

1 INTRODUCTION AND BACKGROUND

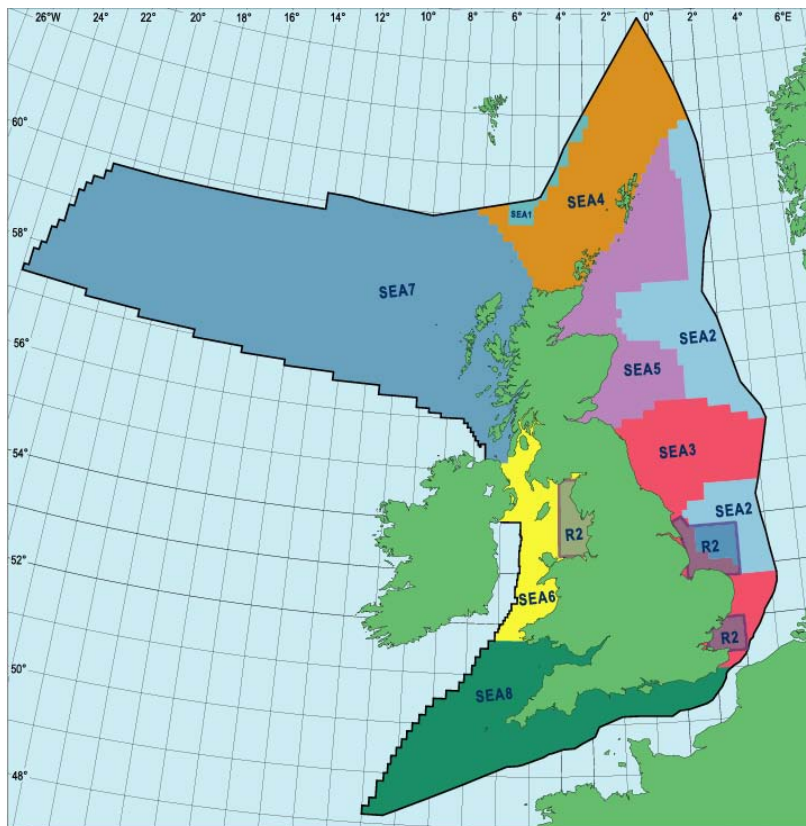
1.1 Introduction

The UK Department of Trade and Industry (DTI) is the principal regulator of the offshore oil and gas industry and has taken a proactive stance on the use of Strategic Environmental Assessment as a means of striking a balance between promoting economic development of the UK's offshore oil and gas resources and effective environmental protection.

Strategic Environmental Assessment (SEA) is a formalised, systematic and comprehensive process through which environmental protection and sustainable development may be considered and factored into national and local decisions regarding government (and other) plans and programmes.

In 1999, the DTI began a sequence of sectoral SEAs considering the implications of further licensing of the United Kingdom Continental Shelf (UKCS) for oil and gas exploration and production. To date four offshore oil and gas licensing SEAs have been completed (marked SEA 1, SEA 2, SEA 3 and SEA 4 on the figure below). During 2003, the DTI also conducted a SEA covering three strategic regions off the coasts of England and Wales (shaded areas marked R2 on Figure 1.1) in preparation for a second round of offshore wind licensing.

