, and areas subject to research (e.g. Ryan et al. 2010, Whooley et al. 2011); but provide useful information on the composition and relative abundance of cetacean species of the area. Data from the IWDG casual database and other sources over the period 2005-2011 were synthesised by Wall et al. (2013), which includes an assessment of the seasonal occurrence of the most commonly sighted species.

The additional observations from the CSHAS data, and those sightings from the IWDG data, reflect the same composition and relative abundance of marine mammals presented in the EIAR (Section 4.4.7), and are consistent with those from the ObSERVE programme (Rogan et al. 2018) presented in the 2019 EIAR Addendum.

Table 3.1: Cetacean sightings: (i) recorded during the annual Celtic Sea Herring Acoustic Surveys and (ii) extracted from the IWDG Casual Cetacean Sightings database ~150km of adjacent coast

Species	Celtic Sea Herring Acoustic Surveys (CSHAS) 2008-2020		IWDG Casual sightings database 2008-2019
	Number of years observed (of a maximum of 13)	Total number of sightings (individuals)	Total number of sightings (individuals)
Toothed cetaceans			
Common dolphin	12	1,230 (15,877)	1,117 (88,867)
Harbour porpoise	11	48 (263)*	588 (2,626)
Bottlenose dolphin	6	8 (40)	202 (1,469)
Risso's dolphin	4	6 (14)	50 (390)
Killer whale	1	1 (3)	10 (26)
Pilot whale	0	0 (0)	1 (5)
Unidentified dolphin	*na*	*81 (674)*	*102 (1,101)*
Baleen whales			
Fin whale	13	139 (237)	658 (2,530)
Minke whale	12	83 (94)	814 (4,665)
Humpback whale	7	19 (26)	245 (543)
Unidentified whale	*11*	75 (95)	*184 (383)*
Total	***na***	***1,690 (17,323)***	***3,971 (102,605)***

*Notes: See main text for a description of the two data sources. * Total harbour porpoise sightings in the CSHASs were heavily influenced by data from the 2016 cruise report where 22 sightings, representing 191 individuals, were reported in the Celtic Deep (>100km southeast of Kinsale); excluding 2016 data yields a total of 19 harbour porpoise sightings totalling 57 individuals.*

Source: Nolan et al. (2014), O'Donnell et al. (2008, 2011, 2012, 2013, 2015, 2016, 2017, 2018, 2019, 2020) Saunders et al. (2009, 2010), IWDG (2020).

3.2 Birds

The Celtic Sea Herring Acoustic Surveys (O'Donnell *et al*. 2016, 2017, 2018, 2019, 2020) surveyed coastal and offshore waters from Mizen Head eastwards to the Irish Sea in 2016-2020, each survey taking place over 2-3 weeks in October. The 2020 survey sighted a total of 34,636 individual seabirds representing 28 species.

The most commonly recorded species were northern gannet (12,690 individuals), guillemot (4,377), black-legged kittiwake (9,594) and fulmar (2,068). Similar to the marine mammal data recorded in these recent surveys, the species composition observed is consistent with that seen in previous years' surveys, and which was presented in the EIAR.

Figure 3.1: Sightings of toothed cetaceans submitted to the IWDG Casual Cetacean Sightings database from 2008-2019

