

# DEPARTMENT OF THE ENVIRONMENT, CLIMATE AND COMMUNICATIONS

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## Irish Offshore Strategic Environment Assessment 6

Strategic Environmental Assessment (SEA) - Statement

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## DOCUMENT RELEASE FORM

### DEPARTMENT OF THE ENVIRONMENT, CLIMATE AND COMMUNICATIONS

P2510\_R6021\_Rev0

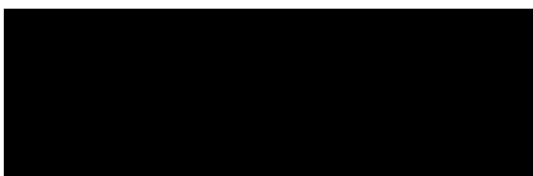
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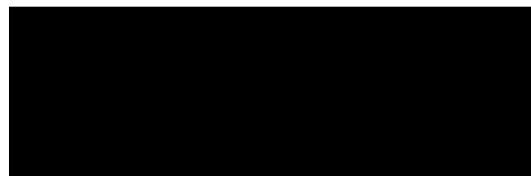
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## GLOSSARY

### AA

Appropriate Assessment

### BIM

Board Iascaigh Mhara

### BWM

Ballast Water Management

### CFP

Common Fisheries Policy

### CIL

Commissioners of Irish Lights

### CO<sub>2</sub>

Carbon Dioxide

### DAERA

Department of Agriculture, Environment and Rural Affairs

### DAFM

Department of Agriculture, Food and the Marine

### DECC

Department of the Environment, Climate and Communications

### DHLGH

Department of Housing, Local Government and Heritage

### EC

European Commission

### EDFR

EDF Renewables

### EDR

Effective deterrence range

### EIA

Environmental Impact Assessment

### EPA

Environmental Protection Agency

### EPS

European Protected Species

### ER

Environmental Report

### EU

European Union

### FLO

Fisheries Liaison Officer

### GHG's

Greenhouse Gases

### GSI

Geological Survey of Ireland

### IMO

International Maritime Organisation

### INNS

Invasive Non-Native Species

### IOSEA

Irish Offshore Strategic Environmental Assessment

### IOSEA5

Irish Offshore Strategic Environmental Assessment 5

### IOSEA6

Irish Offshore Strategic Environmental Assessment 6

### IWDG

Irish Whale and Dolphin Group

### JIP

Joint Industry Programme

### JNCC

Joint Nature Conservation Committee

### LCPA

List of Chemicals for Priority Action

### LSE

Likely Significant Effect

### MARPOL

International Convention for the Prevention of Pollution from Ships

### MCA

Maritime and Coast Guard Agency

### MCZ

Marine Conservation Zone

### MEPC

Marine Environmental Protection Committee

**MI**

Marine Institute

**MMO**

Marine Mammal Organisation

**MMMU**

Marine Mammal Management Unit

**NIEA**

Northern Ireland Environment Agency

**NIS**

Natura Impact Statement

**NO<sub>x</sub>**

Nitrogen Oxide

**NPWS**

National Parks and Wildlife Service

**NRW**

Natural Resources Wales

**OBM**

Oil-Base Muds

**OPEP**

Oil Pollution Emergency Plan

**ORE**

Offshore Renewable Energy

**OSCP**

Oil Spill Contingency Plan

**OSPAR Commission**

Oslo and Paris Commission

**PAH**

Poly Aromatic hydrocarbon

**PBT**

Persistence, Bioaccumulation and Toxicity

**RSBP**

Royal Society for the Protection of Birds

**SAC**

Special Area of Conservation

**SBM**

Synthetic Base Muds

**SCANS**

Small Cetaceans in the European Atlantic and North Sea

**SEA**

Strategic Environmental Assessment

**SEO**

Strategic Environmental Objectives

**SEPA**

Scottish Environment Protection Agency

**SI**

Statutory Instrument

**SO<sub>2</sub>**

Sulphur Dioxide

**SOPEP**

Shipboard Oil Pollution Emergency Plans

**SPA**

Special Protection Area

**UXO**

underwater explosives

**WDC**

Whale and Dolphin Conservation

# 1. INTRODUCTION

This Strategic Environmental Assessment (SEA) Post Adoption Statement has been prepared on behalf of the Department of the Environment, Climate and Communications (DECC) by Intertek Energy and Water Consultancy (Intertek).

This SEA Post Adoption Statement has been prepared as part of the SEA of the Plan for assessment of applications for Petroleum Exploration and Production Authorisations in Irish Offshore Waters for the period to 2030 (DECC, 2022) (hereafter referred to as 'the Plan'). It provides information on how the SEA process has influenced the development of the final Plan. In accordance with Schedule 2, Section 16(2) of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations (Statutory Instrument (SI) No. 435 of 2004) (Irish Statute Book, 2021) as amended and EPA Guidance (EPA, 2020), it includes the following:

1. A summary of how environmental considerations have been integrated into the Plan.
2. Summary of how submissions and consultations were taken into account in the preparation of the Plan.
3. Reasons for choosing the adopted Plan, in light of other reasonable alternatives considered.
4. Summary of monitoring measures put in place to monitor the significant effects of implementing the Plan.

## 1.1 Objectives of the Plan

The main objectives of the Plan are:

- To set out the proposed approach to the issuing of petroleum authorisations in Ireland, and the consideration of the possible offshore exploration activities that could take place under such authorisations, to reflect the 2020 Programme for Government commitment to end the issuing of new Petroleum Authorisations for the exploration and extraction of gas in line with the 2019 Government Decision on oil exploration and extraction and which was given statutory underpinning in the Climate Action and Low Carbon Development (Amendment) Act 2021, and commenced 7<sup>th</sup> September 2021.
- To provide petroleum authorisation holders with an operational baseline against which they can conduct activities whilst ensuring the protection of the marine environment, in line with current best practice and lessons learned from previous IOSEAs.

## 2. STRATEGIC ENVIRONMENTAL ASSESSMENT PROCESS

### 2.1 Introduction

The Plan has been subject to a process of SEA as required under the S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended). The key stages of the SEA process are listed in Table 2-1 below with the current, concluding stage of the process highlighted.

**Table 2-1 Key stages in the SEA Process**

Stage	Description
Screening	Determines whether SEA is required for the draft Plan, in consultation with the designated statutory consultees.
Scoping	Determines the scope and level of detail of the assessment for the SEA, in consultation with the designated statutory consultees.
Environmental Assessment	Formal and transparent assessment of the likely significant impacts on the environment as a result of implementing the draft Plan. The output from this is an Environmental Report which must go on public display along with the Draft Plan.
SEA Statement	Summarises the process undertaken and identifies how environmental considerations and consultations have been integrated into the final Plan.

### 2.2 SEA Screening

Intertek carried out SEA Screening for the Plan Outline in February 2022. The screening determined that the Plan falls within the remit of the SEA Directive and that a Mandatory SEA is required (Intertek, 2022a).

### 2.3 SEA Scoping Report and Consultation

The SEA Screening was followed by a SEA Scoping Report, which detailed the proposed structure of the SEA Environmental Report (ER). The Scoping Report (Intertek, 2022b) and Plan Outline were issued to key stakeholders and statutory authorities (both Irish and transboundary) on 29<sup>th</sup> July 2022 for a six-week consultation period.

#### 2.3.1 Statutory Consultees

The statutory authorities for this plan are:

- Environmental Protection Agency (EPA);
- Department of Agriculture, Food and the Marine (DAFM);
- Department of the Environment, Climate and Communications (DECC); and
- Department of Housing, Local Government and Heritage (DHLGH).



### **2.3.2 Transboundary Statutory Regulators**

- Isle of Man: Department of Environment, Food, and Agriculture
- Northern Ireland:
  - Northern Ireland Environment Agency (NIEA)
  - Department of Agriculture, Environment and Rural Affairs (DAERA)
- Scotland:
  - The Scottish Environment Protection Agency (SEPA)
  - NatureScot
  - Historic Environment Scotland
- Wales:
  - Natural Resources Wales (NRW)
  - Cadw (Welsh Environmental Service)
- England:
  - Natural England
  - Environment Agency
  - Historic England

### **2.3.3 Irish non-statutory consultees relevant to and included in the IOSEA6 consultation**

- An Taisce
- Bird Watch Ireland
- Irish Sailing Association
- Bord Iascaigh Mhara (BIM)
- Commissioners of Irish Lights (CIL)
- Central Fisheries Board
- Failte Ireland
- Health and Safety Authority
- Irish Basking Shark Group
- Irish Offshore Operators' Association
- Irish Whale and Dolphin Group (IWDG)
- Irish Wildlife Trust
- Marine Institute (MI)
- National Parks and Wildlife Service (NPWS)
- Sea Fisheries Protection Authority
- The Heritage Council
- Irish Aviation Authority
- Commission for Regulation of Utilities
- Irish Environmental Network

- Various Fisheries Producer Organisations
- Wind Energy Ireland

#### **2.3.4 UK non-statutory consultees relevant to and included in the IOSEA6 consultation**

- Marine Management Organisation (MMO)
- Joint Nature Conservation Committee (JNCC)
- The Crown Estate
- Whale and Dolphin Conservation (WDC)
- ORCA Whale and Dolphin Group
- Department for Energy and Climate Change (UK)
- Centre for Environment, Fisheries and Aquaculture
- Royal Society for the Protection of Birds (RSPB)

Of the statutory and non-statutory consultees contacted, 11 scoping responses were received from the following parties:

- EPA;
- DECC / Geological Survey Ireland (GSI);
- DAFM;
- Commission for the Regulation of Utilities;
- CIL;
- SEPA;
- NatureScot;
- Historic Environment Scotland;
- Natural England;
- JNCC; and
- Marine and Fisheries Division, DAERA NI.

## **2.4 Environmental Assessment and ER Consultation**

An environmental assessment of the Draft Plan was undertaken and documented in a SEA Environmental Report (Intertek, 2022c). Preparation of the Environmental Report accounted for the views and comments provided by consultees regarding the scope and level of detail that was appropriate for the ER.

The ER focused on the likely significant effects on the environment of the Draft Plan, which included consideration of:

- The baseline data relating to the current state of the environment.
- Links between the Plan and other relevant strategies, policies, plans, programmes and environmental protection objectives.
- Existing environmental problems affecting the Plan.
- The Plan's likely significant effects on the environment (positive and negative).

- Measures envisaged for the prevention, reduction and offsetting of any significant adverse effects.
- An outline of the reasons for selecting the alternatives chosen.
- Mitigation measures to reduce and eliminate impacts.

