

dti

SEA 7

**Environmental Report –
Non Technical Summary**

MARCH 2007

25TH OFFSHORE OIL & GAS LICENSING
ROUND

STRATEGIC ENVIRONMENTAL
ASSESSMENT

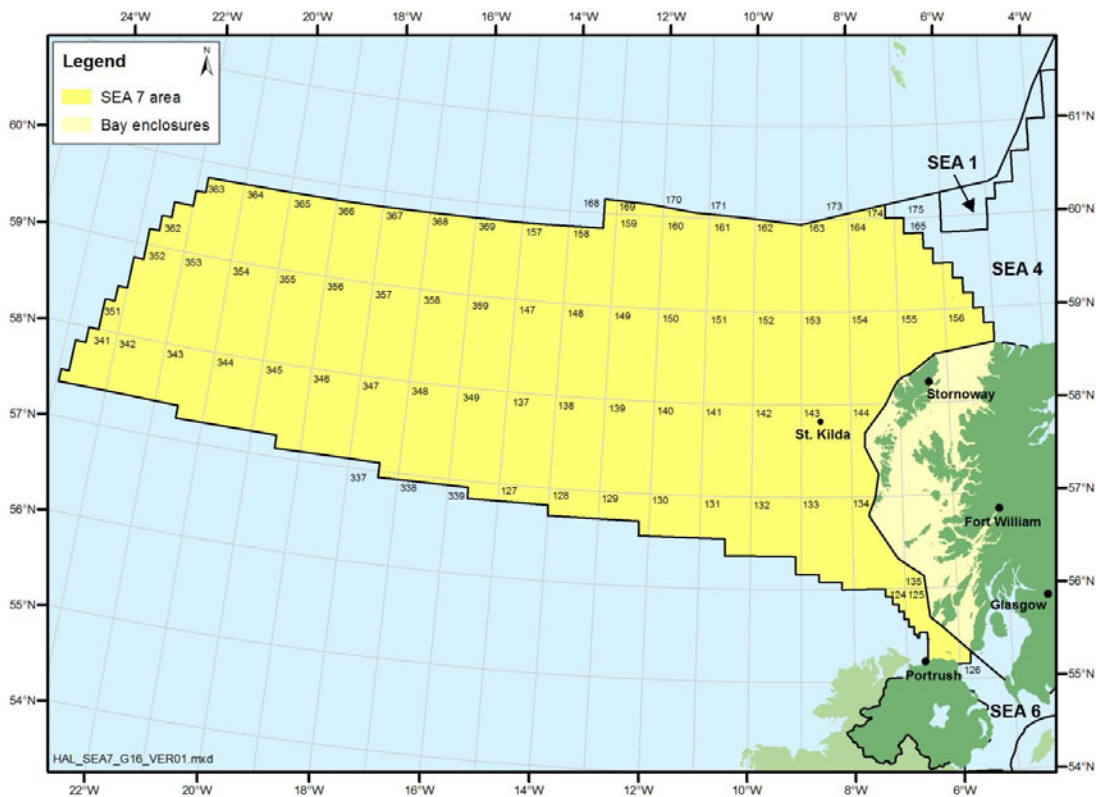
NON-TECHNICAL SUMMARY

This non-technical summary provides a synopsis of the Strategic Environmental Assessment (SEA) of the Department of Trade and Industry's (DTI) draft plan to hold a 25th round of offshore oil and gas licensing. As context, the recently published Marine Bill White Paper notes that activities in the marine area contribute substantially to the UK economy and quality of life, with an annual economic contribution in the order of £67 billion. Important contributors are oil and gas (£22.3 billion), tourism and recreation (£16 billion), naval defence (£6.5 billion), and ship and boat building and repairs (£3 billion), with significant contributions being made by ports (£1.6 billion), fisheries (£0.5 billion) and a range of other activities.