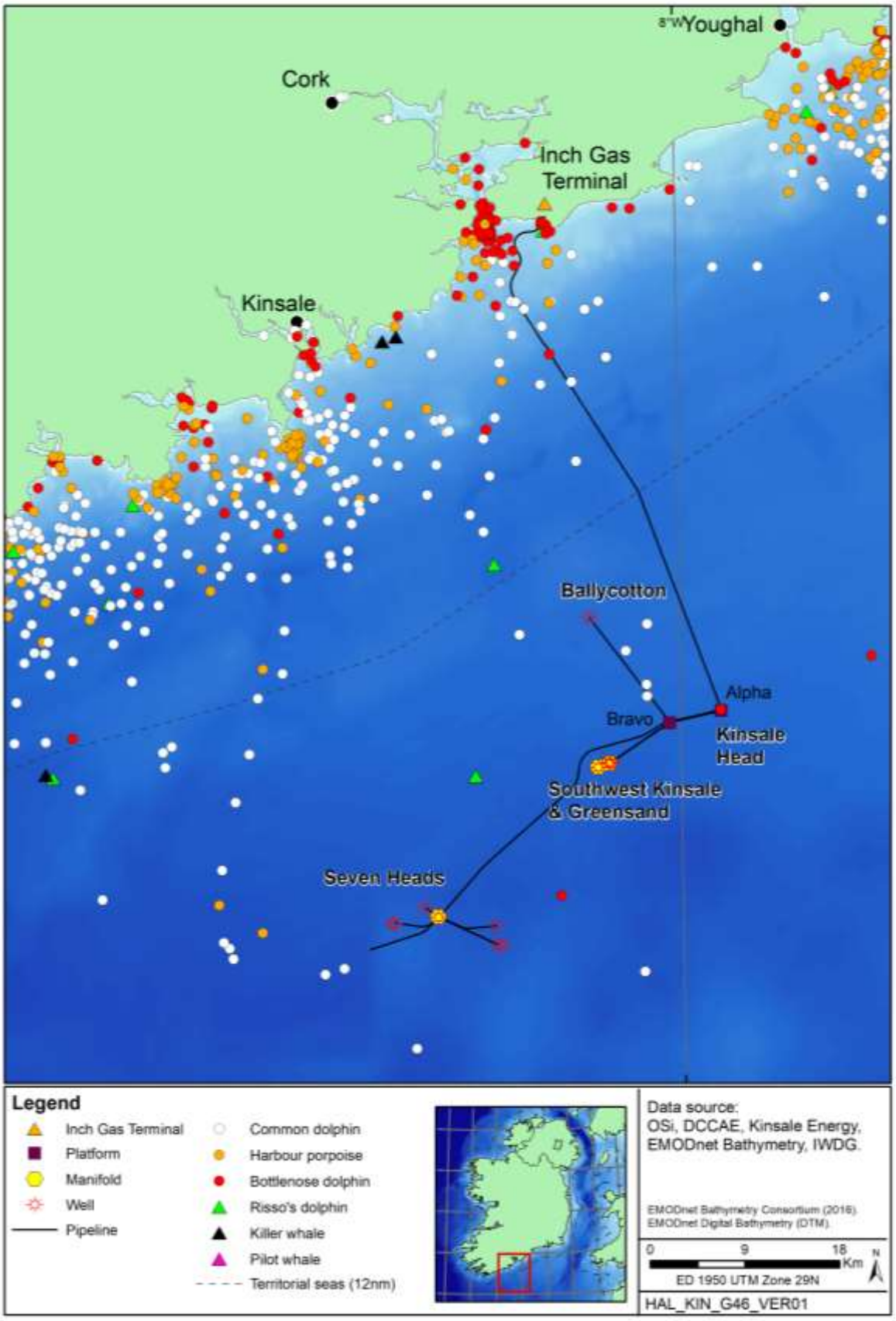
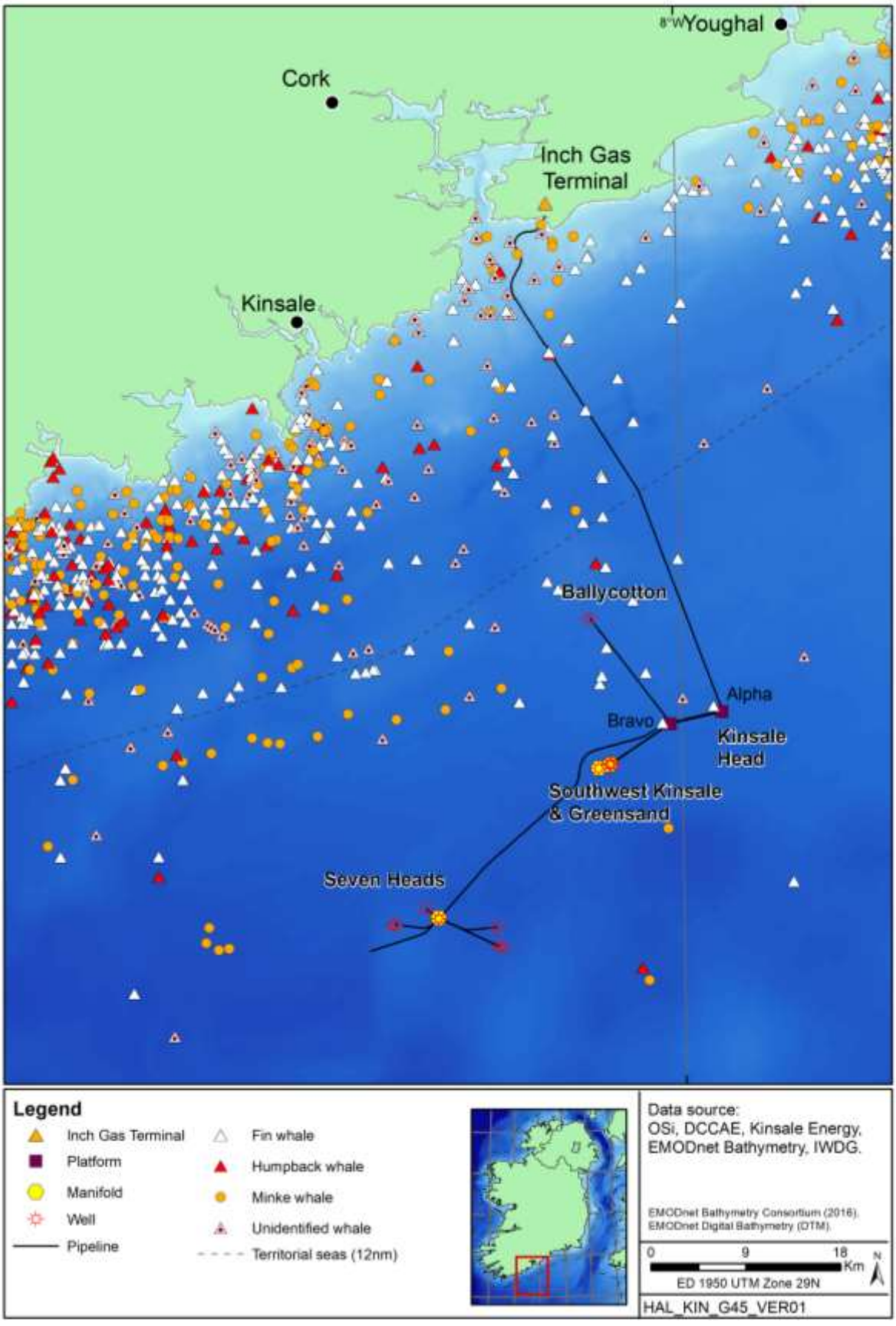