In parallel with the preparation of the ER, a Natura Impact Statement (NIS) was prepared in accordance with Part 5 of the European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No. 477/2011) (as amended) (Intertek, 2022e).

Article 13 of the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended) requires that both the environmental authorities and the public are given an “early and effective” opportunity to make submissions on a plan and the accompanying SEA ER before any final decision is made on the plan. On the 2<sup>nd</sup> December 2022, notice of the public consultation was advertised in the Irish Times newspaper. The draft Plan and accompanying SEA ER and NIS were submitted by email to statutory consultees and other key stakeholders (both Irish and transboundary) and made available for public comment online (<https://www.gov.ie/en/consultation/e7946-consultation-on-the-irish-offshore-strategic-environmental-assessment-6-iosea6/>). Consultation ran for seven weeks and closed on 13<sup>th</sup> January 2023.

All received submissions and observations were reviewed and taken into consideration in the finalisation of the Plan, see Sections 3.3 and 3.4.

## 2.5 SEA Statement

The main purpose of the SEA Statement is to provide information on the decision-making process for the Plan in order to demonstrate in a transparent manner how results of the environmental assessments have been considered during preparation of the Plan.

## 2.6 Screening for Appropriate Assessment (AA) and NIS

In accordance with Regulation 42(6) of the European Communities (Birds and Natural Habitats) Regulations 2011 (as amended), Intertek, on behalf of DECC, undertook initial screening for Appropriate Assessment (AA) in April 2022. The assessment identified pressure-receptor pathways and concluded that the adoption of the Draft Plan could result in a Likely Significant Effect (LSE) on 241 relevant Irish Natura 2000 sites (101 Special Protection Areas (SPAs) and 140 Special Areas of Conservation (SACs)) and 161 relevant Transboundary Natura 2000 sites (104 SACs, 56 SPAs and 1 pSPA) and as a result the Draft Plan should be subject to Stage 2 AA.

The NPSW in its capacity as an advisory body, reviewed the findings of the Screening for AA and agreed with the conclusions (per consultation response received 5<sup>th</sup> May 2022). As such it was determined that assessment of the Draft Plan should proceed to Stage 2 AA.

Following review of initial feedback the report was updated to address comments received and submitted for further consultation in July 2022 (Intertek, 2022d). The edits made to the report mainly consisted of inclusion of missing sites and re-ordering the screening tables.

A NIS (Intertek, 2022e) was then prepared by Intertek on the Draft Plan prior to consultation. The assessment concluded that of the nine potential LSEs, underwater noise changes and hydrocarbon & polycyclic aromatic hydrocarbon (PAH) contamination would result in an LSE to the Conservation Objectives of Natura 2000 sites. Therefore consideration of mitigation measures for the identified pressures assessed should be carried out at Project level to avoid LSE. With the implementation of the proposed mitigation measures (if necessary at Project level) there is no residual effect; therefore, no in-combination effect is possible.

The draft Plan, the NIS and a SEA ER were subject to public consultation from 28<sup>th</sup> November 2022 to 13<sup>th</sup> January 2023 as part of the SEA process. This was undertaken in parallel to preparation of the Plan.

Following the statutory and public consultation, the submissions and observations were taken into consideration and modifications and amendments to the draft Plan were made to reflect issues raised by a wide range of stakeholders.

### 3. HOW ENVIRONMENTAL REPORT AND CONSULTATION COMMENTS HAVE BEEN TAKEN INTO ACCOUNT

This section provides an overview of how the findings from the SEA process were used to inform the preparation of the final Plan.

Table 3-1 lists the environmental considerations and problems in the area and demonstrates how these have been taken into account in the Final Plan. Where these have not been taken into account, reasons for this are included.

**Table 3-1 Environmental considerations and how they were taken into account**

Environmental considerations and findings from the Environmental Report	Integrated / taken into account in the Final Plan (YES/NO)	How integrated/taken into account or reason for not being taken into account
Levels of greenhouse gas emissions and air quality not meeting World Health Organisation standards	Yes	The Final Plan reduces the number and extent of permitted oil and gas exploration than under the Previous Plan. Thereby helping to reduce atmospheric emissions (including greenhouse gas emissions) and as a result helping to lead to improved air quality.
Anthropogenic disturbance in the marine environment e.g. vessel presence and noise, fishing activities) and the pressures (e.g. displacement, disturbance, avoidance or mortality) resulting on marine life.	Yes	Potential impacts to marine mammals, fish, birds and marine reptiles arising from the Plan have been assessed in the ER and NIS.  Mitigation to be followed at Project level has been suggested to reduce impact from activities arising from the Plan on marine life and their habitats.
Impacts of climate change on flora and fauna. Climate change will continue to accelerate.	Yes	Under the Climate Action and Low Carbon Development (Amendment) Act 2021, Ireland is committed to becoming net zero by 2050. Although the exploration for Oil and Gas contributes to climate change, the Plan seeks to minimise the effects of climate by reducing the number and extent of permitted activities.

<b>Environmental considerations and findings from the Environmental Report</b>	<b>Integrated / taken into account in the Final Plan (YES/NO)</b>	<b>How integrated/taken into account or reason for not being taken into account</b>
Loss and damage (e.g. by fishing activities, anchorage) on non-designated but important habitats and species and Annex I Habitats (including potential habitats).	Yes	<p>The Final Plan reduces the number and extent of permitted oil and gas exploration than under the Previous Plan, thereby ensuring that seabed disturbance is kept to a minimum.</p> <p>Potential impacts to marine mammals, fish, birds and marine reptiles arising from the Plan have been assessed in the ER and NIS.</p> <p>Mitigation to be followed at Project level has been included in Section 9 of the Plan to reduce impact from activities arising from the Plan on marine life and their habitats.</p>
Introduction of Invasive Non-native Species (INNS)	Yes	<p>Oil and gas activity is unlikely to change the risk of the INNS as the vessels typically operate in a geographically localised area, and the risk from hull fouling is low, given the geographical working region. However, the Ballast Water Management (BWM) Convention is a treaty adopted by the International Maritime Organisation (IMO) in order to help prevent the spread of potentially harmful aquatic organisms and pathogens in ships' ballast water as Ireland is a member of the IMO it must meet with the legislation enacted.</p>
Marine litter	Yes	<p>The Final Plan will help minimise marine litter introduction risks. All vessels operating under the Plan must adhere to International Convention for the Prevention of Pollution from Ships (MARPOL) standards with respect to black and grey wastewater and food and other waste discharges.</p>
Climate change impacts through sea level rise, pH decreasing and rising sea surface temperatures	No	<p>The Final Plan reduces the number and extent of permitted oil and gas exploration than under the Previous Plan, although this may help to minimise the acceleration of climate change, other Policies and Plans (both in Ireland and Worldwide) will be required to make substantial alterations in climate change impacts.</p>
Damage to marine cultural heritage due to climate change, dredging and natural processes	No	<p>The Final Plan does not directly address these issues but the Plans activities will adhere to appropriate legislation and seek not to adversely impact the integrity of Cultural, Architectural &amp; Archaeological Heritage. Appropriate level mitigation to minimise and avoid any impacts to marine cultural heritage will be considered at project level.</p>

<b>Environmental considerations and findings from the Environmental Report</b>	<b>Integrated / taken into account in the Final Plan (YES/NO)</b>	<b>How integrated/taken into account or reason for not being taken into account</b>
Pressures for space from other marine users (such as fishing and offshore energy projects)	Yes	The Final Plan restricts oil and gas activities to a smaller geographical area than under the Previous Plan. Safety restrictions in terms of exclusion zones are implemented around survey vessels and rigs. The Final Plan seeks to not impede the fishing, shipping and offshore wind industries.
Sediment contamination	Yes	The Final Plan includes restrictions on discharges to water and rig or vessel discharges are controlled through compliance with various MARPOL requirements.  The Plan also minimise the risk of sediment contamination from well leaks and hydrocarbon release by reducing the number and extent of permitted oil and gas exploration than under the Previous Plan.
Impacts on Seascape Character Type due to growth in renewables	No	The Plan is unlikely to impact upon Seascape Character Type due to the distance from the shore of the exploration activities and subsequent well development. This has been assessed in the ER.
Health and safety / injuries of workers	Yes	The Plan follows required legislation and guidelines in relation to health and safety of vessels and operations.
Impacts on water quality from discharges into the marine environment	Yes	The Final Plan includes restrictions on discharges to water and rig or vessel discharges are controlled through compliance with various MARPOL requirements.

### 3.2 How the Environmental Report has been taken into Account

The environmental problems and trends identified above were taken into account in developing the environmental assessment and the Final Plan. The environmental assessment determined which of the assessed alternatives had less environmental impacts and supported the most objectives (see Section 4.1). All recommendations from the SEA, including mitigation measures reviewed and developed were integrated into the adopted Plan, this ensures that any significant adverse effects of implementing the Plan are mitigated.

### 3.3 ER and NIS Report Consultation

The ER, NIS and Draft Plan were published online for a seven-week consultation period from 28<sup>th</sup> November 2022 to 13<sup>th</sup> January 2023. In addition statutory, non-statutory and other stakeholders were contacted via email for comments on the reports and Draft Plan.

Following the consultation period all consultation responses received were reviewed by Intertek and DECC. Of the statutory and non-statutory consultees contacted and the public consultation phase, 17 responses were received from;

- EPA;
- DECC / GSI;
- DAFM;
- CIL;
- NatureScot;
- Historic Environment Scotland;
- Natural England;
- JNCC;
- EnerGeo Alliance;
- Friends of the Earth
- EDF Renewables;
- DAERA NI;
- Donegal County Council;
- Meath County Council;
- Louth County Council; and
- Two members of the public.

These consultation responses lead to updates to the Plan.

### 3.4 How consultation comments were taken into account during preparation of the Plan

This section provides an overview of how stakeholder views have been taken into account within the preparation of the final Plan.

Tables 3-2, 3-3 and 3-4 lists the consultation comments and observations received on the draft Plan, SEA ER and the NIS from Statutory and non-statutory consultees, industry and members of the public respectively. Where applicable, the response includes how the comments raised have been accounted for in the preparation of the final Plan, SEA ER and NIS.