The draft plan and areas covered

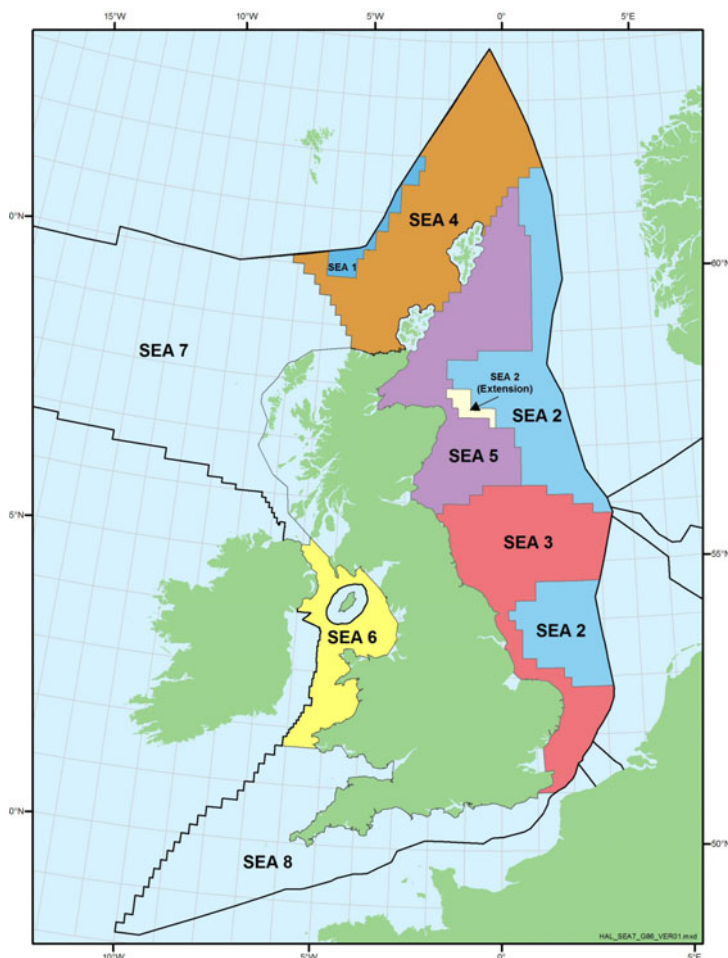
The draft plan is to invite applications for licences for blocks in the SEA 7 area to the north and west of Scotland (highlighted in bright yellow in the figure below) and to grant licences to successful applicants. These licences merely grant exclusivity to any hydrocarbon resources within a block to a company or consortium and do not by themselves permit any field activities, which are subject to a range of regulatory controls and consenting requirements.

The SEA 7 area



In addition, the draft plan includes the proposed re-offer during the same licensing round, of currently unlicensed blocks in the areas covered by earlier offshore oil and gas SEAs 1 to 6 (see figure overleaf).

DTI SEA sequence



For oil and gas licensing purposes the United Kingdom Continental Shelf (UKCS) is divided into quadrants of 1° of latitude by 1° of longitude with each quadrant further partitioned into 30 blocks, each of about 250km². Blocks within the SEA 7 area were first offered for licensing in 1971. The whole area comprises over 1600 blocks although the great majority have not previously been licensed, with only 8 blocks now wholly or partly under licence, and 93 that have been previously licensed but are now wholly relinquished. It is unlikely that blocks west of about longitude 14 degrees west will be offered for licensing or taken up as the far west boundary of the UKCS is not yet internationally agreed, they are beyond normal search and rescue helicopter range, and there are major gaps in environmental information for the area.

Most coastal blocks in the SEA 7 area are not part of this draft plan as they lie within bay closure lines (shaded in pale yellow on the figure below) which are subject to a different licensing regime. However, to allow full consideration of the draft plan for a 25th round of offshore licensing, SEA 7 also addresses the potential for effects on these blocks.

The overall DTI SEA programme covers offshore energy (oil & gas and renewables), but in the SEA 7 area (and other waters adjacent to Scotland) renewable energy is a devolved matter and would not be the subject of a DTI SEA. For other UK waters there is currently no draft plan for a leasing round for renewable energy and so SEA 7 addresses only the proposed oil and gas licensing round.

Strategic Environmental Assessment

The SEA process aims to help inform DTI licensing decisions through consideration of the environmental implications of the proposed plan and the potential exploration, development and production activities which could result from its implementation. The DTI began a sequence of sectoral SEAs in 1999 to consider the implications of further licensing of the UKCS for oil and gas exploration and production. To date six offshore oil and gas licensing SEAs have been completed (see figure above). SEA 1, in preparation for the 19th Seaward Licensing Round in 2001, addressed the deep water area along the boundary between UK

and Faroese waters. SEA 2 covered the central spine of the North Sea with the majority of existing UK oil and gas fields and following an assessment, a minor extension was made to the SEA 2 area. SEA 3 assessed the remainder of the southern North Sea. SEA 4 addressed the UKCS area to the north and west of Orkney and Shetland, SEA 5 covered the areas to the east of the Scottish coast, and SEA 6 was of the Irish Sea. During 2003, in preparation for a second round of offshore wind leasing, the DTI also conducted an SEA covering three strategic regions off the coasts of England and Wales.

Strategic Environmental Assessment (SEA) is now also required under the *Environmental Assessment of Plans and Programmes Regulations 2004*, which implement a European Directive on the subject, and this SEA has been prepared in accordance with its requirements.

SEA 7 process

The DTI offshore energy SEA process has developed over time, drawing in concepts and approaches from a variety of individuals, organisations and other SEAs as well as addressing the requirements of legislation and guidance. The process followed for SEA 7 and temporal sequence of events is summarised below although it is noted that certain activities such as information gathering continue throughout the process:

Initial scoping for SEA 7 with the SEA Steering Group, environmental authorities and a range of academic and conservation organisations commenced early in 2005 and focussed on ascertaining seabed and other survey needs. This was because of the timescale needed to organise, collect and analyse offshore information and samples. The conclusion of scoping was that further seabed survey work was necessary to investigate seabed habitats and biota, particularly of the seamounts, banks and pinnacles in deeper water well offshore. Survey field work was conducted during the summers of 2005 and 2006 using a variety of vessels and in collaboration with others interested in furthering understanding of the area including the British Geological Survey and Joint Nature Conservation Committee.