Figure 3.2: Sightings of baleen whales submitted to the IWDG Casual Cetacean Sightings database from 2008-2019



3.3 Other users

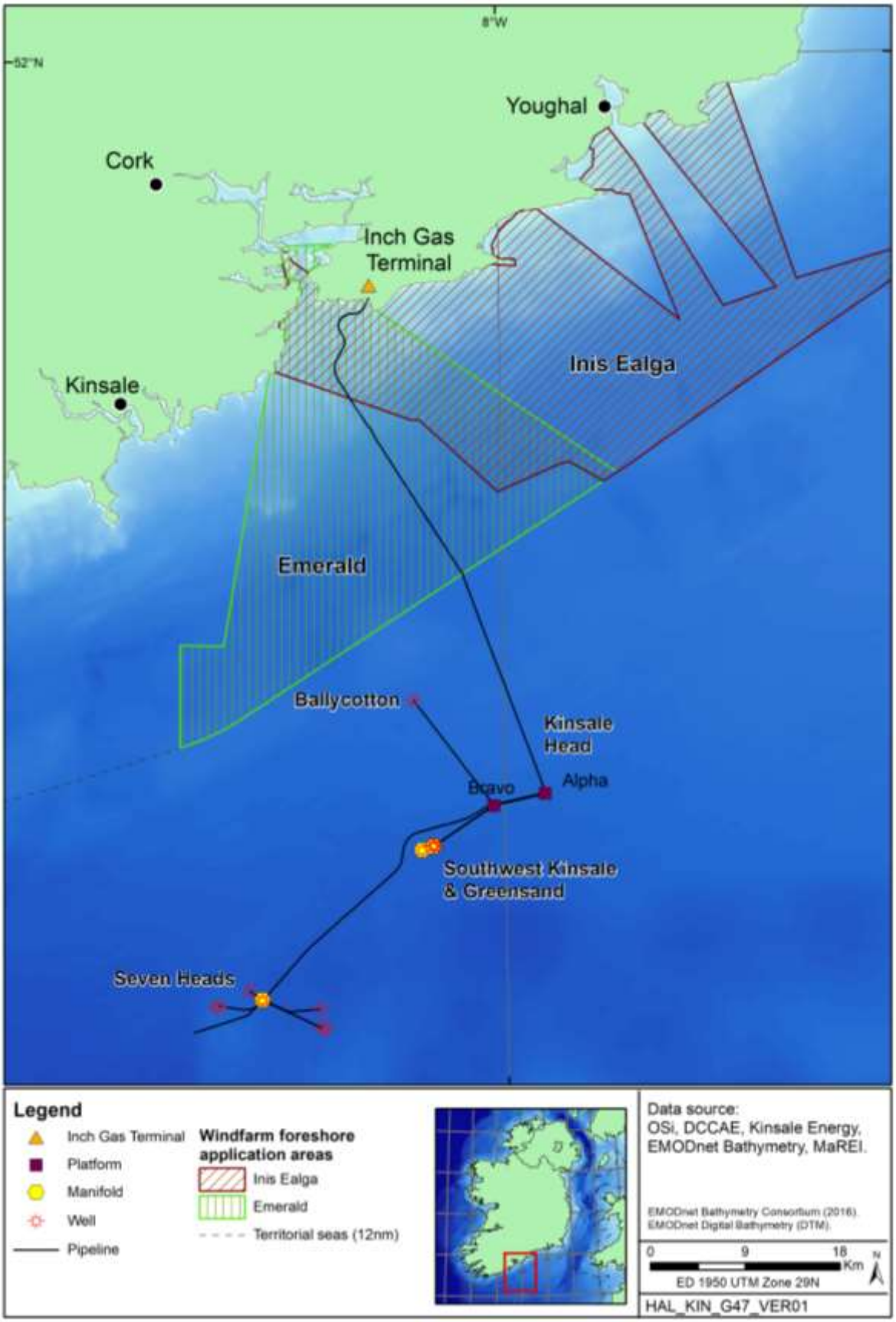
Offshore Energy: Renewables and Oil and Gas

While no offshore wind farms or other firm renewable energy proposals are located within or in close proximity to Kinsale Area, there have been a number of recent Foreshore Licence applications for site investigations relating to potential projects in the territorial and offshore waters of Ireland, these include several areas offshore of Co. Cork, and through which the export and infield pipelines/umbilicals could traverse (Figure 3.3). The site investigations include those for the Emerald project, led by Simply Blue Energy and Shell, and Inis Ealga Marine Energy Park, led by DP Energy Ireland Ltd and Iberdrola. To date, the investigations concentrate on territorial waters. However, it is the intention of the applicants to submit further applications which cover offshore waters, and for the Emerald project, this would include the Kinsale Area[4].