**Table 3-2 Statutory/non statutory consultee comments on the SEA Environmental Report and Plan**

Consultee	Summarised Comment	Response
EPA	<b>General comment:</b> With regards monitoring considerations for the Plan, while we note the intention for monitoring to be carried out at a project level, the Plan should provide further information regarding what plan-level monitoring is to be carried out, as required under the SEA Directive. Suggest plan level approaches to SEA-monitoring.	Plan updated to provide further information on Plan level monitoring to be carried out.
	<b>Plan comment:</b> DECC should also ensure that the Plan aligns with key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Marine Planning Framework and the National Planning Framework, as relevant and where appropriate.	Noted. This Plan is intended to provide an operational baseline against which activities can be conducted under the current policy and legislative frameworks, which would include the frameworks referenced.
	<b>Plan comment:</b> Section 6 - Activities Subject to Environmental Impact Assessment (EIA)/AA screening - We recommend that an additional section be included which summarises the key findings of the SEA and AA processes.	DECC acknowledges this recommendation but has opted against including this section as this SEA/AA Process updated previous assessments taken in this area.
	<b>Plan comment:</b> Section 8 – Monitoring of the Plan - while we note that this section acknowledges the role of project-related monitoring, we recommend that this monitoring considers the relevant environmental monitoring arising from the SEA process.	As the Plan is time bound until 2030, if the process of developing a new plan is initiated post 2030, it is intended that it would include a review of the environmental monitoring measures proposed in IOSEA6.
	<b>Plan comment:</b> Section 9 – Mitigation Measures -we recommend that this section could provide more detail on what plan-level mitigation measures are considered. We note the various requirements and mitigation measures referred to in the Plan for controlling project level activities throughout this section. These could be converted into plan-level objectives, where appropriate. It would also be useful if the mitigation measures referred to in this section are codified, where possible.	DECC acknowledges this recommendation but has opted to keep the requirements and measures referenced at a project level.

Consultee	Summarised Comment	Response
	<b>Plan comment:</b> The Plan should include an objective to support the protection of existing marine protected areas (and any proposed new) areas that might be designated over the lifetime of the Plan.	This objective will be considered at a Project level to account for the latest data available on marine protected areas.
	<b>Plan comment:</b> There is also merit in the Plan recognising the possible requirement for a dumping at sea permit for certain activities that may require authorisation under the Plan, for instance drilling and decommissioning of offshore installations.	As this Plan sets out the proposed approach to the issuing of petroleum authorisations and the consideration of the possible offshore exploration activities that could take place, decommissioning is outside of the scope of the plan and is subject to the EIA and AA processes at a project level.
	<b>ER Comment:</b> We note that Section 3.1 Policy and Legislative Background, includes reference to the Climate Action Plan 2021 and the National Marine Planning Framework. There may also be merit in considering the Draft National Seafood Development Programme 2021-2027 and the Draft Offshore Renewable Energy Development Plan II.  With regards biodiversity, we suggest reference be made to the 4th National Biodiversity Action Plan (NPWS), currently being prepared.	Noted.
	<b>ER Comment:</b> There is merit in describing whether aspects such as installation, removal or decommissioning of related infrastructure (both offshore and onshore) supporting petroleum exploration or production activities are considered in the Plan, or in other plans or programmes, or at a project level.	The activities associated with installation, removal or decommissioning of related infrastructure are outside the jurisdiction of the Plan and not considered in IOSEA6. These are assessed at Project level.
	<b>ER Comment:</b> We welcome that a number of EPA guidance documents are referred to specifically in Table 3.1. We suggest that these are referred to in a separate table of other resources considered.	Noted.

Consultee	Summarised Comment	Response
	<b>ER Comment:</b> Environmental Problems relevant to the Plan, there is merit in incorporating these into the Plan, where relevant as a series of plan-level objective, to cover the various elements scoped into the SEA process.	Noted.
	<b>ER Comment:</b> We also acknowledge that the EPA's Guidance on Cumulative Effects Assessment in SEA (EPA, 2020) has been considered and referred to in the SEA ER.	Noted.
	<b>ER Comment:</b> EPA Guidance on the Tiering of environmental assessments may also offer useful guidance in terms of future projects that may arise from the Plan and how their environmental assessments could be linked with this SEA.	This Guidance will be reviewed and followed where relevant.
	<b>ER Comment:</b> Where you have identified the potential for LSE, you should provide appropriate mitigation measures to avoid or minimise these. You should ensure that the Plan includes clear commitments to implement the proposed mitigation measures.	The assessment does not conclude any significant negative environmental effects. Mitigation measures that could be implemented at Project level are suggested, many of these are common place in the oil and gas industry and enforced by existing regulations and Conventions.
	<b>ER Comment:</b> we recommend that a plan-level monitoring programme is carried out, taking into account the requirements of Article 17 of S.I. No. 435 of 2004, as amended.  Given that various suggested mitigation measures are set out in Annex A and Annex B of the Plan, this suggests there is scope, at a plan level, to take account of monitoring of the relevant environmental criteria.  Guidance provided on how to prepare plan-level monitoring.	The Plan is time bound until 2030, with the expectation that a new plan will be drafted in that period. It would be intended that the process of developing a new plan that is subject to the same SEA and AA process, would include a review of the environmental monitoring measures proposed in IOSEA6.
	<b>ER Comment:</b> In finalising the Plan and integrating the findings of the SEA into the Plan, the recommendations, key issues and challenges described in our State of the Environment Report Ireland's Environment – An Integrated Assessment 2020 (EPA, 2020) should be Considered and taken into account.	The State of the Environment Report was reviewed and utilised where relevant in the preparation of the environmental baseline, assessment and report.

Consultee	Summarised Comment	Response
	<p><b>ER Comment:</b> The SOER2020 messages are also linked to a number of the UN's Sustainable Development Goals, in particular Climate Action, Life on Land and Life below Water. Addressing and implementing these actions will be important in delivering environmental protection and promoting sustainable development in Ireland. In finalising the Plan and integrating the findings of the SEA into the Plan, the relevant recommendations, key issues and challenges described in the EPAs SOER2020 should be taken into account.</p>	The UN Sustainable Development Goals were reviewed and considered at the SEA Scoping stage. While not explicitly referenced they were considered in the development of the SEA and Plan.
	<p><b>General comment:</b> There is merit in describing transboundary consultation undertaken at this stage in the process.</p>	This is included within Section 2 of this report.
	<p><b>General comment:</b> Any future amendments to the Plan should be screened for likely significant effects in accordance with the SEA Directive/ Regulations, using the same method of assessment applied in the "environmental assessment" of the Plan.</p>	Any amendments to the Plan (if required) will be subjected to a new SEA process.
DECC / GSI	<p><b>ER Comment:</b> We note use of some of our datasets used to inform the baseline assessment (Table 3-2). Geological Survey Ireland (the national earth science agency and a division of the Department of the Environment, Climate and Communications) encourages use of and reference to our datasets which can add to the content and robustness of the SEA process.</p> <p>Provide summary of datasets available.</p>	Datasets recommend were reviewed and used were relevant within the environmental baseline, assessment and report preparation.
DAFM	<p><b>ER Comment:</b> DAFM does not accept nor agree with the statements in the SEA (Page C-192 in C.8 Population and Human Health) relating to the administrative inquiry, the evaluation of Ireland's capacity to apply the rules of the Common Fisheries Policy (CFP).</p>	Noted.
CIL	<p><b>General comment:</b> In review we have the following comment: National Marine Planning Framework – Safety at Sea, Chapter 19, Policy 4. Establishing, changing or disestablishing Aids to Navigation (AtoN) must be sanctioned, in advance of works, by the Commissioners of Irish Lights.</p>	Noted.
Friends of the Earth	<p><b>General comment:</b> We do not consider the 2022 Policy Statement to be sufficient or in line with these objectives given the risk of fossil gas lock-in where any such fields from further leases are brought on stream. The Draft Plan and SEA are equally inadequate given lack of coherence with climate commitments.</p>	The objectives of this plan is to inform specific environmental considerations in petroleum activities taking place under both existing petroleum authorisations and any follow-on authorisations that may be granted under the

Consultee	Summarised Comment	Response
		current policy and legislative framework, and to provide petroleum authorisation holders with an operational baseline against which they can conduct activities whilst ensuring the protection of the marine environment, in line with current best practice and lessons learned from previous IOSEAs.
	<b>Plan comment:</b> It is in this context that the new plan must clearly demonstrate compliance with legally binding carbon budgets, as well as 2030 and 2050 targets. Extension of leases and timeframes allowing for petroleum production at high-levels beyond 2030 is not in accordance with such targets. The Department's licencing regime must support a fossil gas phase out, including through commencing a process and the introduction of express provisions for repeal/revocation of existing licences and through clear decommissioning plans.	The recent policy developments relating to Petroleum Exploration and Production are just one of the actions set out as part of Ireland's 2021 Climate Action Plan, which set out to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting us on a path to reach net-zero emissions no later than 2050.
	<b>General comment:</b> We call on the Department to examine the University College Cork MaREI research and the conclusions therein.	Noted.
	<b>Plan comment:</b> The references to latest climate and development as grounds for the continuation of the policy to 2030 is problematic and potentially misleading. Given that prospective developments may (if granted by Minister) only come on-stream in the post 2030 period undermines the 2030 framing. Furthermore, no information or evidence is provided as to how such a new petroleum policy supports or assists the central objective of emissions mitigation associated with the climate and energy policies and targets.	The period of the plan is stated to be in place until 2030 as it is to inform DECC of specific environmental considerations in petroleum activities, and to provide petroleum authorisation holders with an operational baseline against which they can conduct activities under the current policy and legislative

Consultee	Summarised Comment	Response
		<p>framework for petroleum exploration.</p> <p>After 2030, it would be proposed to draft a new plan which would be subject to the SEA and AA processes, and which would account for any changes in the policy and legislative framework in Ireland, as well as incorporate the latest environmental data.</p>
	<p><b>Plan comment:</b> The information provided (in section 3) does not highlight how an increase in lease undertakings and leases (and the potential for eventual exploitation of same post 2030) aligns with Ireland's national and international climate obligations.</p>	<p>Under the Climate Action and Low Carbon Development (Amendment) Bill 2021, Ireland has established a legally binding framework with clear targets and commitments set in law, and ensures the necessary structures and processes are embedded on a statutory basis for us to achieve our national, EU and international climate goals and obligations in the near and long term. This legislation also gives statutory effect to ending the issuing of new licences for the exploration and extraction of gas, which includes saving provisions that allow for existing authorisations to apply to progress through the licensing stages towards a natural conclusion which may include expiry, relinquishment, production or rejection.</p>

Consultee	Summarised Comment	Response
	<b>Plan comment:</b> Annex I - We would underline that where no obligations are imposed or areas excluded in terms of emission reduction, questions arise as to how obligations under the Climate Act have been taken into account.	The Climate Action and Low Carbon Development (Amendment) Act 2021 gives statutory effect to the Programme for Government contains a commitment to end the issuing of new licences for the exploration and extraction of gas, on the same basis as the decision taken in September 2019. This includes saving provisions that allows for existing authorisations to apply to progress through the licensing stages towards a natural conclusion which may include expiry, relinquishment, production or rejection.
	<b>SEA comment:</b> The SEA does not provide a complete or adequate picture on emissions impact. The SEA is insufficient as it appears to only address emissions associated with exploration and drilling. This approach ignores emissions associated with all other activities, most notably those associated with continued consumption of fossil gas post-2030 resulting from any viable find.	The scope of the Plan and therefore assessment only covers exploration activities and exploration drilling. The cumulative impact assessment includes consideration of other oil and gas activities, and it is noted that this will lead to a greater level of emissions.
	<b>SEA comment:</b> We have concerns regarding information provided on certain climate-related statements given that the SEA does not address specific impact or mitigation measures.	The Plan aims to reduce atmospheric emissions and the level of fossil gas usage. The environmental assessment is strategic in nature and therefore more detailed assessment and mitigation measure will be assessed and identified at Project level.

