



Department of Trade and Industry

**Strategic Environmental Assessment of the
Area North and West of Orkney and Shetland
SEA 4**

Post Public Consultation Report

January 2004

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CONTENTS

1	Introduction.....	1
1.1	Background.....	1
1.2	Overview of the consultation process	1
1.3	Purpose of this document	1
2	DTI SEA website	2
2.1	Introduction	2
2.2	Web hits and pages/documents reviewed statistics.....	2
3	Consultation issues.....	3
3.1	Consultation input received.....	3
3.2	Consultation issues with DTI responses and clarifications.....	4

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1 INTRODUCTION

1.1 Background

In 1999, the UK Department of Trade and Industry (DTI) began a sequence of Strategic Environmental Assessments (SEAs) to consider the implications of further licensing of the UK Continental Shelf (UKCS) for oil and gas exploration and production. The first DTI SEA covered the deep water area along the UK and Faroese boundary (an area formerly known as the “White Zone”). The second SEA (SEA 2) completed during 2001 considered the environmental and socio-economic implications of a proposed licensing round covering the parts of the North Sea which contain the majority of the UK’s existing oil and gas fields. The third SEA (SEA 3) conducted in 2002/2003 for the 21st Licensing round covered the central and southern North Sea.

The public consultation document for the fourth SEA was completed in 2003 and covered the area to the north and west of Orkney and Shetland. This area included much of the former White Zone and provided the opportunity to review the accuracy of the predictions made in SEA 1.

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 (the SEA Directive) entered into force on 21 July 2001. The United Kingdom, as a Member State, is required to comply with the Directive and to transpose it to national legislation by July 2004. The DTI has taken a proactive stance towards the concept of SEA and the European Directive, and since 1999 has used SEA as a planning tool to inform decisions on proposed offshore licensing rounds for hydrocarbon exploration and production on the UKCS. A key element of SEA is consultation with the public and other stakeholders and an overview of the steps taken to promote this for SEA 4 is given below.

1.2 Overview of the consultation process

Key elements of the SEA 4 public and other stakeholder consultation are:

- A dedicated SEA website (www.offshore-sea.org.uk) where the public consultation document and supporting reports can be viewed and downloaded
- Initial scoping consultation in early 2002 with a range of academics and conservation organisations, focussed on ascertaining seabed survey needs
- Wider stakeholder scoping consultation involving over 230 stakeholders. The scoping exercise was carried out electronically, through circulation of a scoping pamphlet in April 2003
- Inclusion of a number of key stakeholders in the expert assessment workshop held in May 2003
- Stakeholder dialogue meeting at the draft assessment document stage in July 2003
- A 3 month public consultation period following publication of the SEA 4 documents on the website in September 2003
- Preparation of a post consultation report (this report)

In keeping with the Government’s move towards “less paper” where feasible, scoping and subsequent consultation was conducted electronically using e-mail and the SEA website. In addition, the SEA 4 documentation could be requested in hard copy or on CD. Responses to the formal public consultation period for SEA 4 were received via the website, e-mail and letter. .

1.3 Purpose of this document

This document summarises the comments received and issues raised during the 90 day public consultation period following publication of the SEA 4 consultation document (full copies of these

responses are available on the SEA website). This report is intended to provide factual and technical clarifications to the SEA 4 consultation document in the light of comments received. It also includes responses regarding policy, regulatory and other controls, and future plans where appropriate. The report is one of the considerations used by the DTI in making decisions regarding offering for licensing Blocks for oil and gas exploration and production in the SEA 4 area.

2 DTI SEA WEBSITE

2.1 Introduction

The site is designed to be user friendly and is formatted in a series of sections, each of which is accessible from the navigation bar.

All documents were placed on the site in pdf format for downloading and in addition the consultation document was converted for viewing on the web. To aid navigation through a large document, the section content list indicated the current viewing location. A search facility was also included.

A comments facility was provided, where users could comment on individual sections within the consultation document, on the technical reports, or on the SEA process in general.

In addition to the web based documents the site included an ordering facility for the documents in paper form or CD.

2.2 Web hits and pages/documents reviewed statistics

The number of visits to the www.offshore-sea.org.uk website, individual reports and pages accessed during the SEA 4 consultation period are summarised in the histograms below. Figures are indicative, as for example search engine page crawlers can add considerable traffic to traffic on a website.