Applications have not been made in relation to the development phases of these projects, which are both presently at an early/conceptual stage. The Emerald project is intended to be a 1.3GW floating offshore wind farm constructed in two phases, located approximately 35-60km offshore, and potentially all or partly over the Kinsale Area. The Inis Ealga Marine Energy Park is similarly proposed to be a floating offshore wind farm, with a capacity of 1GW. The proposed array areas for both wind farms are located in offshore waters (i.e. seaward of 12nm from the coast).

[4]Emerald Project: https://www.gov.ie/en/foreshore-notice/61ccf-simply-blue-emerald-site-investigations-for-possible-floating-offshore-wind-project-off-kinsale/, Inis Ealga: https://www.gov.ie/en/foreshore-notice/c9ea6-dp-energy-site-invesigations-at-inis-ealga/

Figure 3.3: Relevant Foreshore Licence applications related to offshore wind site investigations



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Section 4

Consideration of Potential Effects

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4 Consideration of Potential Effects

4.1 Introduction

The following section presents additional assessment undertaken for this EIAR Addendum. As the updated baseline data broadly reflects that already presented in the EIAR, and the 2019 EIAR Addendum, no further sources of potentially significant effect (replicated in Table 4.2 for those aspects of the KADP relevant to Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2) have been identified and the conclusions of the EIAR in relation to effects from the KADP alone remain unchanged.

A number of additional relevant projects have been proposed, and the potential for cumulative effects with these is considered in Section 4.2.

4.2 Cumulative impacts

Article IV(5e) of the EIA Directive requires that, "*the cumulation of effects with other existing and/or approved projects, taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources*", are described.

Planning applications for foreshore licences, and activities associated with offshore oil and gas leasing in the Celtic Sea (e.g. as listed by DHLGH and DECC on the gov.ie website) were reviewed alongside further information from developer websites, for any potential spatial and temporal overlap with the works relevant to Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2, as there is a possible interaction with the KADP. A number of projects have been proposed since the EIAR was published which are of relevance, and these are subject to assessment below.

Two Foreshore Licences have been applied for in relation to offshore wind farm site investigation work in the territorial waters off Cork (see Section 3.3). The application most of relevance to the KADP is for the Emerald project, though there is some overlap with the Inis Ealga project area in close proximity to shore (Figure 3.3). While the applicant for the Emerald project has indicated their intention to complete site investigation works in offshore waters which would cover the Kinsale Area, no application has yet been made. The proposed schedules for the inshore surveys associated with Emerald and Inis Ealga both indicate a five year window from the date of consent to completion. The indicative schedule in their respective applications suggest activities starting in 2021, or likely taking place 2020-2023. As neither application has been approved, there is the potential for the timescale within which works take place to be later than proposed. There is the potential for interaction between the timings of these surveys and work associated with the decommissioning of the export pipeline, but in view of the approach to decommissioning in this area (rock placement on freespans), the duration and scale of the works (up to 16 days for all KADP pipelines, see EIAR Section 3.5.4.1) are such that there is considerable scope to avoid interactions.

The wind farm proposals associated with the site investigations are at a conceptual stage. No consent application for either development has been made, and no approvals have been granted. In the absence of project information, including indicative design parameters and schedule, the development stages of these wind farms will not be considered here, in keeping with Article IV(5e) of the EIA Directive.

The Barryroe oil discovery and the potential for further exploration and development was acknowledged in the EIAR. Since that time, an application was made to conduct a site survey within the Barryroe licence area (EL 1/11), which was completed in September 2019. Subsequently, a further survey application was made in August 2019 for an area covering a proposed appraisal well ('K'), which overlaps parts of the Seven Heads field.

The proposed survey schedule (to be complete by November 2021), is such that interactions are not considered possible, as KADP activities associated with sources of effect relevant to Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2 are scheduled for late 2022.

As noted in Section **7.11.2.1 of the EIAR**, while there are a number of existing oil and gas exploration licence areas in the vicinity of the Kinsale Area (including EL1/11), project plans for additional exploration are not known or are uncertain[5], and therefore no cumulative effects are predicted.

Kinsale Energy will maintain a dialogue with the developers of both wind farms, and any further proposals in relation to the Barryroe field, to ensure that activities do not proceed in a matter which could lead to cumulative impacts.

It is concluded that no further sources of cumulative effect are available to assess, as interactions can be avoided, such that the conclusion of the EIAR remains unchanged.