In addition, a range of other technical studies and syntheses of data were commissioned to underpin the SEA 7 assessment. These technical and data reports are summarised in Appendix 3 of the Environmental Report and are available for download at www.offshore-sea.org.uk where documents for previous SEAs are also available.

The DTI have developed a regional overview of the likelihood of hydrocarbons being present in commercial quantities in the SEA 7 area, together with likely scenarios in terms of block uptake and number of seismic surveys, wells and developments (see below and Section 2).

An Assessment Workshop involving the SEA Steering Group, Technical Authors and SEA Team was held in October 2006 and summarised in Appendix 11. The output of this workshop included the list of SEA objectives and indicators (see Section 3), the draft plan alternatives (see below) and a list of topics to be considered in more detail in the Environmental Report.

A formal scoping consultation was conducted with the Consultation Bodies/Authorities in November 2006 and feedback received is summarised in Appendix 1.

A stakeholder meeting was held in Glasgow on 26th March 2007 which was attended by stakeholders from a wide variety of organisations, sectors and areas. The stakeholder input on the SEA 7 information base, draft recommendations and other issues is given in Appendix 11.

The SEA assessment has considered the above information as well as the:

- Environmental receptors in the area and likely evolution of the existing baseline conditions (Section 4 and Appendices 3-9)
- Nature of likely operations, their potential environmental effects and existing regulatory or other controls in place to mitigate effects (Appendix 10)
- Implications of other plans and programmes (Appendix 2)
- Gaps in knowledge and understanding

The assessment of the draft plan and recommendations to the DTI are given in the SEA 7 Environmental Report which forms the basis for public consultation. The next steps following public consultation are described at the end of this non-technical summary.

Alternatives

SEA 7 addresses all the blocks within the area in terms of the implications of licensing for oil and gas exploration and development. Depending on the outcome of the SEA process and other Government considerations, all or a proportion of the unlicensed blocks within the SEA 1 to 7 areas may be offered for licensing in the 25th round.

Alternatives to the draft plan to hold a 25th oil and gas Licensing Round have been agreed as:

1. Not to offer any blocks for Production Licence award
2. To proceed with the licensing programme as proposed
3. To restrict the area licensed temporally or spatially

Prospectivity

There has been very little oil and gas exploration activity in the SEA 7 area to date. A number of exploration wells have been drilled but there are no producing fields or associated infrastructure.

For commercial hydrocarbon resources to occur, a number of factors and features have to coincide, including:

- The presence of source rocks, with an appreciable organic matter content
- Adequate depth of burial to allow the conversion of the organic matter to oil or gas through the action of temperature and pressure
- The presence of rocks with sufficient porosity to allow the accumulation of oil or gas
- Cap or seal rocks to prevent the oil or gas from escaping from the reservoir rocks
- Migration pathways to permit oil and gas formed in the source rocks to move to reservoir formations

Aside from a few blocks surveyed with 3D seismic and several blocks with sparse 2D seismic data, the bulk of SEA 7 is devoid of data to appropriately evaluate the real potential for hydrocarbons. Only 11 exploration wells have been drilled to west of the Hebrides of which one (the 154/1-1 well) found the “Benbecula” gas accumulation. Based on this there is a strong likelihood there could be more scope for ‘hydrocarbon traps’ on a trend stretching

south from the “Benbecula” well to the “Dooish” well in the Irish sector along a 260 by 30kms wide corridor along the continental slope in water depths of between 700m and 2,000m.