Figure 1 – Number of SEA 4 PDF requests by subject

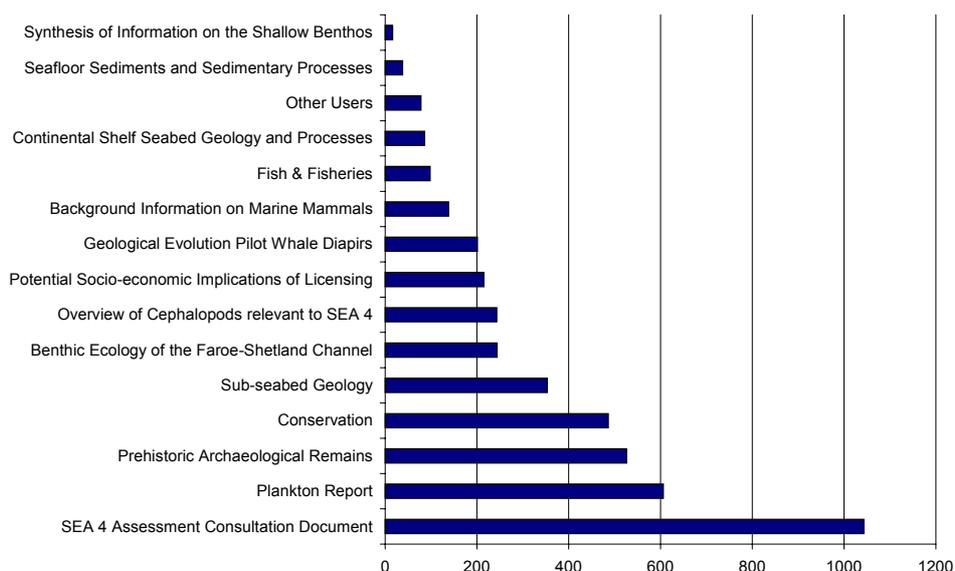
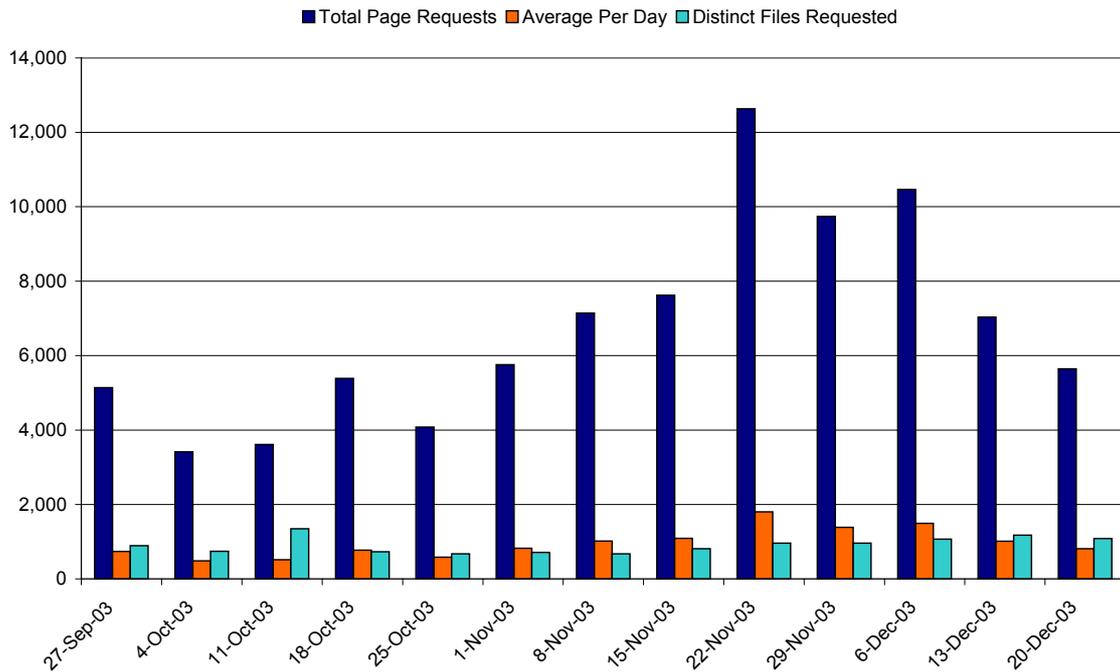


Figure 2 – Page requests during SEA 4 Public Consultation period



Dates refer to the week endings.

3 CONSULTATION ISSUES

3.1 Consultation input received

Responses were received via the SEA website and as e-mailed or hard copy correspondence to the DTI. Feedback relevant to the SEA 4 public consultation was received from:

- Faroese Food, Veterinary and Environmental Agency (FVEA)
- Joint Nature Conservation Committee (JNCC)
- Royal Society for the Protection of Birds (RSPB)
- Marine Conservation Society (MCS)
- Whale and Dolphin Conservation Society (WDCS)

For ease of reader access, consultee comments have been summarised and grouped in Section 3.2 (by SEA 4 consultation document section), together with clarifications and DTI responses which are given in italicised text following each comment. Where consultee comments cover the same issue they have been combined to avoid duplication. Where author approval was given, full texts of consultee comments are available on the SEA website.