The sources of effect specifically relevant to Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2 and the environmental factors likely to be significantly affected by related activities are reproduced from the EIAR in Table 4.2 below, along with the defined severity criteria (Table 4.1) which indicates the potential for significance for each effect.

[5] Noting the position set out in the Policy Statement for Petroleum Exploration and Production Activities as part of Ireland's Transition to a Low Carbon Economy, that future licensing rounds will not cover oil exploration, but would be allowed for gas only as a transition fuel.

Table 4.1: Criteria for the identification of potential effects from the Kinsale Area Decommissioning Project

Effect	Consequences
None Foreseen	No detectable effects
Positive	Activity may contribute to recovery of habitats Positive benefits to local, regional or national economy
Negligible	Change is within scope of existing variability but potentially detectable.
Moderate	Change in ecosystem leading to short term damage with likelihood for recovery within 2 years to an offshore area less than 100 hectares or less than 2 hectares of a benthic fish spawning ground Possible but unlikely effect on human health Possible transboundary effects Possible contribution to cumulative effects Issue of limited public concern May cause nuisance Possible short term minor loss to private users or public finance
Major	Change in ecosystem leading to medium term (2+ year) damage with recovery likely within 2 - 10 years to an offshore area 100 hectares or more or 2 hectares of a benthic fish spawning ground or coastal habitat, or to internationally or nationally protected populations, habitats or sites Transboundary effects expected Moderate contribution to cumulative effects Issue of public concern Possible effect on human health Possible medium term loss to private users or public finance
Severe	Change in ecosystem leading to long term (10+ year) damage with poor potential for recovery to an offshore area 100 hectares or more or 2 hectares of a benthic fish spawning ground or coastal habitat, or to internationally or nationally protected populations, habitats or sites Major transboundary effects expected Major contribution to cumulative effects Issue of acute public concern Likely effect on human health Long term, substantial loss to private users or public finance

Frequency with which Activity or Event Might Occur	Likelihood
Unlikely to occur	**Remote**
Once during decommissioning activity	**Unlikely**
Foreseeable possibly once a year	**Possible**
Once a month or regular short term events	**Likely**
Continuous or regular planned activity	**Definite**

	Likelihood				
Consequences	Definite	Likely	Possible	Unlikely	Remote
Severe	A5	A4	A3	A2	A1
Major	B5	B4	B3	B2	B1
Moderate	C5	C4	C3	C2	C1
Negligible	D5	D4	D3	D2	D1
Positive	E5	E4	E3	E2	E1
None foreseen					

	Potentially significant effects requiring assessment (assessed in Section 7 of the EIAR)
	Potential positive or minor or negligible effects (assessed in Appendix D of the EIAR)
	No likely effects

Notes:
1. The criteria to the left include consideration of issues of known public concern.
2. In addition to identification on the basis of these criteria, issues/interactions raised during stakeholder consultation are normally treated as requiring detailed consideration in the EIAR.

Table 4.2: Sources of potential effects, relevant environmental factors and related environmental receptors relevant to remedial rock placement, retention of pipelines and umbilicals *in situ*

Environmental factor	Population & Human Health[6]	Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC[7]								Land, soil, water, air, climate			Material assets, cultural heritage and landscape						Summary consideration (including reference to relevant sections of the EIAR submitted with Consent Application no. 1)
Activity/Source of Potential Effect		Benthic Fauna	Plankton	Fish & Shellfish	Marine Reptiles	Marine Mammals	Waterbirds & Seabirds	Onshore habitats/species	Conservation sites/species	Soils & Seabed[A]	Water Quality	Air & climate	Fisheries/aquaculture	Other Uses & Resources[B]	Shipping	Waste Treatment & Landfill resource onshore	Cultural Heritage[C]	Landscape/seascape	
Pipeline and umbilical decommissioning																			
Remedial rock placement	C4	C4		D4		D4			D4	C4			C4	D4	D4				There will be a legacy of pipelines/umbilicals and rock cover on the seabed following decommissioning. See **EIAR Section 7.3**, along with the introduction of hard substrates (rock cover). See **EIAR Section 7.4**. These will generate localised impacts on seabed habitats, and also represent a source of potential interaction for other users, for which they are providing remediation and risk reduction. There will be a contribution to KADP underwater noise, which has the potential to impact on noise sensitive species. See **EIAR Section 7.5**.
Pipeline and umbilical exposure	B1												B1	C1	C1				Potential third party risks resulting from the snagging of fishing gear or vessel anchors. See **EIAR Section 7.3**.

[6] This topic is largely considered in the context of other environmental factors, for example effects on air quality, climate, other users, landscape/seascape.
[7] Note that interactions between individual components of the biodiversity environmental factor have also been considered, for example effects on supporting habitats of species, or on prey species of other animals.