Consultee	Summarised Comment	Response
	<b>SEA comment:</b> We do not consider a comparison with the previous plan to be a relevant or satisfactory baseline. We have concerns that such assessments do not reflect, or appear to ignore, actual targets under the Climate Act.	The environmental assessment is based on identifying likely significant environmental effects on implementing the plan. In order to assess this a baseline needs to be determined, as there is an existing plan in place this was determined to be the baseline. A baseline of no activity is not realistic and therefore not suitable for this SEA.
NatureScot	<b>Plan comment:</b> We note and welcome that the Plan's intention is for the period up to 2030 - a period it is noted in which Ireland intends to reduce its reliance on fossil fuels and in line with both the Climate Action and Low Carbon Development (Amendment) Act 2021 and Climate Action Plan 2021. It is anticipated that the number of authorisations will decline and no new authorisations will be provided however there will be ongoing consideration for existing authorisations.	This conclusion is correct.
	<b>Plan comment:</b> We note the predicted maximum activities that could occur during the plan period on a per annum basis and that this level is based on realistic previous levels of activity. We welcome the intention to monitor the implications of the plan through plan monitoring as well as individual project activity requirements.	Noted.
	<b>Plan comment:</b> Annex II (mitigation measures) we welcome the measures identified in this annex and note reference is made to the Scottish Marine Wildlife Watching Code and useful guidance provided on measures to minimise disturbance to marine wildlife - it may be pertinent to consider if any additional measures or changes are required in the context of these activities within Irish waters. There may be text missing under the paragraph titled – underwater noise changes in this section of the annex.	Missing text from mitigation measures has been added into Final Plan.
	<b>ER Comment:</b> We consider the objectives set for the Environmental Report have been met with regard to the consideration of impacts to Scottish nature interests and we welcome and agree with the alternatives considered and the assessment based on option A - lesser amount of likely annual activity. The assessment for each of the SEA topics has been undertaken with appropriate methodologies and mitigation measures for both the Plan and for subsequent implementation at an individual project level	Noted.



Consultee	Summarised Comment	Response
	identified, where negative impacts have been identified as possible / likely. We support these mitigation measures.	
	<b>ER Comment:</b> In respect of the monitoring, due to the plan not concluding significant negative environmental effects, monitoring will be focussed on individual project level activities, but we welcome the role DECC will play in managing all seismic activities.	Noted.
	<b>NIS comment:</b> We note that our previous comments on screening in Scottish European Sites have only partially been acted upon. There are still a number of sites (St Kilda, Sound of Barra and Solway Firth SACs) that seem to have been further assessed, where we consider LSE from seismic / drilling and accidental pollution events to be unlikely.  If these aforementioned sites have been assessed then we suggest that the Inner Hebrides and Minches SAC with respect to its harbour porpoise feature, should also have been included - although as above we consider that LSE to this site is unlikely.	These sites were selected through use of GIS when it was concluded that in the event of a large unmitigated oil spill hydrocarbons may reach this area.  The Inner Hebrides and Minches SAC was screened out of the assessment at the Screening stage as the site is not within a Marine Mammal Management Unit (MMM) for harbour porpoise which intersects the IOSEA6 Study area (i.e. authorisations).
	<b>NIS comment:</b> We note that the NIS recommends that for potential projects to avoid LSE, further detailed assessment will be required and consideration given to the specific implementation of the mitigation measures outlined in the draft Plan. We have no further comments to make.	Noted.
Historic Environment Scotland	<b>Plan comment:</b> We understand that the purpose of this plan is to provide a framework for the issuing of petroleum authorisations in Irish Offshore Waters. We can confirm that we have no comments to offer on the plan itself.	Noted.
	<b>ER Comment:</b> We note from Appendix C.4 Cultural, Architectural & Archaeological Heritage that it has been your consideration that transboundary effects on the historic environment in Scotland as a result of the plan are unlikely and therefore not significant. In light of this potential effects on Scotland's historic environment have not been considered in the assessment. We agree with this and therefore have no further comments to offer.	Noted.

Consultee	Summarised Comment	Response
Natural England	<b>Plan comment:</b> The Plan provides a clear demonstration of proposed activities that may be required through to 2030, through an expected period of declining need for oil and gas and in line with Irish Government's commitment to end issuing new petroleum authorisations for exploration and extraction of oil and gas. We note the objectives of the plan and from our perspective believe that the relevant consideration towards the marine and coastal environment is provided. We would like to highlight our support to the positive climate action the Irish Government's overarching commitment supports. We have no further comments to provide on the Plan at this time.	Noted.
	<b>NIS comment:</b> Natural England provided comments on the Stage 1 screening assessment in April 2022 and acknowledge that our advice on inclusion of certain sites was taken onboard.	Noted.
	<b>NIS comment:</b> The NIS identifies the potential for LSE for some English Transboundary SACs from seismic survey and drilling activities. Whilst we acknowledge and welcome this precautionary approach we advise that you should reconsider the assessment as some of the English sites do not have the qualifying features that have been identified in Table 5-2	Species that have been incorrectly listed as Qualifying Interests will be removed and sites reassessed for potential adverse effects on conservation objectives.
	<b>NIS comment:</b> We welcome the modelling undertaken to identify the potential oil spill shoreline impact on protected sites and this is visually well presented for ease of the reader. We agree with the precautionary approach that identifies LSE for the English sites with respect to potential impact from an accidental event. We welcome the mitigation measures highlighted within section 6.3 and the statement that highlights that this should be reassessed at project level.	Noted.
	<b>General comment:</b> Natural England would welcome sight of any relevant Oil Pollution Emergency Plan where consideration of English waters and protected sites is required. Natural England are a statutory consultee for the Maritime and Coastguard Agency and any consultations that require advice on Oil Pollution Emergency Plan (OPEPs) should be directed to our main consultations hub.	Noted.
	<b>NIS comment:</b> The proposed mitigation measures identified in Section 6 provide a clear list of measures that will be embedded in projects and this will help to ensure consistency.	Noted.
	<b>ER comment:</b> We previously advised that the SEA should incorporate information on other protected sites in English waters namely Marine Conservation Zones (MCZs) and Ramsars, the response from your authority indicates that they would be included within the SEA, however, we cannot see these sites referenced in the SEA. Clear reference to other protected sites at the Plan level would be helpful to guide further project level assessments should those come forwards with potential implications on protected sites in English waters.	Transboundary MCZs were include within Appendix C, Section C.2.6.2. Ramsar sites are included within Appendix C, Section C.2.6.4.

Consultee	Summarised Comment	Response
JNCC	<p><b>NIS comment:</b> JNCC does not agree that foraging ranges are not an appropriate screening tool, as stated in Table 4-1 Response to NatureScot comments on use of foraging range for LSE screening. For species with large foraging ranges there is the potential for impact and therefore LSE cannot be ruled out.</p>	<p>Due to the Plan level assessment (large study area, large number of sites and species) it was not considered appropriate to use this form of screening. However it is agreed that this approach is suitable at Project level.</p>
	<p><b>General comment:</b> The Plan does not preclude for all annual allowable seismic surveys and or all 3 wells to be drilled simultaneously in an important areas at a sensitive time of the year. Such as scenarios requires consideration.</p> <p>It is not appropriate for delegation to Project level where a reasonable assessment could be made at Plan level i.e. there is scope for the Plan to apply limitations on timings or seasonal restrictions or the total number or extent of activities in in certain locations, should Appropriate Assessment show this to be necessary.</p>	<p>This scenario is not viewed as a potential scenario that could occur during the time period of the plan, based on the Activities which took place during the duration of previous IOSEAs.</p> <p>In the event that this situation would occur, then the activities would result in the appropriate environmental assessment being undertaken.</p>
	<p><b>NIS comment:</b> Section 5.1.2.2. seems to make an assumption of only one vessel operating in an area, and that single passes would occur. However, ER section 4.2 states a maximum of 2 vessels for seismic surveys, with the typical time for a seismic survey being four weeks. typical survey parameters could be used to give a high-level assessment of disturbance risk.</p> <p>We agree that slower moving vessels appear to be less disturbing, but conversely, they are likely to be present in an area for longer.</p>	<p>Noted. During a survey one vessel would undertake the seismic data acquisition, with support from smaller support vessel (on occasions). This additional vessel will not have a noticeable impact on visual disturbance given background levels. This impact will be considered at project level (where relevant).</p>
	<p><b>NIS comment:</b> Whilst Section 5.1.2.2. comments on disturbance, the NIS makes no mention of the potential for attraction. This is particularly relevant to Manx shearwater and petrel species. While it is unlikely to lead to significant adverse impact at a population scale. Mitigation measures proposed.</p>	<p>Suggested additional mitigation have been added into Annex II of the Plan.</p>