Figure 1.1 – DTI Offshore SEAs



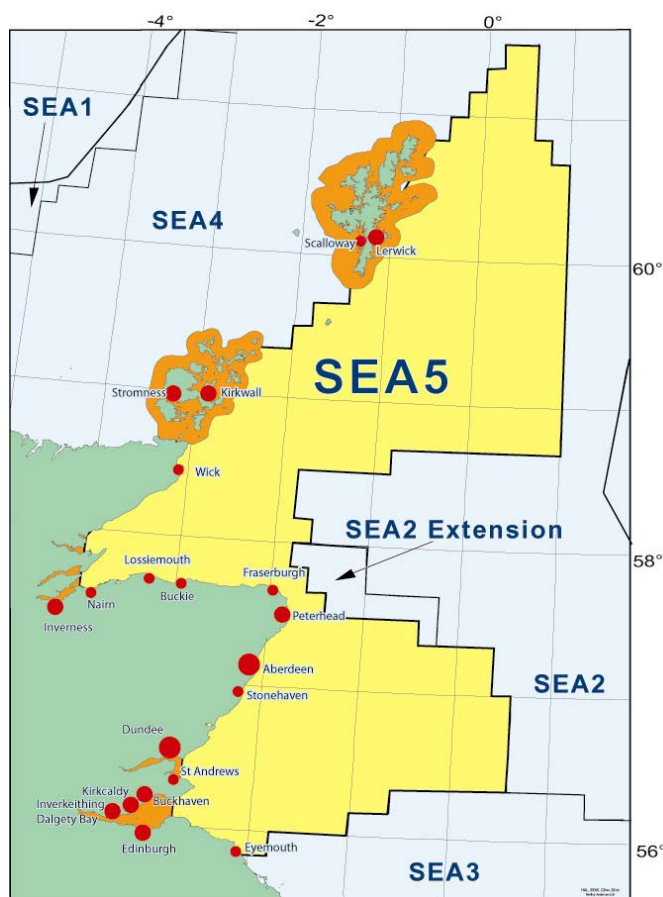
The first of the DTI's offshore oil and gas SEAs (SEA 1) was conducted in 1999/2000 in preparation for the 19th Offshore Licensing Round. SEA 1 addressed the deep water area along the boundary between UK and Faroese waters (an area formerly known as the "White Zone").

Subsequent offshore oil and gas licensing SEAs have included: SEA 2 (2001), which covered the central spine of the North Sea where the majority of existing UK oil and gas fields are located (following an assessment, a minor extension was made to the SEA 2 area); SEA 3 which assessed the remaining

parts of the southern North Sea (2002-2003) and SEA 4 (2003-2004) which addressed the area of the UKCS to the north and west of Orkney and Shetland which abuts the SEA 1 area.

1.2 Scope and purpose of this SEA and report

Figure 1.2 – DTI Offshore SEA 5 Area



The purpose of this SEA is to integrate environmental considerations into the DTI's draft plan to offer for offshore oil and gas licensing, areas to the east of the Scottish mainland, Orkney and Shetland – the area coloured yellow on Figure 1.2.

This is the DTI's 5th offshore oil and gas licensing SEA and is hereafter referred to as SEA 5. The area would be offered in a 23rd round of offshore licensing.

The purpose of this Environmental Report is to document the assessment of the environmental implications of the proposed plan and its alternatives, together with the potential exploration, development and production activities which could result. The report provides a basis of information for formal consultation with the public and consultation bodies regarding the environmental implications of the draft plan.

To allow full consideration of the implications of licensing for oil and gas exploration within the SEA 5 area, the Environmental Report addresses the area up to the shoreline. It also includes areas within bay enclosure lines (coloured orange in Figure 1.2); although these areas are licensed under a different regime and would not form part of an offshore licensing round.

The SEA aims to consider the following:

- The environmental protection objectives, standards etc., established for the area relevant to the approval and subsequent implementation of the proposed action.
- Any existing environmental problems in the area which may be affected by the proposed action.
- Potential activities in the area.
- The main mitigatory measures and alternatives investigated.
- An assessment of the likely significant environmental consequences of the proposed action and its alternatives including the potential for cumulative, synergistic and transboundary effects.
- Proposed arrangements for monitoring the environmental effects of the proposed action and post decision analysis of its environmental consequences.
- Difficulties encountered in compiling the information and a discussion of uncertainty of impact predictions.

As well as a consideration of the offering for licence of areas within the SEA 5 area, this report also includes a consideration of the implications of re-offering for licence unlicensed blocks within the areas covered by the earlier offshore oil and gas SEAs (SEA 1, SEA 2 including SEA 2 extension, SEA 3 and SEA 4 as shown on Figure 1.1 on the previous page).

This report was prepared by independent consultants, Hartley Anderson Limited, on behalf of the DTI. Contributions to the assessment and the public consultation document have been received from the SEA Steering Group, the DTI and Geotek Limited, together with the authors of the underpinning studies summarised in the subsequent sections of this document, participants in the Expert Assessment Workshop and the Stakeholder Dialogue meeting.