Environmental factor		Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC[7]								Land, soil, water, air, climate			Material assets, cultural heritage and landscape						Summary consideration (including reference to relevant sections of the EIAR submitted with Consent Application no. 1)
Activity/Source of Potential Effect	Population & Human Health[6]	Benthic Fauna	Plankton	Fish & Shellfish	Marine Reptiles	Marine Mammals	Waterbirds & Seabirds	Onshore habitats/species	Conservation sites/species	Soils & Seabed[A]	Water Quality	Air & climate	Fisheries/aquaculture	Other Uses & Resources[B]	Shipping	Waste Treatment & Landfill resource onshore	Cultural Heritage[C]	Landscape/seascape	
Pipeline and umbilical degradation	B1		D2	D2						C1	D2		B1	C1	C1				Pipelines and umbilicals are constructed of non-toxic and relatively inert materials (carbon steel, concrete, plastics). Potential future third party risks resulting from the snagging of fishing gear or vessel anchors. See **Section 7.3**. There will be some minor "legacy" discharges as pipelines and umbilicals degrade, but these are small in volume and would rapidly disperse (see **EIAR Section 7.6**).
Post-decommissioning survey	D2			D2	D2	C2	D2		C2				D2	D3	D3			D2	The survey would include the use of noise generating equipment; including side-scan sonar and MBES and therefore contribute to overall KADP underwater noise, and the potential for impact on noise sensitive species. The physical presence of the vessel has the potential for interaction/disturbance through physical presence, of birds and marine mammal species, and other users of the sea. See **EIAR Sections 7.5 and 7.9**.

*Notes. Potentially significant effects are highlighted dark green with potential positive or minor or negligible effects, light green. See **Table 4.1** for the criteria used to identify the significance of potential effects.*

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Section 5

Management of Residual Impacts and Conclusions

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5 Management of Residual Impacts and Conclusions

5.1 Introduction

A number of mitigation measures and environmental management actions were identified in the consideration of potential effects (**Section 7 of the EIAR**) which were reflected in a series of environmental management commitments and mitigation measures (**Section 8.2 of EIAR**). These have informed the development of the KADP draft Environmental Management Plan (**Section 5.2.1** below) which formed part of the response to the Request for Additional Information to Consent Application no. 1 in November 2018 and which, in association with other relevant conditions of the consents (**Section 5.2.2**), will ensure that potential residual impacts associated with the KADP are managed appropriately. It is anticipated that similar or identical conditions to those contained in Consent Applications no. 1 and Kinsale Head Consent Application no. 2 will be applied to any approval for Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2. Therefore these conditions are identified and considered below.

5.2 Environmental Management Commitments and Mitigation Measures

The following section reflects commitments already made in the EIAR (see **Section 8 of the EIAR**) as well as environmental conditions imposed in the consents to Consent Application no. 1 and Consent Application no. 2.

The conditions imposed as part of Consent Applications no. 1 and Kinsale Head Consent Application no. 2 are identifiable in the following section by reference to the numbering in the letters provided to Kinsale Energy by the Department of Communications, Climate Action and the Environment in the conditions between the determinations are distinguished below). The conditions relate to both the Kinsale Head and Seven Heads areas unless distinguished. Certain conditions imposed are not directly relevant to the EIAR (**Conditions 5-10, or 5-9 for Consent Application no. 2**) and are therefore not reproduced here, but remain commitments of Kinsale Energy as part of the KADP. Certain aspects of the KADP have been completed (e.g. manifold removal) or have commenced (e.g. well plug and abandonment), and therefore certain conditions such as those relating to the provision of a guard vessel during well plug and abandonment, are being, or have been, discharged. Therefore, the following only reflects those conditions relevant to the aspects of the KADP covered by Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2.

Note that the Department of Communications, Climate Action and the Environment is now the Department of Environment, Climate and Communications (DECC).

Kinsale Energy note that there may be additional conditions applied as part of Kinsale Head Consent Application no. 3 and Seven Heads Consent Application no. 2, and the KADP will be undertaken in accordance with these.

5.2.1 Environmental Management Plan

The KADP draft Environmental Management Plan (EMP, see Appendix D to the 2019 EIAR Addendum) was produced to ensure compliance with legislative requirements and commitments made in the EIAR for the project. It identifies the minimum requirements with regard to the appropriate mitigation, monitoring, inspection and reporting mechanisms that need to be implemented throughout the decommissioning works.

The measures to be implemented to minimise likely significant negative effects, as far as practicable, during the decommissioning of the proposed development are described below.

A detailed EMP specific to the requirements of the works the subject of this application will be prepared by contractors based on the draft EMP, and will be provided to DECC for approval by the Minister before any works take place (**Condition 1**).

All natural materials to be used in undertaking the KADP (e.g. topsoil, subsoil, rock armour/cover) will be sourced from suitably licensed facilities, and evidence of this will be provided to the Minister (**Condition 2**).

Physical Presence: Decommissioning Activities

To minimise potential physical presence effects associated with the decommissioning works, all activities will be undertaken in adherence to relevant legally required standards and controls, which include:

- Notices to Mariners will be issued to cover decommissioning work associated with each consent application to communicate the nature and timing of the activities to relevant other users of the sea. Before decommissioning work commences, Kinsale Energy will provide draft Marine Notices to the Minister for Transport highlighting the nature of the work involved and the approximate length of time the works will last (**Condition 13, or Condition 11 for Consent Application no. 2**);
- All vessels used in the decommissioning operations will meet applicable national and international standards (e.g. in terms of signals and lighting); and

Physical Presence: Legacy of Materials Left *In Situ*

There are a number of aspects of the proposed decommissioning works which will result in legacy materials being left *in situ* with the potential for longer term effects.