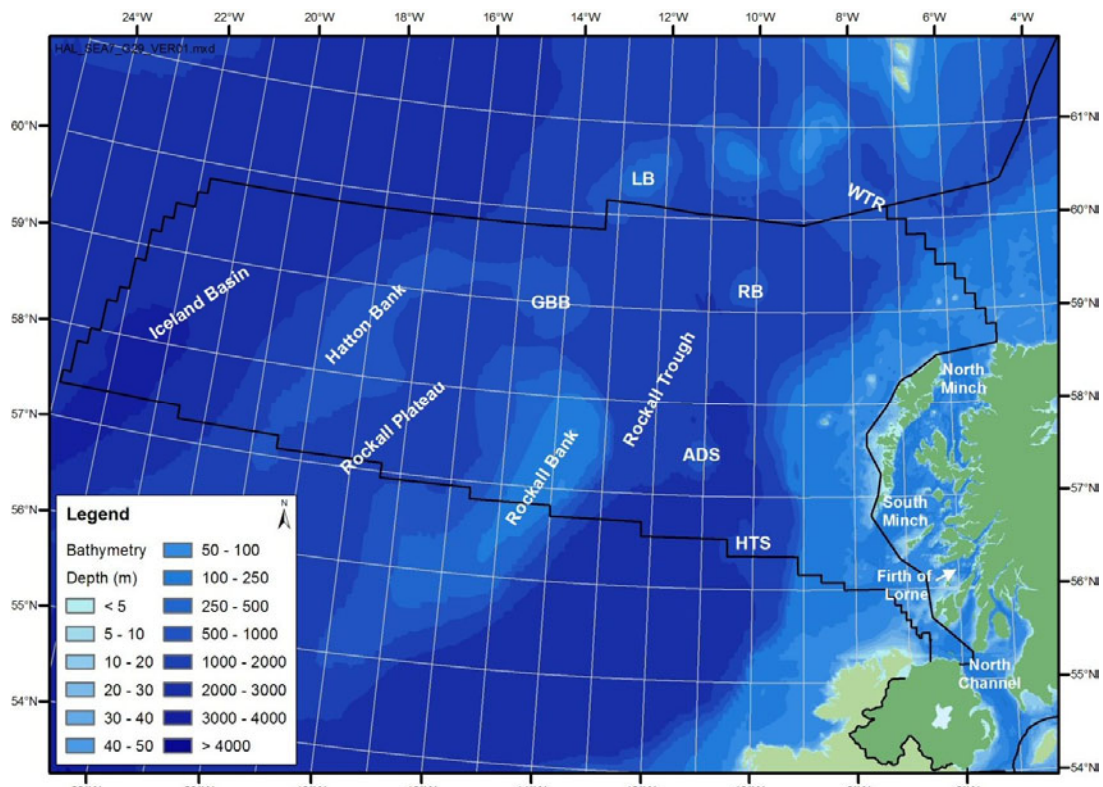
The geology of the area around the Hebrides and St. Kilda is not viewed as having prospectivity for hydrocarbons whilst the large area to the far west in deeper water is too poorly known to be definitive.

For the blocks in the SEA 7 area the DTI estimate that less than 10 x 2D seismic surveys, 2 to 8 x 3D seismic surveys and up to 10 drill or drop/contingent wells may be bid as part of 25th Round applications, with only half the wells actually being drilled. The anticipated timing of these wells over the first 5 years after licensing is: 1 in 2009, 2 in 2010 and 2 in 2011. Further activity levels will depend on the results of these initial exploration activities.

Overview of the SEA 7 environment

SEA 7 is the largest of the SEA areas. Topographically it includes sheltered coastal sea lochs, the exposed Hebrides continental shelf, the continental slope beyond the shelf to extensive areas of deep water muds of the Rockall Trough. The deep water area contains a number of major banks such as the Rockall and Hatton Banks as well as several seamounts. The area is bounded to the north east by the Wyville Thomson Ridge, a major ecological divide between warm and cold water areas.

Topographic features of the SEA 7 area



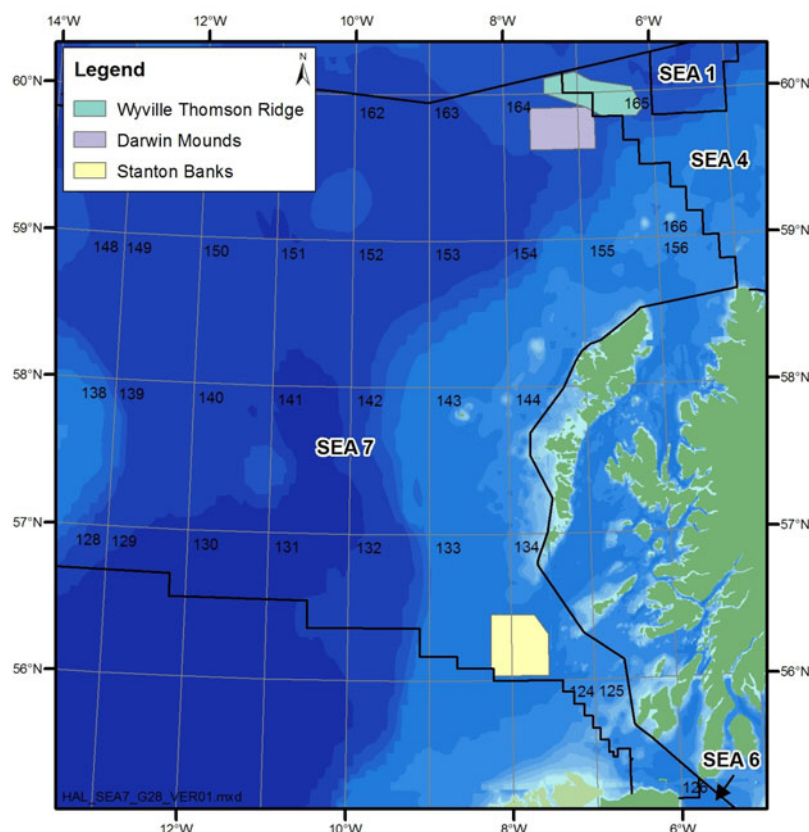
Notes: ADS - Anton Dohrn Seamount; LB - Lousy Bank; GBB - George Bligh Bank; HTS - Hebrides Terrace Seamount; RB - Rosemary Bank; WTR – Wyville Thomson Ridge.