3.2 Consultation issues with DTI responses and clarifications

3.2.1 Comments on the SEA initiative

Positive comments on the DTI SEA initiative were received from:

- Faroese Food, Veterinary and Environmental Agency (FVEA)
- Joint Nature Conservation Committee (JNCC)
- Royal Society for the Protection of Birds (RSPB)
- Whale and Dolphin Conservation Society (WDCS)

3.2.2 Issues raised on Section 1 Introduction and Background

- a. RSPB Section 1.1 Introduction - Suggest replacing the term “appraisal” with “assessment”.
- Although the words are synonymous, in line with the SEA Directive (and to avoid possible confusion with the sustainability appraisal described in the Office of the Deputy Prime Minister’s October 2003 guidance on the SEA Directive), in future DTI SEAs the term assessment will be adopted.*
- b. RSPB Section 1.5 Scope & purpose of the SEA – Positions the SEA in relation to the “appraisal of wider policy issues” of continued oil and gas production and sustainable development. Informative to clarify what the “different appraisal forum” is and how stakeholders can contribute to this appraisal process.
- The SEA Directive requires an environmental assessment of certain plans and programmes. The Directive does not cover policies and the intent of the text in Section 1.5 was to emphasise this. However, this section will be expanded in future DTI SEAs.*

3.2.3 Issues raised on Section 2 SEA Process

- a. RSPB Stakeholder interactions – Cross reference list of stakeholder issues raised with where issue is addressed in the SEA report, whether it will be taken forward in subsequent SEAs or whether outside scope of the SEA.
- The SEA process continues to evolve and suggestions that promote stakeholder participation and understanding are welcomed. In addition to a supporting document on the SEA website, Appendix 3 of the SEA 4 document summarised information from the stakeholder workshop with comments grouped under headings which relate to specific sections in the document. The suggestion to cross reference will be explored for SEA 5.*
- b. RSPB Actual closing date for comments rather than an approximate timeframe.
- Accepted, and a closing date will be posted on the SEA website.*

3.2.4 Issues raised on Section 4 Activities

- a. RSPB Basis of activity predictions to be made clearer – are they “most likely estimates” or “maximum estimates”. Helpful to include level of confidence in activity predictions.
- The activity predictions developed by the DTI Licensing and Consents Unit are based on a number of factors including geology, anticipated applications for the blocks,*

currently known but undeveloped reserves and likely exploration success rates. The estimates are indicative but are taken to represent the most likely level of potential activity. The review of SEA 1 predictions in Section 4.2.3 provided an indication of the relative accuracy of previous DTI activity predictions, and it is planned to continue this process of reality checking and adjustment of activity estimates as necessary for future SEAs.

- b. RSPB Useful to have used lower and upper level of predicted activity throughout the assessment or an assessment of what would happen if predicted activity level exceeded.

Consideration of the effects of licensing was based on the activity predictions given in Section 4.2.3 which represent the predicted most likely level of activity. The overall recommendation of the SEA was “predicated on the projections of the likely scale and location of activities that could follow licensing.” If these are likely to be substantially exceeded it is accepted and stated (Section 11.4) that the conclusions of the SEA would be re-examined.

- c. RSPB Section 4.2.3 Estimates of potential activity - Do the ‘actual’ activity values represent present values or final values?

The ‘actual’ values represent the level of activity that the operators have agreed to at licence award (as documented in the Licence Round award announcement on the DTI website). The “drilled” values for exploration wells indicate the present situation. As mentioned in the response to 3.2.4a, efforts will continue to review and refine the activity estimates.

3.2.5 Issues raised on Section 6 Ecology

Seabirds

- a. JNCC Seabird vulnerability – JNCC would expect operators to undertake necessary seabird surveys to fill any gaps in seabird vulnerability data.

Noted. As a key consultee at the activity consenting and project specific EIA stage, the JNCC will be able to discuss any data requirements with the respective operator and make such recommendations in their advice to the DTI. JNCC is a member of the Atlantic Frontier Environmental Network and if appropriate, potential collaborative surveys could be discussed through this group as has been successfully achieved in the past.

- b. RSPB Section 6.7.6 Sensitivities & vulnerability – Notification of reference containing additional information on impact of longline fishing on northern fulmars.

The paper was missed at the scoping stage. However, following review of the report it does not alter the conclusions of the current SEA. Section 6.7.6 of the SEA 4 report indicates, “...because the breeding distribution and population size is expanding, long-line mortality is not currently regarded as a serious threat to the species.” Dunn & Steel (2001) concur in that, “the estimated annual mortality [from long-line by-catch] is not thought to be status-threatening (English summary, p.8).”

Cetaceans

- a. WDCS Section 6.8.2 – WDCS provided a number of comments regarding the distribution and abundance of various cetacean species in the SEA 4 area.

The points of information or interpretation are noted and the WDCS amplifications to

information and text are welcomed. The fundamental issue relates to the relative importance of the SEA 4 area for cetaceans in general and for certain endangered/vulnerable species. The importance of the SEA 4 area for a variety of cetaceans is explicitly recognised in the SEA 4 public consultation document and in the underpinning technical report by the SMRU. Similarly, the potential effects of oil industry generated noise are given prominence in the consideration of effects (Section 10.3.1).