1.3 Regulatory context to SEA

The Treaty establishing the European Community, *“provides that Community policy on the environment is to contribute to, inter alia, the preservation, protection and improvement of the quality of the environment, the protection of human health and the prudent and rational utilisation of natural resources and that it is to be based on the precautionary principle”*.

The Treaty also provides *“that environmental protection requirements are to be integrated into the definition of Community policies and activities, in particular with a view to promoting sustainable development”*.

Directive 2001/42/EC of the European Parliament and of the Council of 27 June 2001 on the assessment of the effects of certain plans and programmes on the environment came into force on 21 July 2001.

The Directive’s stated objective is *“to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans and programmes with a view to promoting sustainable development, by ensuring that, in accordance with this Directive, an environmental assessment is carried out of certain plans and programmes which are likely to have significant effects on the environment.”*

Member States were required to bring into force the necessary laws, regulations and administrative provisions to comply with the Directive before the 21st July 2004. To this end the following regulations have been established in the United Kingdom:

- *The Environmental Assessment of Plans and Programmes Regulations 2004* – these regulations apply to any plan or programme which relates either solely to the whole or any part of England or to England and other parts of the UK. The regulations also apply to the territorial waters of the United Kingdom that are not part of Northern Ireland, Scotland or Wales, and waters in any area for the time being designated under Section 1(7) of the Continental Shelf Act 1964.
- *The Environmental Assessment of Plans and Programmes (Scotland) Regulations 2004* – these regulations apply to plans or programmes which relate solely to the whole or any part of Scotland.
- *The Environmental Assessment of Plans and Programmes (Wales) Regulations 2004* - these regulations apply to plans or programmes which relate solely to the whole or any part of Wales.

- The *Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004* – these regulations apply to plans or programmes which relate solely to the whole or any part of Northern Ireland.

The SEA Directive applies to plans and programmes whose first formal preparatory act is on or after 21 July 2004, and also, with retroactive effect, to those which have not been either adopted or submitted to a legislative procedure leading to adoption by 21 July 2006. The process for SEA 5 commenced in the spring of 2003, before *The Environmental Assessment of Plans and Programmes Regulations 2004* entered into force. SEA is an evolving process and SEA 5 builds on the lessons learned in conducting previous SEAs, together with input from stakeholders during the scoping and dialogue processes, and guidance and practice from the UK and elsewhere.

The SEA Directive sets out the information to be included in the environmental report of the Strategic Environmental Assessment, namely:

- An outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes.
- The relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme.
- The environmental characteristics of areas likely to be significantly affected.
- Any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC (the Birds and Habitats Directives).
- The environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation.
- The likely significant effects on the environment, including issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the inter-relationship between the above factors.
- The measures envisaged to prevent, reduce and, as fully as possible, offset any significant adverse effects on the environment of implementing the plan or programme.
- An outline of the reasons for selecting the alternatives dealt with and a description of how the assessment was undertaken, including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information.
- A description of the measures envisaged concerning monitoring.
- A non-technical summary of the information provided under the above headings.

These effects should include secondary, cumulative, synergistic, short, medium and long-term permanent and temporary, positive and negative effects.

Annex II of the SEA Directive sets out the criteria for determining the likely significance of effects. These are listed below:

- The characteristics of plans and programmes, having regard, in particular, to:
 - the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources

- the degree to which the plan or programme influences other plans and programmes including those in a hierarchy
 - the relevance of the plan or programme for the integration of environmental considerations, in particular with a view to promoting sustainable development
 - environmental problems relevant to the plan or programme
 - the relevance of the plan or programme for the implementation of community legislation on the environment (e.g. plans and programmes linked to waste-management or water protection)
- Characteristics of the effects and of the area likely to be affected, having regard, in particular, to:
 - the probability, duration, frequency and reversibility of the effects
 - the cumulative nature of the effects
 - the transboundary nature of the effects
 - the risks to human health or the environment (e.g. due to accidents)
 - the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)
 - the value and vulnerability of the area likely to be affected due to:
 - special natural characteristics or cultural heritage
 - exceeded environmental quality standards or limit values
 - intensive land use
 - the effects on areas or landscapes which have a recognised national, community or international protection status

The United Kingdom is also a signatory to the “*UN/ECE Convention on access to information, public participation in decision-making and access to justice in environmental matters*” (hereafter called the Aarhus Convention).