The region is fully exposed to North Atlantic winds and waves. Water movement is largely from south west to north east with the prevailing current system dominated by an along shelf slope current of warm Atlantic water, the European Shelf Current. This is subject to some

seasonality and variability in speed according to the influence of depth contours. In the north of the region the current passes over the Wyville Thomson Ridge and a proportion of the water enters the North Sea by the Fair Isle current between Orkney and Shetland, and also from the north to the east of Shetland. Deeper waters to the west of the shelf edge are a mixture of water masses of different origin including periodic overspill of Arctic water from the north. Strong bottom currents around many of the seamounts and banks play an important role in determining the distribution of sediments and seabed biological communities.

The wide range in bathymetry, water currents and other factors results in a diverse array of seabed habitats and biological community types. Whilst shelf habitats have been fairly well described, those in deeper waters have remained largely unknown. The DTI SEA-funded seabed surveys of 2005 and 2006, which were largely directed at the major banks and seamounts of the area, have provided valuable information on these offshore areas and documented several cold water coral reefs and features of potential conservation importance. It is likely that based on this information a number of potential new offshore Special Areas of Conservation (SAC) will be selected in the SEA 7 area in the future. Currently three offshore areas in SEA 7 have been put forward as SACs for coral, stony and reef habitats on the Darwin Mounds, Wyville Thomson Ridge and Stanton Banks – see figure below.

Offshore conservation sites in the SEA 7 area



Within shelf and coastal waters, there are a large number of conservation sites of international and national importance, many of which cover extensive marine areas. The region is of great importance for seabirds (including puffin, guillemot, gannets, fulmar, shearwaters and other petrels) and waterbirds (e.g. seaduck, divers and geese), both during and outwith the breeding season. This importance is reflected in the number of Special Protection Areas (SPA) designated. One of the most important conservation sites is St. Kilda which is an SAC, SPA, World Heritage Site and National Nature

Reserve which has 89% and 24% of the north east Atlantic population of Leach's petrel and gannet respectively. The most abundant breeding bird on St. Kilda is the puffin with over 135,000 nests. Some of the birds breeding on St. Kilda and other offshore islands feed beyond the shelf edge (e.g. Leach's petrel).

The SEA 7 area is also very important for marine mammals, with ten species of whale and dolphin recorded regularly, and the shelf region is of particular importance for harbour porpoise and a variety of dolphin species. Although data is limited, the deeper waters off the shelf appear to be important for a number of medium sized and large whale species, including beaked whales, sperm whale and humpbacked whale. Some whales migrate through the SEA 7 area between their Arctic feeding grounds and their breeding grounds at lower latitudes, although it is uncertain if defined migration routes are used.

Shelf areas are also very important for grey and harbour seals. Many of the region's islands support important breeding and moulting haul out sites for both species, with the exposed shelf waters to the west of the Hebrides of particular importance to foraging grey seals. More sheltered areas of the Minch and around Islay appear to be important for foraging harbour seals.

The SEA 7 area is largely rural and undeveloped. Important coastal activities and industries include tourism and mariculture, with fishing important both in coastal and offshore waters (including the offshore banks and seamounts). Offshore waters also contain important shipping routes, military practice areas and past munitions and other disposal sites. A number of telecommunications cables traverse the region.

Overview of main sources of effect and controls in place

The main stages of oil and gas activity are:

1. Exploration, including seismic survey and exploration drilling
2. Development, including production facility installation, generally with construction of an export pipeline, and the drilling of producer or injector wells
3. Production, with routine supply, return of wastes to shore, power generation, chemical use and produced water reinjection
4. Maintenance
5. Decommissioning, including cleaning and removal of facilities

The main sources of potential environmental effects are:

- Noise (impulsive) from seismic survey and piling during installation
- Noise (continuous) from drilling rig, production facility or vessels
- Physical damage (acute) from anchoring, pipeline construction
- Physical damage (non-acute) from particulate smothering
- Physical presence (biological) colonisation of structures by organisms
- Physical presence (human uses) interference with other users of the sea
- Chemical contamination (routine) from drilling and production discharges
- Chemical contamination (accidental) from spills etc
- Atmospheric emissions (air quality) from fuel combustion, venting
- Atmospheric emissions (climate) from fuel combustion

All the major stages of oil industry operation offshore are now covered by environmental regulations (see Appendix 10). Consents (with applications supported by assessments of effects) are required for seismic survey, exploration drilling, field development, pipeline installation, development drilling, field operation (including atmospheric emissions, production of hydrocarbons, use of chemicals, produced water treatment), offshore facility modification, field decommissioning etc. The major consents also include a public

consultation stage which allows stakeholders to draw issues to the DTI and developers attention.

Environmental Report

The Environmental Report provides a basis of information for formal consultation with the statutory consultation bodies and authorities and with the public, regarding the implications of the draft plan and its alternatives.

In accordance with the SEA Regulations, the following potentially affected receptors were included within the scope of the assessment.