- b. WDCS Section 6.8.5 – SEA 4 Report should consider the annual Faroese cetacean drive hunts since animals taken in the hunts are likely to be part of wider populations that also inhabit the region including the SEA 4 area.

The subject of Faroese drive hunts and past European whaling were considered in SEA 1 (Volume 2 Sections 3.5.1 & 2). These are clearly outwith the span of DTI control and are appropriately the subject of species conservation efforts and consideration of the sustainability of traditional hunting practices. The main focus of the drive hunts is long finned pilot whales for which a recent estimate of population in the core North Atlantic range (deep waters southwest of the Faroes and west of Iceland) was some 778,000 individuals (Reid et al. 2003). Probably only a small proportion of this population is present in the SEA 4 area and consequently population level effects from SEA 4 activities are not predicted.

- c. WDCS Section 6.8.5 – Some consideration of climate change should be given, as impacts on marine wildlife are highly probable.

WDCS acknowledge in their comments that the consequences of climate change are largely unknown. It is therefore extremely difficult to assess the nature and extent of any impacts on marine wildlife. The SEA 4 assessment document considered (Section 10.3.6) the potential effects from atmospheric emissions resulting from further licensing for oil and gas exploration and production in the area. Potential impacts on marine wildlife in general were considered in Section 10.3.6.3 and it is believed that the same general principles of species response to changing conditions would apply to cetaceans in the area.

3.2.6 Issues raised on Section 7 Coastal and Offshore Conservation

- a. WDCS WDCS believe that cetaceans should be given a higher level of protection. This should include effective management prescriptions and potential designation of marine protected areas.

The WDCS perspective is noted. As the SEA 4 document makes clear in Section 7.3, all cetacean species are afforded protection at a European level through being listed on Annex IV of the Habitats Directive. With regard to oil and gas activities, “Regulation 10 of The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 states that oil and gas activities shall not deliberately disturb any creature listed on Annex IVa of the Habitats Directive (includes all cetaceans), nor cause deterioration or destruction of breeding sites or resting places of any such creature” (Section 10.3.1.6). Although the DTI do not consider that oil and gas activities constitute deliberate disturbance we have adopted a precautionary approach to activities such as seismic surveys that may incidentally disturb cetaceans and work to ensure that they are managed in such a way as to minimise disturbance effects. Work is ongoing in the UK to identify offshore SACs for wide-ranging Annex II species such as bottlenose dolphin and harbour porpoise. In UK waters, all cetacean species are also protected under Schedule 5 of the Wildlife and Countryside Act 1981.

- b. JNCC Concerns at a local level that operations could potentially affect the integrity of habitats which may in the future be designated as SACs or SPAs. However, realise that issues will be resolved at site specific EIA stage.
- Noted. The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 regulates UKCS offshore oil and gas activities with respect to the Habitats and Birds Directive. That offshore SACs and SPAs had not yet been designated was fully recognised by the SEA Steering Group and assessment team. The designation of SACs and SPAs does not preclude activities in an area – rather it requires that the effects of such activities be thoroughly considered through an appropriate assessment before consent(s) can be granted. Section 10 of the SEA 4 document considered the potential effects of activities that could follow licensing, including effects on potential statutory conservation sites. The assessment concluded that in the event of offshore SACs and SPAs being designated in the SEA 4 area, project-specific assessment and permitting procedures available to the DTI under existing legislation including The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 provided adequate control over exploration and production activities (including management of oil spill risks). As a key consultee at the activity consenting and project specific EIA stage, the JNCC will be able to make comment on habitat integrity issues in their advice to the DTI.*
- c. RSPB DTI should take a stronger precautionary approach to the present lack of conservation designations in the marine area. Blocks containing Natura 2000 qualifying habitats and species should be excluded from the 22nd Licensing Round until the exact sites and boundaries have been designated. If blocks which contain qualifying habitats and species are not excluded from the 22nd Licensing Round until the decisions on designations and boundaries have been made, a detailed explanation of the decision should be made.
- Section 7.4 of the SEA 4 document describes the progress being made by the government to identify and designate potential marine conservation sites within UK waters. Whilst at present there are no offshore sites in the SEA 4 area, The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 apply the Habitats and Birds Directives in relation to oil and gas plans or projects. Existing offshore activity consenting mechanisms (e.g. PON14, PON15, Environmental Statements, Oil Spill Contingency Plans) already allow for a precautionary approach regarding the implications of potential conservation sites. Any plan or project which either alone or in combination with other plans or projects would be likely to have a significant effect on a site must be subject to an appropriate assessment. See also response 3.2.6b above.*
- d. RSPB Section 7.4 Potential for coastal & offshore sites within the SEA 4 area – OSPAR MPA information needs to be updated.
- The DTI is party to the ongoing OSPAR programme to identify a network of Marine Protected Areas and the information provided in the SEA 4 report reflected progress at the time of writing. However, it is believed that the MPA information used as the basis of the SEA 4 assessment has not significantly changed and therefore the conclusions of the SEA remain valid.*
- e. MCS Reefs – Concern that cobbles & boulders not considered as potential Annex I reef habitats in SEA 4.
- Section 7.4 of the SEA 4 report describes qualifying habitats in the SEA 4 area and*