Article 1 of the Aarhus Convention states that, “*In order to contribute to the protection of the right of every person of present and future generations to live in an environment adequate to his or her health and well-being, each Party shall guarantee the rights of access to information, public participation in decision-making, and access to justice*”.

A required part of SEA is consultation with the public, environmental authorities and other bodies, together with such neighbouring states as may be potentially affected. To this end, SEA 5 has included a stakeholder consultation process involving scoping and a dialogue meeting – see Section 2.

1.4 Licensing context

Oil and gas exploration and production in the UK is regulated primarily through a licensing system (see Section 3 for more detail). Production Licences grant exclusive rights allowing the holders to “search and bore for, and get, petroleum” in specific areas. The first offshore (seaward) UKCS Licensing Round took place in 1964 and seaward licensing rounds have been held roughly every one to two years since. There were 157 UK offshore oil fields producing in 2003, and 109 UK offshore gas fields producing in 2002 (DTI oil and gas website <http://www.og.dti.gov.uk/information/fields.htm>).

The licensing system is managed by the DTI’s Licensing and Consents Unit. For the purpose of licensing, the UKCS is divided into quadrants of 1° of latitude by 1° of longitude (except where the coastline, “bay closing line” or a boundary line intervenes). Each quadrant is then further subdivided into 30 blocks of 10 x 12 minutes with an average size of

250km². Production licences may be issued for single or groups of blocks and may be offered again following relinquishment. Blocks within the SEA 5 area were first offered for licensing in 1964. The area comprises some 382 blocks of which 6 are currently wholly under licence, 8 are partly licensed and partly relinquished, 101 have been licensed but are now wholly relinquished, and 267 which have not previously been licensed – see Figure 4.1 in Section 4.

1.5 Organisation of the Environmental Report

The Environmental Report comprises 12 main Sections plus references, glossary, appendices and a non-technical summary. Figures and tables are interspersed throughout the document.

The **non-technical summary** is intended as a comprehensive stand alone summary of the SEA, its findings and conclusions.

Section 1 Introduction and Background provides a context and guide to the main body of the report.

Section 2 Strategic Environmental Assessment Process provides an overview of the various stages and activities leading up to the public consultation phase.

Section 3 Regulatory Context gives an overview of environmental legislation and controls in relation to the oil and gas industry offshore.

Section 4 Activities describes the proposed plan, its alternatives and the activities arising.

Section 5 Physical and Chemical Environment describes the geology, sediments, climatic conditions and oceanography of the area, together with a consideration of the existing levels of contamination and their sources.

Section 6 Ecology addresses the biodiversity, flora and fauna of the area, together with their ecological importance and sensitivity to oil and gas activity.

Section 7 Coastal and Offshore Conservation specifically considers habitats and species of relevance in the context of *The Offshore Petroleum Activities (Conservation of Habitats) Regulations, 2001*.

Section 8 Users of the Sea and Coastal Environment describes the commercial and other human interests and activities in the coastal and offshore area.

Section 9 Other European Resources of Potential Relevance to SEA 5 summarises coastal resources and conservation interests in these areas.

Section 10 Consideration of the Effects of Licensing the SEA 5 Area describes the method used to screen potential effects together with a more detailed consideration of those environmental interactions with the potential to cause significant effects and including cumulative, synergistic and transboundary effects. Mitigation measures are also considered.

Section 11 Consideration of the re-offering of blocks in the previously SEAed areas gives consideration for SEAs 1-4 to updates to the information base used for the SEAs, the predicted and actual scale of activities, changes in licensing status since the relevant SEA, and if there are any significant changes which would result in different conclusions to the previous SEAs.

Section 12 Conclusions provides an overall conclusion regarding the likely implications of the proposed licensing and alternatives, together with recommendations for mitigation and monitoring and gaps in understanding relevant to the process.