- Biodiversity, habitats, flora and fauna
- Geology and sediments
- Landscape/seascape
- Water environment
- Air quality
- Climatic factors
- Population and human health
- Material assets (infrastructure, other natural resources)
- Cultural heritage, including architectural and archaeological heritage
- Interrelationships of the above

Information on the SEA 7 environmental baseline and its likely evolution has been grouped into these subject areas and the SEA 7 assessment has used the same headlines to maintain line of sight.

The assessment is given in Appendix 11 and summarised in Section 5. The key points and conclusions are highlighted below.

Biodiversity, habitats, flora and fauna

Assessment summary

All areas of the UKCS contain potentially vulnerable habitats and species. In recognition of this and in response to developing societal expectations, regulatory control of oil industry activities, including assessments as part of permitting requirements, and increasingly stringent discharge and emissions standards have been introduced over the years. Risk assessment for specific activities are required which take particular note of seasonal variations in seabird vulnerability, marine mammal distributions and seal moulting/pupping periods. The majority of exploration drilling and all field developments would be subject to statutory Environmental Impact Assessment (EIA) which is documented in an Environmental Statement and subject to public consultation allowing stakeholder input to consent decisions. Pre-activity studies include documentation of the key components of the local environment, such as mapping of seabed habitats and filling gaps in understanding of seabird and marine mammal distribution and abundance as necessary. As a result of the above, significant effects on the marine environment as a result of routine operations are mitigated to acceptable levels. Consequently, for previous SEA areas there seems no reason not to re-offer blocks offered for licensing in previous rounds (unless assessment is continuing as for some blocks in Cardigan Bay and the Moray Firth). For the SEA 7 area the magnitude of the gaps in basic understanding are such that a precautionary approach is suggested to licensing to allow some of the gaps to be filled.

For accidental events, regulations are in place which require operators to develop effective oil spill plans and mitigation measures, covering the organisation of response and the provision of physical and human resources. For some potential locations, estimated times within which oil might beach, under worst case trajectory modelling conditions, are very short. Effective contingency planning and local resources will therefore be necessary to allow the deployment of response measures where appropriate. In some cases, there is strong seasonality in specific sensitivities – in particular in relation to bird populations. Existing regulatory controls emphasise the risk management and contingency planning aspects of environmental management, including the timing of operations.

Since the start of the DTI offshore energy SEA programme, a number of Natura 2000 conservation sites (SACs and SPAs) have been proposed in offshore waters. In respect of coastal, marine and offshore Natura 2000 conservation sites, an Appropriate Assessment (AA) screening or full assessment (as appropriate) of the plan would be undertaken by the DTI after the block applications have been received. The AA process considers the potential of likely resultant activities in the blocks to adversely affect the integrity of Natura 2000 sites. The AA provides a further opportunity for the DTI to draw operator attention to block or local environmental sensitivities and, if viewed as necessary, to place specific temporal, spatial or other conditions on block licences. Operators should be made aware of the possibility that subsequent project level AA for a proposed operation which might affect Natura 2000 sites may conclude that consent is withheld if there is a risk to site integrity which cannot be effectively mitigated. The geology near St. Kilda is not considered prospective for hydrocarbons and on this basis applications for licences in the vicinity of the islands are not expected.

For the SEA 7 area it is concluded that blocks west of 14 degrees west should be withheld from licensing for the present. This is in view of the paucity of information on many potentially vulnerable components of the marine environment and that the analysis of SEA collected seabed data on carbonate mounds and coral reefs in the area and hence potential designation of areas as Natura 2000 sites is not yet complete. In addition, the far west boundary of the UKCS is not yet internationally agreed and is beyond normal search and rescue helicopter range. The offer of licences east of 14 degrees west is supported since there is relatively more data available including that generated during past seismic and drilling activities in the area. The DTI should draw to the attention of applicants that for some activities in certain areas of SEA 7, baseline data on selected components of the marine environment will require to be collected in advance of operations to underpin risk and other assessments.

For the previous SEA areas, the blocks in or overlapping with the boundaries of the Moray Firth and Cardigan Bay SACs should be withheld from licensing for the present whilst the further assessments initiated following the 24th Licensing Round applications are concluded.

Geology and sediments

Assessment summary

All SEA areas include a wide range of geomorphological features resulting from the underlying solid geology, past glaciations and recent processes, with sediments including muds to boulders. Various oil industry activities would result in sediment disturbance or potentially, without mitigation, destruction of small scale features. The seabed mapping undertaken in advance of operations would allow the identification and hence avoidance of valued features. Contamination of sediments may occur from discharges of drilling wastes,

production wastes such as produced water, or spills. The composition of planned discharges is regulated, with increasingly stringent controls applied in recent years. Monitoring results indicate that sediment contamination is not a significant issue. The geological information derived from seismic survey and the drilling of wells is regarded as a positive contribution to the understanding of the UKCS.

Landscape/seascape

Assessment summary

Areas potentially prospective for hydrocarbons in the SEA 7 area are beyond the sight of land and landscape or seascape interactions are not envisaged. Certain blocks within the previous SEA areas abut or are close to the coast, and for these areas exploration drilling or field developments would be subject to statutory EIA which would include visual impact assessment. The Environmental Statements produced as part of the EIA process are subject to public consultation allowing stakeholder input to consent decisions.