Consultee	Summarised Comment	Response
	<p><b>NIS comment:</b> The Irish Sea Front SPA and sites classified for non-breeding species were screened into Appropriate Assessment for impacts from accidental release (Table 3-4), but don't seem to have been considered further in Section 5.2.9.4.</p> <p>Potential oil spill shoreline impact on SPAs is discussed on page 45 but does not include any offshore SPAs. Section 5.2.9.4 discusses potential offshore impacts on seabirds but there is no reference to specific sites or species that may be in high densities etc. Data and maps presented in ER section 4.3.1 could have been presented here to illustrate risk and to inform whether Adverse Effects On Integrity can be ruled out for all sites under consideration.</p>	While not explicitly stated impacts on offshore SPAs (and SAC) were assessed. Due to the Plan level assessment and number of variables it was concluded that a large oil spill could have significant impact on seabirds without mitigation. It is noted that the inclusion of the data for probability of surface sheen (from the ER) could have been used to support the NIS.
	<p><b>NIS comment:</b> We would expect to see survey specific noise modelling being carried out as part of the licensing process to determine the minimum distance at which Permanent Threshold Shift could occur from the air guns (pg 34).</p>	Noted. Noise modelling will be undertaken at Project level where required.
	<p><b>SEA comment:</b> Key activities are described but these do not provide detail on more specific survey methodology (e.g. speed, transect vs grid etc.) as these will exert different pressures and should be taken into consideration when assessing impacts.</p>	Detailed survey methodology has not been established at this stage. The impacts will be assessed in greater detail at Project level.
	<p><b>SEA comment:</b> Cumulative impact conclusion (Section 4.8.4) - We are of the view that a reasonable assessment of certain worst-case scenarios could be undertaken at the Plan level, and the draft Plan amended accordingly should mitigation be required. As stated above, this should not be delegated to Project level, which should only be concerned with the detail of each project and not the Plan as a whole. If the Plan is approved, Project level assessments cannot retrospectively ensure that the Plan will have no adverse effects on the integrity of any relevant site.</p>	Due to uncertainties in the individual Project's definition at this stage it is determined that the implementation of the proposed mitigation measures (as necessary at Project level) should lead to no residual effect; however it is noted that this conclusion needs to be deferred to the Project level.
	<p><b>SEA comment:</b> We would suggest that if the SCANS surveys are to be used as data sources to inform the baseline assessment, that SCANS III (Hammond et al. 2017) is used preferentially over SCANS I &amp; SCANS II, owing to it being a more recent survey.</p>	Noted.

Consultee	Summarised Comment	Response
	<b>SEA comment:</b> We note that very little consideration, if any, has been given towards the possibility of underwater explosives (UXO) clearance. High-order UXO clearance (or detonation), may have an effective deterrence range (EDR) of 26km for harbour porpoises (JNCC, 2020). We would therefore recommend that consideration is given to the potential for UXO clearance being required.	This potential pressure will be considered in more detail at Project level.
DAERA NI	<b>SEA comment:</b> The layout and content of the Environmental Report is well laid out and easy to follow. DAERA SEA Team is content that the environmental report and the process of consultation follow the SEA Directive.	Noted.
	<b>ER Comment:</b> We are content that the mitigation measures proposed within the ER, namely that discharge of chemicals is controlled through DECC consenting procedures and safety procedures within, and that monitoring of the project level operations is undertaken, will not significantly affect Northern Ireland habitats or species.	Noted.
	<b>ER Comment:</b> It is unlikely, given the distance from the locations of oil and gas drilling activities, that the plan will have any significant effects on protected or priority species or habitats within Northern Ireland.	Noted.
	<b>NIS Comment:</b> We are content that given the distance involved, the closest Northern Ireland site, located 220.8km from the nearest exploration and drilling site, is unlikely to have an impact on the selection features of sites, listed within NIS.	Noted.
	<b>NIS Comment:</b> We note that modelling has been undertaken on accidental releases from drilling sites which shows that the likelihood of any such release reaching a Northern Ireland designated site as being less than 5%. Given the low risk and the distance involved Natural Environment Division is content that the plan is unlikely to have a significant impact on Northern Ireland designated sites.	Noted.
	<b>NIS Comment:</b> There is a typo on p46, Irish sites are listed on Table 5-4 and UK sites on Table 5-5, not table 5-3 and 5-4 as stated in the text. Additionally, on p52 the text should read Table 5-6 and 5-7 for the assessment of LSEs and not Table 5-3 and 5-4 as stated.	Noted, this will be amended.
Donegal County Council	<b>Plan comment:</b> The Council and its partners in the region, recognise the potential renewable energy resource in offshore waters as a viable alternative to oil and gas exploration.  To enable a timely response by the county and the region to facilitate the development of a sustainable energy resource to help meet national energy requirements and generate energy for export, the Council considers that the Draft Plan should clearly reference the shift towards offshore renewable energy resources and support the	This plan sets out the proposed approach to the issuing of petroleum authorisations in Ireland, and the consideration of the possible offshore exploration activities that could take place under such authorisations.

Consultee	Summarised Comment	Response
	sustainable energy generation opportunities in our offshore waters as a nationally important alternative to petroleum exploration and production.	DECC is also working on the Offshore Renewable Energy Development Plan II (ORED II), Ireland's first national-level spatial strategy for the offshore renewable energy (ORE) sector led by Government. It replaces the first Offshore Renewable Energy Development Plan (ORED I), and provides a high-level framework to support and guide the long-term, sustainable and planned development of Ireland's ORE resource, taking account of all maritime sectoral needs, including fishing, economic activity, biodiversity, shipping, tourism, etc. The draft ORED II outlines an approach to identifying the most suitable broad areas in our maritime space for offshore renewable energy development in the long-term.
Meath County Council	<b>General comment:</b> The areas identified for exploration are at significant distance from Co. Meath	Noted.
	<b>Plan comment:</b> It is noted that the mitigation Annex II of the Plan does not include all of the mitigation listed in the NIS. It is recommended that Annex I and II are combined in the Plan to reflect one list of mitigation with an additional column included to identify whether it originated from SEA, AA or both assessments.	The chapter on mitigation measures has been updated.
	<b>Plan comment:</b> It is recommended that operators be required to have qualified and experienced environmental officers with responsibility for implementation of all mitigation measures at project level, if not already part of the authorisation standard list of requirements.	Noted.
	<b>ER comment:</b> Section 4.7.12.5 of the SEA ER (Atmospheric emissions) refers to the worst-case scenario for Preferred Option A, namely 15 wells drilled on an annual basis from both seismic survey (20,603 tonnes CO <sub>2</sub> equivalents) and drilling (213,220 tonnes CO <sub>2</sub> equivalents) activities in the IOSEA4 area. This amount to	This is considered out of scope of the plan, but would be a consideration if an application to develop a

Consultee	Summarised Comment	Response
	233,933 tonnes CO <sub>2</sub> equivalent, which equates to 0.4% of the total annual Irish emissions for 2021. Considerations should be given to including (if feasible) an estimate (low/medium/high) of the GHG emissions that could be emitted, should a discovery of petroleum be declared commercial under a Petroleum Lease and result in the eventual burning of petroleum.	commercial discovery were made, which would be subject to an EIA and AA at the Project Level.
	<b>ER comment:</b> Plans, Programmes and Policy Review (Appendix A) of the Environmental Report should be updated. Note that Regional Planning Guidelines (2010-2022) for the South-East, South-West and Greater Dublin Area were superseded by Regional Spatial and Economic Strategies for the Southern Region, Northern and Western Region and Eastern and Midland Region (2019/2020). These plans are framed within the context of the National Planning Framework 2021-2027.	Noted.
Louth County Council	<b>General comment:</b> Council wishes to ensure that there is adequate consideration given to maritime traffic management.	This is considered at a project level as, there is a number of prescribed bodies which are required to be notified of upcoming activities by those undertaking the activity, including those responsible for maritime traffic management.
	<b>General comment:</b> Council welcomes the mitigation measure identified in respect of the appointment of a Fisheries Liaison Officer and emphasises the importance of honest, open communication with all commercial fisheries operators that may be affected by the Plan and/or subsequent authorisations.	Noted.

**Table 3-3 Industry comments on the SEA Environmental Report and Plan**

Consultee	Summarised Comment	Response
EDF Renewables (EDFR)	<b>General comment:</b> We support the positive steps taken by DECC in implementing the policy frameworks necessary to unlock Ireland's vast renewable energy potential.	Noted.
	<b>General comment:</b> It is not clear that enough evidence has been provided to demonstrate a substantive commitment to Climate Change mitigation, particularly in terms of displacing fossil fuels with renewable energy.	The objectives of this plan are to inform specific environmental considerations in petroleum

Consultee	Summarised Comment	Response
	<p><b>Plan comment:</b> We would therefore recommend that the DECC reviews how the SEA takes appropriate account of the National Climate and Environmental Policies. These include goals of enabling the development of renewable energy in Ireland, and safeguarding the environment and biodiversity, in line with its national policy commitments.</p>	<p>activities taking place under both existing petroleum authorisations and any follow-on authorisations that may be granted under the current policy and legislative framework, and to provide petroleum authorisation holders with an operational baseline against which they can conduct activities whilst ensuring the protection of the marine environment, in line with current best practice and lessons learned from previous IOSEAs.</p> <p>DECC is also working on the OREDP II, Ireland's first national-level spatial strategy for the ORE sector led by Government. It replaces the first Offshore Renewable Energy Development Plan (ORED I), and provides a high-level framework to support and guide the long-term, sustainable and planned development of Ireland's ORE resource, taking account of all maritime sectoral needs, including fishing, economic activity, biodiversity, shipping, tourism, etc. The draft OREDP II outlines an approach to identifying the most suitable broad areas in our maritime space for offshore renewable energy development in the long-term.</p>



Consultee	Summarised Comment	Response
	<b>ER comment:</b> The ER identifies that underwater noise can cause death, injury and disturbance to marine mammals. In principle mitigation measures are available to reduce these various categories of impact to acceptable levels, but there is no reference in the SEA to the need for mitigation measures to be identified and implemented. This is concerning.	Mitigation is suggested which mitigates against underwater noise.
	<b>General comment:</b> There is a shortfall in what we would expect to see, in terms of Ireland's international commitments to Biodiversity, in the assessment and proposals set out in the IOSEA6. IOSEA6 identifies that the proposed licensing plan will impact European Climate Law, Regulation 2021/1119, which requires oil and gas licensing to meet the general aims to reduce greenhouse gas emissions. The European Green Deal (2019) will also be impacted, which requires oil and gas licensing to meet the general aims to reduce greenhouse gas emissions and take into account any relevant initiatives for climate and energy. However, IOSEA6 does not explain how or if these impacts will be addressed.	The current Government policy Petroleum Exploration and Production is a part of Ireland's 2021 Climate Action Plan, which set out to achieve a 51% reduction in overall greenhouse gas emissions by 2030 and setting us on a path to reach net-zero emissions no later than 2050.
	<b>General comment:</b> EDFR are concerned that the expansion of offshore drilling and exploration activities may have the potential to displace future renewable energy projects. We would urge the Department to ensure that the exploration activities, as proposed, do not prevent or restrict offshore renewable electricity projects from being developed in Irish waters. EDFR recommends that the Government carries out a much more detailed assessment of the potential interaction between petroleum exploration and production in Irish offshore waters and future offshore wind projects.	Under this plan, only existing authorisations that have been in place before August 2019 would be allowed to progress to a natural conclusion, as new Petroleum Authorisations will no longer be issued.
EnerGeo Alliance	<b>Plan comment:</b> The progression through the licensing stages for those oil and gas operators holding existing authorisations is welcomed, and as noted within the Draft Plan seismic surveys are an integral part of any potential developments.	Noted.
	<b>General comment:</b> Founded in 2004, the Sound and Marine Life Joint Industry Programme (JIP) regularly funds independent studies that are published in peer reviewed literature. An extensive list of independently reviewed published literature supported by JIP funding.	The JIP Database was used to collate papers which were used in the NIS and SEA.
	<b>Plan comment:</b> It is worth noting that in light of technological advancements in source technology and acquisition techniques, it would be beneficial to ensure that measures contained within guidance are proportionate and based on both the best available science, and up to date information on the best available technology. Therefore, a review of the mitigation within the Plan may be warranted in due course.	As the Plan is time bound until 2030, with the expectation that a new plan would be drafted after 2030. It would be intended that the process