It is planned that rock cover remediation will be used to reduce the potential snagging risk associated with decommissioning pipelines and umbilicals left *in situ* or with any potential protruding jacket leg stumps. The following measures will be implemented as part of the rock placement programme:

- The remediation of all pipeline/umbilical end sections and freespans using overtrawlable rock berms to further reduce risks to third parties;
- Accurate rock-placement will be assured by the use of a Remotely Operated Vehicle (ROV) guided fall pipe system on the rock-placement vessel;
- On-going consultation with fisheries representatives and maritime authorities;
- All infrastructure decommissioned *in situ* will be surveyed post-decommissioning to accurately record their location and status. This information will be included on navigational charts and also passed to representatives of the fishing community; and
- Standard overtrawling surveys will also be undertaken where wellheads, spoolpieces etc. are removed to confirm the area is clear of debris and snagging hazards.

Physical Disturbance

The decommissioning activities will result in some seabed disturbance (KADP total of 0.46-0.76km^2, or a total of 0.023km^2 for pipeline end and freespan remediation alone), the effects of which are considered to be minor and temporary. Mitigation is proposed to further reduce the significance of these effects and includes:

- the use of Dynamic Positioning (DP) on most vessels where practicable to reduce anchor deployment – note that sensitive features such as wrecks or Annex I habitats have not been detected in previous surveys; and
- For each option/activity involving rock placement, efforts will be made to minimise the volume of rock deployed, subject to achieving the required technical function.

Underwater Noise

The environmental assessment concluded that there is no likely significant effect on marine mammals from underwater noise as a result of the proposed decommissioning works and therefore it is not proposed to engage a Marine Mammal Observer (MMO) during the works, or that any specific mitigation is required in relation to underwater noise effects Despite this, wherever possible, through careful activity phasing, vessel synergies will be sought to minimise vessel days and associated noise emissions. Any post-decommissioning survey works will require appropriate consent applications which will detail the proposed survey methods and mitigation measures.

Discharges to Sea

To minimise potential effects from discharges to sea associated with the decommissioning works, all activities will be undertaken in accordance with regulatory and policy controls, including:

- Existing operational controls for the management of routine marine discharges from the decommissioning activities (e.g. adherence to the International Convention for the Prevention of Pollution from Ships (MARPOL) standards); and

All potential discharges associated with decommissioning the Kinsale Area facilities (e.g. from pipelines abandonment) are considered to be minor.

Waste: Materials Recycling, Reuse and Disposal

The KADP will comply with all relevant waste and resource management policy and legislation that applies (including International, European and Irish policy and legislation). It is worth noting that there will be no planned recovery or disposal of waste as part of the works to be carried out pursuant to Kinsale Head Consent Application no. 3 and Seven Heads Application no. 2 beyond what is required as part of normal shipping operations (e.g. consistent with MARPOL).

Energy Use and Atmospheric Emissions

It is considered that there is limited scope for mitigation measures to reduce the residual effect on atmospheric Greenhouse Gas (GHG) loading, or any local effects on air quality. There is the potential to minimise time in the field and associated vessel days and related emissions by making use of vessel synergies and careful activity phasing which would form part of standard programme management, and there is the potential to make further emissions reductions during contractor selection (e.g. those using modern efficient vessels); however, neither of these are considered to significantly alter the predicted effect.

Emissions from material flows will be minimised by using a waste hierarchy approach consistent with the Waste Framework Directive 2008/98/EC; establishing where there is scope for equipment and material re-use and recycling, with disposal only taking place where no feasible alternative is available.

Conservation Sites and Species

No specific mitigation measures have been identified that are relied upon to avoid adverse effects on any conservation site.

Accidental Events

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, including:

- Other users of the Kinsale Area, which include fisheries, shipping and other sea users such as recreational sailing and those involved in maritime activities such as surveys, will be alerted to the decommissioning activities via publication of Notices to Mariners detailing vessel positions, activities and timing and by full navigation lighting on the vessels;
- All vessels to be used during decommissioning will be subject to audit and expected to adhere to Kinsale Energy Health, Environment and Safety policy. They will have in place the relevant, current Shipboard Oil Pollution Emergency Plans (SOPEP) in accordance with MARPOL and/or an oil spill contingency plan, which would be implemented in the event of an accidental event.

Kinsale Energy's risk management measures and legislative compliance minimise the risk that an accidental event could occur (noting the already very low frequencies of such incidents relating to oil and gas activities), and therefore minimise the likelihood of any resultant significant effect. This includes measures which will be in place to avoid, as far as possible, spills from bunkering and supply operations, and general vessel operations, including processes and procedures.