Water environment

Assessment summary

Contamination of water may occur from discharges of drilling wastes, production wastes such as produced water (i.e. water produced along with oil and gas during the production phase), or spills. It is not expected that significant discharges of produced water will be made, since there is a strong presumption against marine discharge and regulatory preference for reinjection to a suitable subsurface formation.

Drilling discharges are comprehensively regulated, with the discharge of oil-based drilling fluids effectively banned, and strict controls implemented over chemical additives used in water-based fluids. In view of the water depths and current regimes prevalent in prospective parts of the SEA 7 area, significant contamination or ecological effects of drilling discharges are not expected.

Other operational discharges are subject to regulatory controls, and are not considered to have significant environmental risk.

Monitoring results indicate that water column contamination and associated biological effects are not significant issues. This would apply to blocks in all SEA areas under consideration in SEA 7.

Air quality

Assessment summary

Atmospheric emissions from the potential activities likely to follow implementation of the DTI's draft plan could affect local air quality. Gaseous emissions contribute to regional acid gas loads and local low level ozone and potentially smog formation. The principal routine operational emissions during oil industry exploration and production (E&P) operations are of combustion products (CO₂, CO, NO_x, SO₂, CH₄, and volatile organic compounds (VOCs)) from power generation and engines on rigs, production facilities, vessels and helicopters. Fugitive emissions such as from cement tanks, diesel storage and cooling/refrigeration systems could potentially occur, resulting in emissions of dust/particulates, VOCs,

hydrofluorocarbon refrigerants etc dependent on source. The scale and timing of projected activity in the SEA 7 area, the distance offshore and limited other such sources in the region indicate that significant effects on local and regional air quality will not occur. A similar assessment is made for the other SEA areas, although in some there are appreciable other oil industry, fishing and vessel traffic contributions. The implications of atmospheric emissions from all exploration wells and all field developments would be assessed through the statutory EIA process, which would serve to identify if further mitigation was required.

Climatic factors

Assessment summary

Atmospheric emissions from the potential activities following implementation of the DTI's draft plan will contribute to local, regional and global concentrations of CO₂ and other greenhouse gases. There are growing concerns about the effects of fossil fuel combustion in terms of climate change and ocean acidification. However, the contribution of atmospheric emissions from activities that may result from implementation of draft plan alternative 2 or 3, or the end use of any hydrocarbons produced, would represent a minor fraction of existing UK, European and global emissions. In response to climate change concerns, the UK government and European Union have and are introducing a variety of policy initiatives intended to stabilise and reduce greenhouse gas emissions. All recognise the long term nature of the venture and that there is no one solution, with a series of contributory steps being required. These steps include reduction in energy demand through increased energy efficiency, promotion of renewable fuels and electricity generation, fuel switching to lower carbon alternatives, carbon capture and sequestration etc. In the near term, UK energy demand not met from indigenous sources (whether fossil or renewable) will be supplied by imported fossil fuels – with little distinction in terms of resultant atmospheric emissions. Thus domestic hydrocarbon production would be neutral in the attainment of UK climate change response policy objectives, and potentially positive in respect of oil, since associated gas is put to beneficial use rather than mostly flared as in some other sources of potential supply. In addition, domestic hydrocarbon production has a positive contribution to the UK economy and security of supply.

In recognition of the national and international focus on climate change and curbing fossil fuel emissions, the DTI should seek and give consideration to CO₂ emission reduction proposals at both the licensing and development Environmental Statement and production consent application review project stages. Examples of such proposals are capture and storage of CO₂ from gas processing operations (rather than venting).

Population and human health

Assessment summary

In view of the nature of activities resulting from the proposed licensing; low risk (based on historic frequency and severity) of major accidental events; occupational health regulation of risks to workforce; controls on use and discharge of chemicals and other marine discharges and remoteness from coastlines and major centres of population, no adverse effects on population or human health are expected.

Licensing is likely to result in continued activity and investment in the UK offshore oil and gas industry and hence positive benefits in terms of employment, tax revenues and security of energy supply.

Material assets (infrastructure, other natural resources)

Assessment summary

There is no existing oil and gas infrastructure in the SEA 7 area and interactions with other users of the marine environment are not likely to result in significant detriment to other activities. Within the SEA 7 and previous SEA areas, it is not considered that oil and gas exploration and production would result in “sterilisation” of the area in respect of renewable energy development or for underground storage of captured carbon dioxide, although this should be reviewed during the consideration of licence applications. The continued use and maintenance of existing offshore oil and gas infrastructure provides the opportunity for its potential future use in carbon capture and storage projects.

Cultural heritage, architectural and archaeological heritage

Assessment summary

Offshore cultural heritage in deeper waters consists chiefly of shipwrecks and crashed aircraft, with no significant interaction expected. A likely positive effect of activities in licensed areas is wreck discovery and potentially identification during oil industry rig site or pipeline route surveys. No interactions are foreseen between activities in blocks potentially licensed in a 25th Round and the abundant coastal archaeological heritage of the SEA 7 area. If commercial quantities of hydrocarbons are discovered and a pipeline to shore is considered, offshore aspects would be covered by a statutory EIA and onshore elements through the planning process. Similar considerations apply to the previous SEA areas.