reflects progress to date in identifying sites. For the purposes of SEA 4, Annex I reef habitats identified by Johnston et al. (2003; JNCC 03 P01) were described. This report classified areas into “Group 1 or Group 2 depending (respectively) on the confirmation/suspicion of the presence of Annex I habitat, adequacy/inadequacy of biological information, and absence/presence of sites of such character in territorial waters (0-12nm).” This report offers the most up-to-date information relating to progress in identifying potential offshore sites. See also response 3.2.6b above.

- f. MCS Iceberg ploughmarks found along the West Shetland Slope and Wyville Thomson Ridge; the Judd Deep; Solan Bank; Turbot and Otter Banks, and around Shetland Islands. All these areas should be protected and not just the Wyville Thomson Ridge as indicated in SEA 4.

Section 7.4 states that “potential areas of ‘reef’ habitat relevant to SEA 4 include iceberg ploughmarks along the West Shetland Slope and Wyville Thomson Ridge; the Judd Deep; Solan Bank; Turbot and Otter Banks, and areas around the Shetland Islands. Of the potential areas, Johnston et al. (2003), identify the Wyville Thomson Ridge as the only area of reef habitat within the SEA 4 area for which there is sufficient information to class it in Group 1.” This does not mean that the WTR will be the only area to be protected but rather it is currently the only area for which there is sufficient information available to consider it against the selection criteria (Group 1). The other areas mentioned are considered in Group 2, indicating that further consideration or survey work is required. See also response 3.2.6b above.

- g. MCS Additional surveys required to be certain that no pockmarks and biogenic reefs in the SEA 4 area.

The MCS view is noted. Regional topographic surveys carried out by the Atlantic Frontier Environmental Network and the DTI as part of the SEA process confirm the absence of large biogenic reefs of cold water coral in the SEA 4 area (see also discussion and references in Section 6.3 deep water areas). Such surveys are unlikely to have detected any but the largest submarine structure made by leaking gases. However, such structures would be identified by pre-activity seabed surveys such as rig site and pipeline route surveys – the results of which are considered in activity consenting processes. Section 11.3 of SEA 4 recommended that “Basic research into the identity, distribution and biological functioning of the species and communities present in the SEA 4 area should be promoted and as appropriate supported, consistent with Government policies on biodiversity and conservation.”

- h. MCS Concern that SEA 4 does not contain maps detailing the location of Annex I habitats in the SEA 4 area. Future SEAs should detail this information.

Following SEA 3, JNCC suggested that those interested refer directly to the Annex I location graphics presented in Natura 2000 in UK Offshore Waters, JNCC Report 325, Johnston et al. (2002, and available at <http://www.jncc.gov.uk/Publications/JNCC325/intro325.htm#full>). This report was clearly signposted for this purpose in Section 7.4.1 of the SEA 4 report. However, the issue will be reviewed for future SEAs.

- i. MCS In future SEAs it would be helpful if the exact area of the SACs were mapped. Detailing all the terrestrial SACs is not necessary.

There are currently no offshore SACs identified within the SEA 4 area. Maps detailing the exact area of the coastal SACs were not included in the consultation document in the interests of report brevity and since the SAC site information provided in the

Conservation Report for SEA 4 contained links to the JNCC and SNH websites where site maps could be viewed. Terrestrial SACs were listed within the SEA report if the site either contained a marine component or interfaced with the marine environment e.g. contained a shoreline since these could be affected by, for example, a major oil spillage.

- j. MCS DTI need to ensure that licensing will not have a direct or cumulative adverse affect on the integrity of existing or potential SPAs.
Such protection is integral to the DTI's consideration of licensing through the SEA process and post licensing activity consenting processes. See also response to 3.2.6b and c.
- k. MCS OSPAR's MPA programme – DTI should avoid licensing activities and development that may have a significant effect on habitats or species identified under OSPAR. SEA did not fully assess the significance of impacts against each of the habitats and species listed by OSPAR.
The identification and implementation of OSPAR MPAs was a consideration during the assessment process (SEA 4 Appendix 2) although it should be noted that at the time the OSPAR list of habitats and species was still in development and had not been agreed. The potential to cause significant change “to internationally or nationally protected or listed [see response 3.2.10a] populations, habitats or sites” was a screening criterion for the assessment (SEA 4 Appendix 2).
- l. MCS SEA did not include any comprehensive assessment of marine features and species that may be of national importance.
The SEA 4 assessment document and underpinning technical reports did consider marine features and species of potential importance at various scales. For deep water habitats and species in particular there is rarely definition of which are of national importance (and often not even the basic distributional or taxonomic information on which to make such value judgements). For deeper water features and species the UK Biodiversity Group Action Plans include only relatively well known vertebrates and cold water coral Lophelia pertusa reefs. However, various studies including those commissioned by the DTI as part of the SEA process have contributed substantially to improved understanding of the SEA 4 area and form a basis on which to take strategic decisions regarding future oil and gas licensing.