5.2.2 Other relevant conditions associated with Consent Application 1

5.2.2.1 Cultural Heritage

The services of a suitably qualified and suitably experienced maritime archaeologist shall be engaged to monitor subsea works for identified wreck sites that are less than 300m to proposed decommissioning works[8] (see **Section 3.3** and **Appendix C of the EIAR Addendum submitted for Consent Application no.2**). The archaeologist shall be licensed by the Department of Culture, Heritage and the Gaeltacht. Kinsale Energy will provide specifications in advance of the proposed work to allow the archaeologist to determine any mitigation strategies that may need to be put in place to protect identified shipwreck remains. Kinsale Energy will follow the advice of the archaeologist, and provision shall be made to accommodate the monitoring archaeologist on board decommissioning vessels to enable them to successfully carry out their work (**Condition 3**).

[8] Note that the wording of the condition associated with Consent Application no. 1 was that it should apply to any wreck site less than 300m to the proposed decommissioning infrastructure. As the pipelines are being left *in situ*, and the proposed remaining works will take place along only small portions of these long and linear features, it is proposed that the condition would only apply to those locations where seabed works are to take place.

5.2.2.2 Additional survey

A post-decommissioning survey was already a commitment made in the EIAR, specifically that, pipelines and umbilicals will be surveyed post-decommissioning to establish their exact position and this information will be included in navigational charts.

5.3 Conclusion

This EIAR Addendum takes into account consideration of the following:

- updates to the legal and policy framework and the characteristics of the marine environment. While there have been changes to the legal framework which are relevant to the decommissioning of certain aspects of the pipelines and umbilicals; Neither these or the updated baseline information represent significant changes, and they do not alter the conclusions of the EIAR, and the previous EIAR Addendum which accompanied Kinsale Head Consent Application no. 2,
- additional information including in relation to in-combination effects with other plans and programmes, which were not found to be a source of likely significant effect,
- environmental management commitments and relevant expected consent conditions

The conclusion of the EIAR, updated to reflect the information presented in this addendum, and the EIAR Addendum submitted in Kinsale Head Consent Application no. 2, is that the activities associated with the proposed KADP will not result, either directly or indirectly, in likely significant adverse effects on the environment, alone or cumulatively with other existing or approved projects.

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Section 6

References

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6 References

Nolan C, O'Donnell C, Lynch D, Lyons K, Keogh N, McAvoy S, Cronin C & Hunt W (2014). Celtic Sea Herring Acoustic Survey cruise report 2014. FSS Survey Series 2014/04,51pp.

O'Donnell C, Lynch D, Lyons K, Keogh N & O'Donovan M (2015). Celtic Sea Herring Acoustic Survey cruise report 2015. FSS Survey Series 2015/04,53pp.

O'Donnell C, Lynch D, Lyons K, Ni Riogain P & Volkenandt M (2011). Celtic Sea Herring Acoustic Survey cruise report 2011. FSS Survey Series 2011/03,48pp.

O'Donnell C, Mullins E, Lynch D, Lyons K, Keogh N & O'Callaghan S (2018). Celtic Sea Herring Acoustic Survey cruise report 2018. FSS Survey Series 2018/04, 44pp.

O'Donnell C, Nolan C, Mullins E, Lyons K, Volkenandt M, Keogh N, McAvoy S & Williams D (2013). Celtic Sea Herring Acoustic Survey cruise report 2013. FSS Survey Series 2013/04,51pp.

O'Donnell C, Nolan C, Sullivan M, Lyons K, McKeogh E, McAvoy S, Ingham S & O'Sullivan E (2012). Celtic Sea Herring Acoustic Survey cruise report 2012. FSS Survey Series 2012/05,43pp.

O'Donnell C, Saunders R, Lynch D, Lyons K & Wall D (2008). Celtic Sea Herring Acoustic Survey cruise report 2008. FSS Survey Series 2008/03,57pp.

O'Donnell C, Sullivan M, Lyons K, Keogh N & Quinn M (2016). Celtic Sea Herring Acoustic Survey (CSHAS) cruise report 2016. FSS Survey Series 2016/04, 44pp.

O'Donnell C, O'Malley M, Lynch D, Lyons K, Keogh N & O'Driscoll D (2017). Celtic Sea Herring Acoustic Survey (CSHAS) cruise report 2017. FSS Survey Series 2017/04, 38pp

O'Donnell C, Mullins E, Lynch D, Lyons K, Connaughton P & Power J (2019). Celtic Sea Herring Acoustic Survey cruise report 2019. FSS Survey Series 2019/04, 49pp.

O'Donnell C, Mullins E, Lynch D, Lyons K, Connaughton P & Perez Tadeo M (2020). Celtic Sea Herring Acoustic Survey cruise report 2020. FSS Survey Series 2020/04, 54pp.

Saunders R, O'Donnell C, Campbell A, Lynch D, Egan A, Lyons K & Wall D (2010). Celtic Sea Herring

Saunders R, O'Donnell C, Campbell A, Lynch D, Lyons K & Wall D (2009). Celtic Sea Herring Acoustic Survey cruise report 2009. FSS Survey Series 2009/03, 63pp.