Consultee	Summarised Comment	Response
		of developing a new plan, that is subject to the same SEA and AA process, would include a review of the environmental monitoring measures proposed in IOSEA6.
	<b>General comment:</b> EnerGeo Alliance, in collaboration with members have developed and published comprehensive voluntary 'Guidance for Estimating and Reporting Greenhouse Gas (GHG) Emissions' for marine geoscience survey activities. The guidance provides a methodology to measure and reduce GHG emissions throughout the entire value chain of the energy geoscience industry. The emissions guidance follows the Greenhouse Gas Protocol convened by the World Resources Institute and the World Business Council for Sustainable Development.	Noted. This Guidance is known to DECC and it is acknowledged that operators are likely to implement this in due course.
	<b>NIS comment:</b> The Impact Statement provides a balanced review of the literature relating to the potential impacts of underwater sound on marine species, including both fish and marine mammals. EnerGeo concurs with the conclusion that the disturbance effects to fish species from a transient and brief activity are also likely to be brief and therefore not significant. Additional data research paper provided to support conclusions.	Noted.
	<b>General comment:</b> The localised disturbance of the seabed is noted as a concern within Scoping Report Appendix C, in relation to the deployment of ocean bottom seismic systems. Such systems are generally deployed very precisely using Remotely Operated Vehicles or ropes. In each case, seabed disturbance is minimal, as the instruments themselves are highly sensitive and lightweight. Through the use of Remotely Operated Vehicles and automated systems for precise placement, the risk of disturbance is minimised considerably.	Noted.
	<b>ER Comment:</b> We believe that the recommendation for Option A is not representative of the overall findings that seismic surveys in particular do not compromise the strategic environmental objectives stated within the Report. As seismic surveys are an essential tool in planning for exploration wells, it would be sensible to disassociate seismic and wells within the permissible totals under each of the options presented, as collecting more seismic data may enable fewer wells to be drilled based on the enhanced understanding of the subsurface through the acquisition of data. We would therefore urge not only Option B to be the most prudent in terms of facilitating relevant data collection to inform the cycle of exploration and production for those operators with an existing authorisation, but that no arbitrary limits be placed on the quantity of seismic survey data acquisition.	Noted.

Consultee	Summarised Comment	Response
	<b>NIS Comment:</b> EnerGeo Alliance concurs with the findings of the Impact Statement, noting the balanced literature review and pragmatic finding that the potential impacts from seismic surveys are not significant, and well managed using established mitigation measures.	Noted.

**Table 3-4 Public comments on the SEA Environmental Report and Plan**

Public Observation	Summarised Comment	Responses
PO1	<b>General comment:</b> Suggestions provided on how to implement and consent offshore windfarms.	The comments provided were not relevant to the content and objectives of the Plan.
PO2	<b>ER comment:</b> Ireland's petroleum exploration policy (DECC, 2022) has ended the issuance of new petroleum exploration and extraction licences but continues to progress with current licences. While two options were examined the zero-alternative was not considered.	The ceasing of issuing authorisations is not a viable option and does not support current Policy Statements.
	<b>General comment:</b> Various EU targets and Obligations are presented.	DECC are aware of the targets and obligations and note that renewable energy will be the main source of energy in the near future, however, there is still a short term need to examine Ireland's offshore hydrocarbon resources, hence there is a requirement for a revised plan for issuing authorisations.
	<b>General comment:</b> Information presented on negative impacts of petroleum exploration. Including impacts on biodiversity, fishing industries and GHG emissions.	Noted. The impacts of oil and gas activities are well known and the sector is stringently regulated to ensure the environment is protected.

Public Observation	Summarised Comment	Responses
	<b>General comment:</b> Information presented on benefits of offshore renewable energy and how stopping offshore drilling reduces emissions over time.	Noted. DECC acknowledges that that renewable energy will be the main source of energy in the near future.
	<b>General comment:</b> While the energy crisis needs to be addressed, continuing with O&G exploration is not a sustainable and responsible use of Ireland's maritime resource. Recommendation to Change Ireland's petroleum exploration policy to revoke all exploration licenses while continuing with current gas production.	This would not fall under the scope of the Plan, which is to inform DECC specific environmental considerations in petroleum activities taking place under both existing petroleum authorisations and any follow-on authorisations that may be granted under the current policy and legislative framework.

## 4. THE REASONS FOR CHOOSING THE PLAN IN LIGHT OF OTHER REASONABLE ALTERNATIVES

SEA requires the consideration of reasonable alternatives. While DECC consider that renewable energy will be the main source of energy in the near future, there is still a short term need to examine Ireland's offshore hydrocarbon resources, hence the requirement for a revised plan for issuing authorisations. The 'no plan' Option was not considered a reasonable alternative due to requirement to bridge the gap between use of fossil fuels and transiting to renewable energy. As such, the 'no plan' alternative was not considered in the SEA.

The continuation of the level of activities as permitted under the previous Plan (i.e. maximum of 10 wells per annum, 25,000km<sup>2</sup> of 2D seismic survey per annum and 20,000km<sup>2</sup> of 3D seismic survey per annum) was not consistent with DECC's policy approach and legislation, therefore, was not a realistic alternative. Cessation of issuing authorisations is also not a viable option. Therefore two different Options were developed based on level of activity, both number of wells permitted and amount of seismic survey work. Both Options are a significant reduction in the volumes of activities permitted under the Previous Plan.

It is also recognised that the actual volumes of activities may be lower than these upper limits. The amount of seismic survey and exploration wells undertaken during the period 2015-2020 (which was subject to IOSEA5) was less than the maximum permitted by the Plan. Over the entire duration of the IOSEA5 Plan (i.e. in the period 2015-2020), there was a sum total of three wells drilled, 15,533.5km<sup>2</sup> 2D seismic acquisition and 20,695km<sup>2</sup> 3D seismic acquisition.

### 4.1 SEA Findings for the Final Plan

The assessment of the alternative Options was undertaken against a number of SEA objectives (SEOs). These were kept broad to allow for a wide range of environmental topics to be considered. The SEOs specify the desired direction of change (e.g., reduce impacts on water quality, promote green economy). The environmental assessment determined that both Options mostly supported or had neutral contributions to the SEOs. The assessment was split separately for seismic and drilling activities as both result in different environmental effects. There were several times where the drilling activity could detract from the SEO. These were in relation to hydrocarbon spill (e.g. well blowout) that could lead to the potential for negative effects on the SEOs and receptors.

Assessment of the likely significant environmental effects of the two options concluded that there is the potential for negative effects on *Air Quality, biodiversity, Flora and Fauna, Climatic Factors, Economy and Material Assets, Landscape and Seascape, Population and Human Health and Water* from implementation of the Plan. These potential effects on the SEA topics resulting from seismic and drilling activities are summarised below:

- **Air Quality:** Significant reduction in air emissions than under the Previous Plan due to reduction in the extent of permitted seismic survey and drilling activity.
- **Biodiversity, Flora and Fauna:** Potential negative effects on biodiversity, flora and fauna could include underwater noise during seismic survey, contaminated cuttings discharge and chemical/mud/cement/cuttings discharge, disturbance of marine mammals and birds due to presence of vessels and helicopters, habitat disturbance and impact to benthos through anchoring or placement of equipment on the seabed and drilling and disturbance of birds due to flaring. An

accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on biodiversity, flora and fauna in local and transboundary waters.

- **Climatic Factors:** Significant reduction of volume of activities than under Previous Plan, therefore minimising impact on climate change.
- **Cultural, Architectural & Archaeological Heritage:** Minimal negative effects predicted on submerged cultural heritage due to physical damage from drilling operations and seismic surveys.
- **Economy and Material Assets:** Could be some minor negative effects on other industries (fishing and other developers) due to exclusions around survey vessels/drilling rigs and conflict of space. An accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on the economy.
- **Geology, substrates and coastal sediments:** Minimal negative effects predicted to seabed due to physical damage from drilling operations. An accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on coastal sediments.
- **Landscape and Seascape:** Seismic surveys and drilling will not impact the landscape/seascape character. An accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on coastal landscape and seascape.
- **Population and Human Health:** An accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on population, although low risk to human health.
- **Water:** Potential for negative effects on water quality due to accidental release of fuel from vessels and chemical discharges from drilling operations and due to release of mud/cement/cuttings into the water column. An accidental oil spill event (e.g. well blowout) could lead to the potential for negative effects on water quality in local and transboundary waters.

In summary, Option A was determined to be the preferred option. This is for the following maximum limits:

**Table 4-1 Maximum levels of activity permitted under the Plan**

Activity	Maximum over duration of plan	Maximum in any one year
Wells drilled	15	3
2D seismic survey acquired	8,000km	2,000km
3D seismic survey acquired	4,000km <sup>2</sup>	1,000km <sup>2</sup>

The selected Option provides a significant reduction in the extent of permitted seismic survey activity, with a 92% reduction in 2D and 95% reduction in 3D seismic survey activity per year, compared to the Previous Plan. It also permits significantly less exploration wells to be drilled than under the Previous Plan with a 70% reduction per year. This reduction in the level of activities minimised the likely significant effects on the environment and supports the most SEO's.

Cumulative and synergistic effects were also considered. Cumulative effects could arise from the combined effects of oil and gas exploration activities and other plans and activities within the area. Synergistic effects could arise from interactions between activities leading to a greater overall effect than the sum of the individual effects. Activities and developments that were considered included Offshore Renewable Energy (ORE) project site investigations, construction, operation activities, fisheries, aquaculture, seaweed harvesting, marine aggregates and mining, port and harbour developments, tourism and recreation, cable installations, wastewater treatment & disposal sites,

general shipping and other O&G activities such as geo-technical/geo-physical survey and drilling production wells.