3.2.7 Issues raised on Section 8 Users of the Sea and Coastal Environment

Military activity

- a. WDCS Reports of cetacean strandings associated with military activities should be included within a 'Management issues and initiatives' section.
Cetacean strandings associated with military activities were described in Section 10.3.1.3 Noise effects on marine mammals. New information continues to appear (for example the October 2003 paper “Gas-bubble lesions in stranded cetaceans” by Jepson et al. published in the journal Nature volume 425 pages 575-576) and where relevant is considered by DTI in licensing and activity consenting decisions.

3.2.8 Issues raised on Section 10 Consideration of the Effects of Licensing

Approach

- a. RSPB Impact-type basis of assessment not sufficient to provide clear view of likely significant effects on different receptors/components of the environment. Adequate assessment of cumulative effects cannot be produced unless receptor-based. Inclusion of an overall impacts summary table in the Recommendations (Section 11.3) would also be helpful.

The RSPB view is noted and their constructive comments welcomed. The receptor/component approach to assessment was used in the first DTI SEA and necessitated much repetition of information. In response to stakeholder comments on SEA 1, the impact basis to assessment was adopted for subsequent SEAs. However, in light of the RSPB comment, a combined approach for future SEAs will be explored and discussed with the SEA Steering Group.

- b. RSPB Section 10.2 Approach – Who carried out the initial stage of identification of interactions between the potential activities and receptors?

As explained at the expert assessment workshop for SEA 4 (May 2003) the initial stage of identification of interactions was made by the DTI offshore energy SEA consultants. This initial assessment was reviewed and discussed in detail at the expert assessment workshop. See also Section 1.5 of the SEA 4 assessment document.

Consideration of effects

Underwater noise

- c. JNCC
WDCS
MCS SEA 4 document has not demonstrated how the conclusion has been reached that ‘there is an acceptably low risk of potential effects of underwater noise resulting from SEA 4 activities.’

The assessment process was informed by available scientific information and previous experience in the area. Section 10.3.1.6 states the potential “level of [seismic] activity does not represent a significant change to recent seismic survey effort...This effort, and similar levels of activity during the previous 5 years, does not appear to have resulted in significant changes in sightings frequency or behavioural responses (Stone 2003b).” The SEA recognises the importance of the SEA 4 area for cetaceans and sets out a number of recommendations in relation to remaining uncertainties and data gaps. Given the existing and apparently effective mitigation measures (primarily the JNCC Guidelines for minimising acoustic disturbance to marine mammals from seismic surveys, augmented since SEA 1 by the DTI PON14 consenting process) and the apparent lack of significant detrimental effects from previous seismic activity, the potential effects of underwater noise were judged on balance, to be of acceptably low risk. It is recognised that gaps in understanding remain about potential far-field and additive/cumulative disturbance effects that may arise. The DTI accepts that although the risk is believed to be low this cannot be objectively demonstrated at this time. This problem is recognised internationally and work is ongoing to try and fill these data gaps. In the meantime, the DTI will consent and manage these activities in a precautionary way and work towards reducing the environmental footprint of noise.

- d. JNCC The DTI (or the oil and gas industry as appropriate) should adopt the recommendations in Section 10.3.1.7 and 11.3 to minimise disturbance to marine

mammals. In particular:

- “Oil and gas industry encouraged to minimise noise production through engineering solutions.”

The JNCC view is noted and potential engineering solutions are described in Section 10.3.1.6. “Possibly the major area which could be addressed through technology development is a reduction in source power levels, for example through improved streamer and survey design, or (in the longer term) through replacement of seismic surveys with electromagnetic seabed logging. Further technology development, particularly in acoustic detection, identification and monitoring of cetaceans, could also substantially improve the effectiveness of mitigation through the established procedures.”

- With regard to the management of cumulative effects of noise, DTI encouraged to “establish criteria for determining limits of acceptable cumulative impact; and for regulation (through permitting procedures) of cumulative impacts.”

The JNCC view is noted and the SEA 4 recommendations will be considered in detail by the DTI (with others as appropriate).

- Support the recommendation that there should be ‘a presumption in favour of the use of acoustic detection methods during seismic surveys in the SEA 4 area.’

The JNCC view is noted and this recommendation already forms part of revised DTI guidance on the PON 14 consenting process. All seismic surveys in deep water areas to the west of Shetland consented in 2003 were required to use passive acoustic monitoring as a condition of consent.