The geology near St. Kilda is not considered prospective for hydrocarbons and on this basis interactions with the World Heritage Site are not anticipated.

Interrelationships - Cumulative effects

Assessment summary

Cumulative effects from activities resulting from the proposed 25th round licensing have the potential to act incrementally with those from other oil and gas activity, including both existing activities and new activities in existing licensed areas, or to act cumulatively with those of other human activities (e.g. fishing and shipping). Secondary effects comprise indirect effects which do not occur as a direct result of the proposed activities, while synergistic effects are considered to be potential effects of E&P activities where the joint result of two or more effects is greater than the sum of individual effects. Cumulative effects in the sense of overlapping “footprints” of detectable contamination or biological effect were considered to be either very limited (noise, physical presence, physical damage, emissions, discharges) given the past level of activity in the SEA 7 area, or unlikely (accidental events). A similar assessment is made for the areas covered by previous SEAs since monitoring data indicates that the more stringent emissions, discharge and activity controls introduced over recent years have been effective and there is no evidence for significant cumulative effects from current activities.

Atmospheric emissions from activities that may result from implementation of draft plan alternative 2 or 3, and the end use of any hydrocarbons produced will contribute to the overall global emissions of greenhouse gases. However, the scale of such emissions is relatively small, and they will be included in overall UK emissions inventories and the longer

term initiatives to shift the balance of energy demand and supply towards a low carbon economy.

Besides an indistinguishable contribution to climate change and ocean acidification, no secondary or synergistic effects were identified that were considered to be potentially significant, although the effects of multiple noise sources, including the interaction of seismic survey and military sonars, were identified as areas requiring better understanding.

Interrelationships - Wider policy objectives

Assessment summary

The SEA Directive requires that, in considering the likely significance of effects, the degree to which the plan or programme influences other plans and programmes should be addressed, together with the promotion of sustainable development. Activities which may follow licensing in a proposed 25th Licensing Round are subject to regulatory control and are not predicted to have a significant negative impact on UK Government or other wider policy and commitments. The contribution of atmospheric emissions from activities that may result from implementation of draft plan alternative 2 or 3, or the end use of any hydrocarbons produced, would represent a minor fraction of existing UK, European and global emissions. These emissions where they relate to combustion end use would be neutral in the attainment of UK climate change response policy objectives, and potentially positive in respect of oil since associated gas is husbanded rather than mostly flared as in some other sources of potential supply.

The outcome of the 25th Licensing Round has the potential to contribute positively to UK energy supply and policy, although the scale of this is uncertain, particularly in respect of the SEA 7 area. No major negative effects on other policies or programmes are foreseen.

Transboundary effects

Assessment summary

The SEA 7 area is contiguous with waters under the jurisdiction of the Republic of Ireland and the Faroes. Based on the likely area where blocks would be applied for, prevailing wind and major water mass movements will normally result in the transport of atmospheric emissions, marine discharges and spills towards the west coast of Scotland. However, SEA 7 activities may occur adjacent to the median lines and sources of potentially significant environmental effects, with the additional potential for transboundary effects, therefore include:

- Underwater noise
- Marine discharges
- Atmospheric emissions
- Accidental events – oil spills

All of the four aspects above may be able to be detected physically or chemically in Irish or Faroese waters. A similar consideration applies to the potential for transboundary effects from activities in SEA areas 1 to 6, variously in the waters of adjacent States.

The scale and consequences of environmental effects in adjacent state territories due to activities resulting from the proposed 25th Round licensing will be less than those in UK waters and are unlikely to be significant.

Conclusions

The SEA considered the alternatives to the draft plan and the potential implications of the resultant activities in the context of the objective of the draft plan, the SEA objectives, the existing regulatory and other control mechanisms, and the existing environmental problems and their likely evolution over time. A number of recommendations are made. The conclusion of the SEA is that alternative 3 to the draft plan, with the area licensed restricted spatially through the exclusion of certain blocks, is the preferred option for a 25th Licensing Round.

Next steps

The SEA 7 Environmental Report and supporting documents are available for review and public comment for a period of 12 weeks from date of publication in April 2007. The documents are being made available from the SEA website (www.offshore-sea.org.uk) or on CD or printed copy. Comments and feedback should be marked “SEA 7 Consultation” and may be made via the website or by letter or e-mail addressed to:

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Aberdeen AB11 6AR
Fax: 01224 254019
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The DTI will consider comments received from the public consultation in their decision making regarding the draft plan.

A Post Consultation Report will be prepared and placed on the website collating the comments and DTI responses to them.

In addition, if the licensing round is held and blocks applied for, prior to the award of any licences the DTI will undertake a plan level Appropriate Assessment to consider the potential implications of activities within a block for the integrity of Natura 2000 conservation sites.