The assessment found that development of the other large projects (such as ORE) and activities permitted by the draft Plan could lead to cumulative negative effects on all SEA topics. It is likely that good planning and timing of works will minimise the potential for negative cumulative and in-combination effects.

These potential cumulative effects on the SEA topics are summarised below:

**Table 4-2 Potential Cumulative Effects of the Plan**

SEA Topic	Description of total effects of the plan
Air Quality	<b>Atmospheric emissions:</b> Use of fuel for vessels for activities related to oil and gas exploration activities, fishing, shipping, and ORE surveys causes release of SO <sub>2</sub> and NO <sub>x</sub> which can cause cumulative impacts on air quality.
Biodiversity, Flora and Fauna	<p><b>Underwater sound changes and the subsequent effects on birds, fish and marine mammals:</b> Noise generated from air guns during seismic surveys have the potential to impact marine mammals.</p> <p><b>Disturbance to the seabed:</b> Loss and damage on non-designated but important habitats and species</p> <p><b>Atmospheric emissions:</b> Impact of climate change, i.e. shifting baselines of certain species due to increase in temperature, e.g. phytoplankton are sensitive to temperature change which can increase harmful algal blooms.</p> <p><b>Physical presence:</b> There is the potential that seabirds and marine mammals may be physically disturbed by the presence of survey vessels and equipment. Both visual and noise disturbance may result from the presence of the vessels and equipment whilst noise disturbance is likely to be the most significant cause of disturbance during borehole operations</p> <p><b>Accidental events:</b> Loss and damage on non-designated but important habitats and species</p>
Climatic Factors	<b>Atmospheric emissions:</b> Increase in greenhouse gas emissions can result in sea level rise, pH level decreasing and rise of sea surface temperature.
Cultural, Architectural and Archaeological Heritage	<p><b>Disturbance to the seabed:</b> May result in minor impacts where releases occur in close proximity to historic wrecks both known and unknown. Currently unquantifiable due to lack of information on actual well locations and proximity to historic wrecks. Notable that historic wrecks may also act as a contaminant and release chemicals and dangerous substances into the marine environment.</p> <p><b>Physical Presence:</b> Physical damage can occur from associated vessel/rig anchoring. Additionally, loss of access to submerged cultural heritage can occur through loss of access.</p> <p><b>Accidental events:</b> Potential impacts from hydrocarbon spill on coastal archaeology and historic wrecks, which are primarily associated with smothering and damage from clean-up operations rather than from the spill itself.</p>
Economy and Material Assets (Commercial Fisheries / Aquaculture /	<b>Underwater sound changes and the subsequent effects on birds, fish and marine mammals:</b> Potential for disturbance and displacement of mobile marine life. Therefore, affecting Economy and Material Assets.

SEA Topic	Description of total effects of the plan
Marine-related activities and communities / Tourism and Recreation)	<p><b>The temporary displacement of other marine users (including fishing vessels):</b> If multiple sectors are operating in the same area this can impact mobile species ability to move away from disturbance.</p> <p><b>Disturbance to the seabed:</b> Loss and damage on non-designated but important habitats and species</p> <p><b>Atmospheric emissions:</b> Impact of climate change, i.e. shifting baselines of certain species due to increase in temperature, e.g. phytoplankton are sensitive to temperature change which can increase harmful algal blooms.</p> <p><b>Physical presence:</b> There is potential for interactions between fishing vessels and seismic survey operations. No impacts predicted to aquaculture and tourism due to the offshore location of the oil and gas exploration activities.</p> <p><b>Accidental events:</b> Potential for impact on / death of marine life due to loss of equipment / collision. Potential impacts on receptors if hydrocarbon spill occurs.</p>
Geology, Substrates and Coastal Sediments	<p><b>Disturbance to the seabed:</b> Localised areas of the seabed will be disturbed by drilling which can take place with ORE activities and oil and gas exploration drilling.</p> <p><b>Accidental events:</b> Oil may enter the marine environment during seismic and/or drilling operations as a result an accidental event.</p>
Landscape and Seascape	<p><b>Physical Presence:</b> Potential for negative visual effects which could also affect the Seascape/Landscape character, but likely to be negligible due to the distance from the coast.</p> <p><b>Accidental events:</b> Hydrocarbon contamination from a large event i.e. blowout or from vessel spills can have the potential to effect the quality of the receptors.</p>
Population and Human Health	<p><b>The temporary displacement of other marine users (including fishing vessels):</b> Multiple operations with buffer zones can exclude marine users from certain areas.</p> <p><b>Disturbance to the seabed:</b> Indirect effects of sea water contamination affecting fish/shellfish and then passing into the food chain.</p> <p><b>Atmospheric emissions:</b> Increase in atmospheric emissions contributing to climate change which will indirectly effect populations and human health.</p> <p><b>Physical presence:</b> Potential for death or injury of workers or other users of the sea due to vessel collision.</p> <p><b>Accidental events:</b> A severe hydrocarbon and PAH contamination could lead to direct (e.g. restrictions to activities in the local area) or indirect (e.g. reduced amenity value, impact to water quality or marine life) impacts on recreation and tourism.</p>
Water Quality	<p><b>Disturbance to the seabed:</b> Release of oil and chemicals etc to the water, with a direct effect on the water quality. Impacts on water quality would indirectly impact ecology, recreation value, and also have potential impacts for human health (via food uptake routes).</p> <p><b>Atmospheric emissions:</b> Increase in atmospheric emissions due to cumulative impact from all industries can cause sea surface temperature to rise, changes in salinity and changes in pH levels.</p> <p><b>Accidental events:</b> Release of diesel, chemicals etc. to the water from multiple industries e.g. waste treatment, with a direct effect on the water quality. Impacts</p>



SEA Topic	Description of total effects of the plan
	on water quality would indirectly impact ecology, recreation value, and also have potential impacts for human health (via food uptake routes). If a large scale blowout occurred these effects may be major.

There is inevitably uncertainty in predicting cumulative and synergistic effects and determining their significance due to the strategic nature of this study and the current lack of detailed proposal plans and timelines. In addition, uncertainty can arise due to the variation in natural systems and their interactions, a lack of reliable and up to date information, sufficient scientific agreement regarding cause-effect relationships and the inability to adequately understand and represent complex systems and the potential implications of cumulative and synergistic effects on these systems.

## 4.2 NIS Findings for the Final Plan

In accordance with the precautionary principle the NIS assessed the greater level of activities. The NIS determined that without mitigation there was the potential for LSE for the following identified pressures:

- Underwater noise changes on marine mammals during seismic surveys.
- Hydrocarbon and PAH contamination on marine mammals, fish, seabirds and benthic habitats during exploration drilling activities.

The NIS concluded that application of mitigation measures (identified in Section 9 of the Plan) should be carried out at Project level to avoid LSE for the above impacts. Detailed assessment will be undertaken at project level (as required), to ensure that the Final Plan and consented activities will not adversely affect the integrity of any relevant Natura 2000 sites. With the implementation of the proposed mitigation measures (if necessary at Project level) there is no residual effect; therefore, no in-combination effect is possible.

Continued assessment is required at individual project level to ensure that the Final Plan will not adversely affect the integrity of any relevant Natura 2000 sites in view of the conservation objectives of these sites.

## 5. MITIGATION MEASURES

This section presents a summary of the mitigation measures and how these are linked to the potential environmental impacts identified in the environmental assessment.

**Table 5-1 Measures envisaged for the prevention, reduction and offsetting of any significant adverse effects**

SEA Topic	Issue / Impact Predicted	Mitigation Measure
Air Quality	Impacts of atmospheric emission from combustion from survey vessels, rigs, helicopters and other vessels.	Under the MARPOL Convention and EU law, as applicable in national law, ships may not cause pollution either by discharge to water or emissions to air, when at sea or when at berth in port.  Annex VI of MARPOL covers the prevention of air pollution from ships.
	Impacts of flaring on air quality.	Flaring should only be undertaken when required. Best Available Techniques Guidance on upstream hydrocarbon exploration and production published by the European Commission should be followed.
Biodiversity, Flora and Fauna	Underwater noise impacts on marine mammals and fish from seismic survey and drilling.	Application of mitigation measures listed in Section 4.3.4 in relation to seismic survey and 4.3.2 in relation to Drilling of Guidance to Manage the Risk to Marine Mammals from Man-made Sound Sources in Irish Waters (DAHG, 2014).
		Under Annex IV of the EU Habitats Directive 92/43/EEC cetaceans are listed as requiring strict protection. Therefore seismic surveys should screen for potential impact to Annex IV species and where necessary Appropriate Assessment will be undertaken.
	Effects of accidental spills on flora and fauna (including birds, fish and marine mammals), habitats and designated sites.	DECC will act as a central coordinator of seismic activity which will also include surveys carried out under Marine Scientific Research provisions on the Irish Continental Shelf. The 100 km separation distance is a standard condition of all survey approvals.  Design / implementation of schemes should minimise disturbance to biodiversity as well as wildlife protection measures.  Control measures and shipboard oil pollution emergency plans (SOPEP) will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.