- e. WDCS Limitations and implications of active acoustic monitoring on cetaceans should be considered. Understand that DTI are currently conducting a desk-based study into this. Research programmes that both Hammond *et al.* (2003) and the SEA 4 report detailed as necessary should be initiated. Need to put in place long-term monitoring projects before new activities develop.

The report referred to in the WDCS comments will be made public when finalised. The WDCS view is noted and will be considered in the DTI review of the research programmes recommended by the SEA. Section 10.3.1.7 notes that the “DTI and a Joint Industry Project group are funding a three-year project aimed at developing and validating a systematic approach to assessing sensitivity to acoustic disturbance in fish and marine mammals, involving an assessment of frequency response in individual species in relation to received power spectra from a variety of sources. This information (and that from other initiatives) should help inform future assessments of acoustic disturbance.”

- f. WDCS Full consideration to be given as to how to limit any effects on cetaceans through additional protection, effective mitigation, the use of new technology and limitations on scale of any development in the area.

The SEA recognises the importance of the SEA 4 area to cetaceans and the factors highlighted by WDCS form an integral part of the assessment process. The recommendations made in Section 11.3 cover many of the issues highlighted by the WDCS - these will be considered in the 22nd Licensing Round decisions. See also response 3.2.8d.

- g. WDCS Section 10.3.1.3 Noise effects on marine mammals – WDCS provided additional information for inclusion/consideration in this section. Information relating to noise effects in fish also provided.

Noted. The information on bowhead whale response to seismic survey in the Arctic is difficult to apply to UK waters, since in the Arctic the species is subject to hunting and the observed responses may be in part be a result of this. The information published by Jepson et al. appeared after the SEA 4 document was placed on the website – however, the causal link appeared to be military sonar with beaked whale stranding starting about 4 hours after the start of mid-frequency sonar use in an international naval exercise. Military sonar and oil industry seismic surveys cannot be directly compared because of differences in frequency power spectrums and since seismic survey noise is impulsive not continuous. It seems unlikely that such effects (mortality) are associated with oil industry seismic survey since moribund cetaceans could be expected to be observed at the surface given the presence of marine mammal observers on board the vessels and the close line spacing and duration of survey. In addition, strandings of sperm whales are predominantly in winter whilst seismic surveys are typically conducted in summer.

- h. MCS Concern that level and scale of proposed seismic testing will disturb and damage cetaceans and may be detrimental to the maintenance of the populations of some species of cetaceans at a favourable conservation status in their natural range. DTI must work with the oil and gas industry to establish greater co-operation and sharing of seismic data and this should be a condition of licence.

Many operators include reprocessing of seismic data within work commitments when applying for licences and the DTI actively promote this. . New data are expensive to acquire and a new survey is usually only proposed if reprocessing of existing data is not an option. Regulation 4 of The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 requires consent for “prospecting or carrying out geological surveys by physical or chemical means”. Any seismic activities judged individually or in combination with any other plan or project, to have a potentially significant effect on a relevant/potential conservation site would have to undergo an appropriate assessment. See also responses to 3.2.6a and b for the more general protection afforded to cetaceans by Regulation 10.

Marine discharges

- j. FVEA Given importance of fishing and fish farming to Faroese economy, important that marine discharges are limited as much as possible. Recognise UK’s implementation of OSPAR measures.

Noted. Section 10.3.4.6 describes the control and mitigation measures in place to manage marine discharges from oil and gas activities. These measures include the Offshore Chemicals Regulations, 2002 a focus of which is the reduction of the use of hazardous chemicals. Through OSPAR the UK is committed to a 15% reduction in total discharge volume of oil in produced water by 2006 and there is a presumption against discharge from new developments. Previous discharges of water based muds and cuttings in the SEA 4 area have been shown to disperse rapidly and to result in minimal contamination or ecological effects.

Accidental events

- k. RSPB Section 10.3.8.4 Oil spill trajectory - Shortest time to beach was 25 hours from Clair to Shetland. This is the minimum acceptable limit for the RSPB.
- Noted. The modelling data provided represents the worst case scenario and forms the basis of the relevant oil spill contingency plan which sets out the strategic response of the operator and relevant authorities. The Clair example was based on a crude blowout which is extremely unlikely (blowout frequencies for west of Shetland range from 1 in 1,075 to 35,714 well- years). The deterministic modelling represents a worst case scenario of a constant 30 knot onshore wind but in winds of less than 13 knots the oil would not beach on Shetland. Stochastic modelling indicates probabilities of between <10-30% for surface oiling resulting from uncontrolled crude oil blowout scenarios reaching Shetland.*
- l. RSPB Section 10.3.8.5 Ecological & economic effects of oil spills – Welcome DTI commitment to further post-Braer sampling.
- As part of the DTI SEA process, during 2003 samples were taken for hydrocarbon, physical and biological analyses at the main areas around Shetland affected by the Braer spill. The analysis of these samples is underway and the results will be made publicly available in due course.*