SEA Topic	Issue / Impact Predicted	Mitigation Measure
		Implementation of an OPEP / Oil Spill Contingency Plan (OSCP). These are designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects.
	Visual disturbance of marine mammals and birds due to presence of vessels and helicopters.	<p>Under Annex IV of the EU Habitats Directive 92/43/EEC cetaceans are listed as requiring strict protection. Therefore seismic surveys should screen for potential impact to Annex IV species and where necessary Appropriate Assessment will be undertaken.</p> <p>Surveys could be undertaken to determine European Protected Species (EPS) and basking sharks presence in areas where development is proposed.</p> <p>Lighting on-board the vessels will be kept to the minimum level required to ensure safe operations. This will minimise disturbance to seabird species without compromising marine navigation requirements and health and safety of offshore workers.</p> <p>Vessels will be travelling at a slow speed during works to minimise impacts of disturbance.</p>
	Disturbance of birds due to flaring.	Flaring should be minimised as much as is practically possible in order to reduce the potential for adverse impacts on seabird populations
	Collision above and below water with static or moving objects on marine mammals	Vessels will be travelling at a slow speed during works to minimise the risk injury impacts to marine mammals.
	Habitats disturbance and impact on benthos due to anchoring or placement of equipment on the seabed and drilling.	<p>Seabed habitat information should be obtained, using surveys if necessary, prior to any deployment in order to assess the potential for damage, and deployment on the most sensitive habitats should be avoided. The European Communities (Birds and Natural Habitats) Regulations provide for the management of Natura 2000 sites and the strict protection of animal species. Any activity carried out under a petroleum authorisation is, therefore, subject to AA Screening/AA as appropriate.</p> <p>Deployment of anchor chains will be kept to a minimum.</p> <p>The consideration of potential impact to the benthic community is a component requirement of the EIA Directive and in the Habitats Directive</p>

SEA Topic	Issue / Impact Predicted	Mitigation Measure
		assessments, where there is existence of benthos.
		Appropriate site assessment and planning, to include determination of the location of any potentially sensitive benthic habitats, along with modelling and assessment of the potential for accumulation and dispersal of cuttings, should be carried out prior to selection of final drilling locations in order to reduce the potential for significant impacts.
	Control and management of alien species and invasive species.	Ballast water discharges from vessels will be managed under International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention).
	Impact on species and habitats due to contaminated cuttings discharge and chemical/mud/cement/cuttings discharge.	Discharge of chemicals is controlled through DECC consenting processes for use and discharge of chemicals in connection with O&G activities, in accordance with relevant OSPAR Decisions, Agreements and Recommendations.
Climatic Factors	Atmospheric emissions of greenhouse gases from combustion from survey vessels, rigs, helicopters and other vessels.	All petroleum activities, under an exploration licence or petroleum prospecting licence, including seismic surveys are subject to the requirements of the European Communities (Environmental Impact Assessment) (Petroleum Exploration) Regulations 2013 as amended and European Union (Gas Act 1976) (Environmental Impact Assessment) regulations 2021 with respect of EIA.
Economy and Material Assets	Indirect effects on economy due to accidental spills.	<p>Control measures and SOPEP will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.</p> <p>Implementation of an OPEP / OSCP. These are designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects.</p> <p>As per the MARPOL 73/78 requirement under Annex I, all ships with 400 GT and above must carry an oil prevention plan as per the norms and guidelines laid down by International Maritime Organization under MEPC (Marine Environmental Protection Committee) act.</p> <p>Production of this plan will help to ensure that the potential for release of pollutants from</p>

SEA Topic	Issue / Impact Predicted	Mitigation Measure
		construction, operation and decommissioning is minimised.
		Notification to the Irish Coast Guard if the activity occurs within or near an International Maritime Organisation (IMO) designated Traffic Separation Scheme. Employ the safety measures detailed in 'traffic routing systems' (IMO) wherever possible to reduce the probability for collisions.
	Disturbance effects on fishing industry due to exclusion zones around survey and drilling operations.	A Fisheries Liaison Officer (FLO) will be employed to manage interactions between vessels, personnel, equipment and fishing activity. This will be managed through the Fisheries Liaison Mitigation Action Plan.
		Notification to fishing vessels and the Sea Fisheries Protection Authority and DECC of the location and timing of seismic surveys and drilling operations. The notices include the time and location of any work being carried out, and emergency event procedures.
	Effects on other marine users such as shipping industry, offshore renewable energy projects and military e.g. conflicts of space.	Notice to Mariners (including local), Kingfisher bulletins, Radio Navigational Warnings, NAVTEX, and/or broadcast warnings will be promulgated in advance of any proposed works. The notices include the time and location of any work being carried out, and emergency event procedures.
Geology, substrates and coastal sediments	Effects on coastal sediments due to accidental spills.	Control measures and SOPEP will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.
		Implementation of an OPEP / OSCP. These are designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects.
Landscape and Seascape	Effects on coastal landscape due to accidental spills.	Control measures and SOPEP will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.
		Implementation of an OPEP / OSCP. These are designed to assist the decision-making process during an oil spill, indicate what resources are

SEA Topic	Issue / Impact Predicted	Mitigation Measure
Population and human health	Effects on population due to accidental spills.	required to combat the spill, minimise any further discharges and mitigate its effects.
		Control measures and SOPEP will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.
Water	Impacts on water quality due to routine vessel discharges.	Implementation of an OPEP / OSCP. These are designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects.
		Vessels will be equipped with waste disposal facilities (sewage treatment or waste storage) to IMO MARPOL Annex IV Prevention of Pollution from Ship standards.
	Impacts on water quality due to release of chemicals/mud/cement and cuttings to the water column.	Compliance with all OSPAR Agreements, Recommendations, Strategies, Decisions and Guidelines and MARPOL legislation relating to protection of the marine environment from the potential effects of discharges.
		To use best practice technologies to reduce the concentrations of chemicals discharged,
		Use and discharge of least harmful chemicals to the marine environment, including those on the OSPAR list of Substances/Preparations Used and Discharged Offshore which are Considered to Pose Little or No Risk to the Environment (PLONOR) in all drilling operations wherever possible.
		Zero discharge of chemicals on the OSPAR List of Chemicals for Priority Action (LCPA).
		To reduce usage by the best means practicable of chemicals on the OSPAR List of Substance of Possible Concern.
		All drilling operations to ensure compliance with Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
		Utilisation of Oil-Base Muds (OBM) or Synthetic Based Muds (SBM) to be kept to a minimum and all OBM or SBM to be collected through closed system and brought ashore for re-use, recycling or disposal.
		Ensure minimal use of chemicals where biodegradation is less than 20% during 28 days, and specify use of substances that meet the

SEA Topic	Issue / Impact Predicted	Mitigation Measure
		<p>Persistent, Bioaccumulative and Toxic (PBT) criteria. Both of these measures are used by OSPAR as criteria to assess improvement in the industry over time.</p> <p>All chemicals used on drilling units must have prior approval according to a system in which chemical formulation is continually reviewed and revised to eliminate or minimise harm to the environment through factors such as toxicity and bioaccumulation.</p>
	Impacts to marine waters and the foreshore from accidental spills.	<p>An Emergency Spill Response Plan will help to ensure that the potential for release of pollutants from vessels and rigs is minimised. Production of this plan will help to ensure that the potential for release of pollutants from construction, operation and decommissioning is minimised.</p> <p>As per the MARPOL 73/78 requirement under Annex I, all ships with 400 GT and above must carry an oil prevention plan as per the norms and guidelines laid down by International Maritime Organization under MEPC (Marine Environmental Protection Committee) act.</p> <p>Implementation of an OPEP / OSCP. These are designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects.</p> <p>Any oil spill, however small, must be reported immediately to the Irish Coast Guard. The level and manner of the required oil spill response will be overseen by the Irish Coast Guard, and determined by the volume and type of oil spilled, and the weather and sea conditions at the time.</p> <p>Any oil spill likely to have impacts in UK waters must be reported by the Irish Coast Guard to the relevant UK authorities. The Irish Coast Guard has a close working relationship with the UK Maritime and Coast Guard Agency (MCA) and the two have a draft Service Level Agreement for co-operation on search and rescue and oil spill response in place. The Irish Coast Guard and the UK MCA also regularly conduct joint search and rescue and oil spill response exercises.</p> <p>Potentially hazardous operations should be carried out under appropriate weather/tide conditions</p>

SEA Topic	Issue / Impact Predicted	Mitigation Measure
	Effects on water quality through release of diesel and chemicals.	<p>Implementation of an Oil Pollution Emergency Plan (OPEP). The OPEP is designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects. An OSCP is required under the Sea Pollution (Amendment) Act 1999, and this requirement is re-stated in the DCENR Rules and Procedures Manual (DCENR, 2014). The OSCP is designed to assist the decision-making process during an oil spill, indicate what resources are required to combat the spill, minimise any further discharges and mitigate its effects. The OSCP must be submitted to the Irish Coastguard for approval.</p> <p>Management of ship waste (mainly oil, hazardous and polluting substances, sewage, garbage and polluting emissions to air) and of all cargo residues must be ensured as required under international (IMO), EU and national law. Under existing provisions ships are obliged to discharge waste and cargo residues at port and ports are obliged to provide facilities for their reception from ships.</p> <p>The crew of the drilling rig/ship should undergo environmental awareness and safety training. All equipment used on the rig/ship should have safety measures built in to minimise the risks of any oil spillage. All operations where appropriate, shall apply best available technologies, best environmental practice and clean technology. This is the aim of the requirement of (DCENR, 2014) for operators to have accredited and verified environmental management systems.</p> <p>Implementation of OSPAR Recommendation 2006/3 to phase out discharge of offshore chemicals that are, or which contain substances identified as candidates for substitution and phasing towards the cessation of these discharges from offshore installations.</p> <p>Control measures and SOPEP will be in place and adhered to under MARPOL Annex I requirements for all vessels. In the event of an accidental fuel release occurring and appropriate standard practice management procedures will be implemented accordingly.</p>



## 6. MONITORING MEASURES

Article 5, Annex 1 (i) of the SEA Directive requires a “description of the measures envisaged concerning monitoring in accordance with Article 10”. Article 10 of the SEA Directive requires that monitoring be carried out in order to identify, at an early stage, any unforeseen adverse effects due to implementation of a plan/policy, and to be able to take remedial action. Monitoring is carried out by reporting on a set of targets and indicators, which enable positive and negative impacts on the environment to be measured.

As this is a high-level national Plan and no significant negative environmental effects are predicted monitoring will focus on Project level activities.

Applications for Approval to conduct activities should be submitted to the Geoscience Regulation Office accompanied by a screening for EIA and AA assessing the potential environmental effects of activities in a specific location.

As part of this process, the operator is also required to provide the Geoscience Regulation Office in DECC the most recent and relevant information of the potential environmental impacts of their proposed activities to ensure that the operations being proposed are not in conflict with the SEA objectives outlined under the draft Plan, while the Geoscience Regulation Office will be responsible for seeking observations from relevant bodies on the details of the application.

DECC is satisfied that under these conditions, alongside the requirement for all applications to comply with international and national conventions, directives and legislation and to apply the best available technologies, best environmental practice, and clean technology, that the monitoring of the activities is accurately captured at the project level of each individual application throughout the life of each such project.

When a project obtains ministerial consent, the operator is required to comply with a list of commitments to ensure environmental protection. DECC will in any event conduct compliance check following conclusion of the project operations. In 2030, should a new plan be initiated, any new SEA process will monitor the effectiveness of the previous SEA.

Following identification of any unforeseen significant adverse effects the Final Plan will be modified to provide remedial actions or mitigation measure to prevent, reduce or offset these effects. This will be undertaken in consultation with other bodies and the public where appropriate.

## 7. CONCLUSION

In conclusion, the Plan has been subject to a process of SEA as required under the S.I. No. 435/2004 - European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (as amended), with the appropriate documents having undergone the necessary public and statutory consultation. The observations and comments from this process have been responded to and, where appropriate, incorporated into the Final Plan.

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