Cumulative and synergistic effects

- m. WDCS Section 10.4 – Section does not adequately provide a full assessment of cumulative impacts.
- The WDCS view is noted. The subject of cumulative and synergistic effects assessment is fraught with difficulty, for example considerations of equivalence, significance and relative importance, coupled with often limited information on components of the ecosystem, their interactions and effects of human activities. The assessment workshop (SEA 4 Appendix 2) considered cumulative effects as one of the screening criteria for the assessment. All potential cumulative effects were considered significant and were taken forward for further discussion within the SEA 4 assessment document (Section 10.4).*
- n. MCS Concern that SEA does not assess the direct and cumulative effects of additional oil and gas licensing on coastal SACs. Further assessment needed before licensing proceeds.
- The potential to cause change “to internationally or nationally protected or listed [see response to 3.2.10a] populations, habitats or sites” was a screening criterion for the assessment (SEA 4 Appendix 2). The only credible effect on coastal SACs from additional licensing in the SEA 4 area is from major oil spillage and this was addressed in Section 10.3.8. “Cumulation” of specific issues of concern – for example noise in Section 10.3.1.6 and drilling wastes in 10.3.4.3 – were also addressed in impact sections.*
- o. MCS Marine spatial planning needed in order to properly assess cumulative and synergistic effects of developments and activities at the ecosystem level.
- The MCS perspective is noted although the linkage between marine spatial planning and ecosystem level effects is unclear. The DTI has combined the SEAs for oil and gas and the offshore wind/renewables licensing for future SEAs which will allow integrated consideration for the energy sector.*

- p. RSPB Not convinced that definitions used for incremental, cumulative and synergistic effects are helpful. Incremental and synergistic effects could be viewed as particular types of cumulative effects rather than as separate categories of impact types.
- The RSPB view is noted. The definitions are indeed subsets of cumulative effects but used to aid consideration of the incremental effects of further oil and gas activity in the area of existing activity as distinct from the synergistic effects of other human activities in the area. It is suggested that the subject of such definitions are discussed at the expert assessment workshop for the next SEA.*

3.2.9 Issues raised on Section 11 Conclusions

Information gaps

- a. RSPB Section 11.2 – Explanation of why information gaps identified in SEA 4 and previous SEAs have not been tackled. Request assurances that temporal and spatial gaps in the seabird at sea data sets will be filled. Age of the data also an issue.
- Identification of data gaps is a key part of SEA. The SEA is explicit about the information gaps and recommends that they be filled in due course. A number of initiatives are underway to fill data gaps including the three-year project funded by the DTI and a Joint Industry Project group aimed at developing and validating a systematic approach to assessing sensitivity to acoustic disturbance in fish and marine mammals. A precautionary approach with regard to seabirds is taken in the licensing process with the DTI receiving advice from the JNCC. Similarly, in the consenting of offshore activities, the JNCC is a key consultee and the opportunity for wider advice is provided through the consultation process for Environmental Statements etc. See response to 3.2.5a.*

Overall conclusion

- a. JNCC In general agree with SEA conclusion to restrict the area licensed temporarily or
RSPB spatially. Agree with exclusion of blocks within Quadrant 217 until further
MCS information available.
- The views of the consultees are noted.*
- b. JNCC If coastal waters shown to be of greater prospectivity, DTI to undertake a further SEA
RSPB of this area using revised activity estimates.
- The DTI accepts the statement in Section 11.3 “that the recommendations ... are predicated on the understanding that because of poor hydrocarbon prospectivity, the nearshore blocks are unlikely to be applied for or licensed.” In the event of significant changes to the predicted level of activity as a result of improved near shore prospectivity and if those changes might result in a significant effect to the environment, then a new SEA would be initiated.*
- c. RSPB DTI to make a statement when announcing the 22nd Licensing Round that
recommendations and conclusions based on the assumption that near-shore blocks
unlikely to be applied for. Also expect a statement summarising how environmental
considerations have been integrated into the 22nd Licensing Round and the reasons for
the alternative chosen.
- The DTI has committed to transparency in the SEA process and where appropriate*

will summarise the environmental considerations for 22nd Licensing Round in any announcement made.

- d. MCS Sustainable development – Recommend that the government should consider holding back licensing some blocks so that productive reserves are maintained for the future.
- This perspective is noted. SEA 4 was selected by the DTI as the next in the series because the geology of parts of the area is prospective for both oil and gas and projections show the UK having a growing shortfall in both oil and gas supplied from the UKCS. By around 2006 the UK will be a net importer of gas and by around 2010 of oil (DTI Energy White Paper). Section 11.1 concludes under the heading ‘Wider policy objectives’ that “Provision of oil and gas from UK resources will contribute to the security of national energy supply. Activities resulting from SEA 4 licensing would have positive socio-economic effects (including contribution to human community sustainability) on Shetland, Orkney and north eastern Scotland as well as the UK as a whole.”*

3.2.10 Issues raised on Appendix 2 Assessment Workshop

- a. RSPB Indicative criteria revised at assessment workshop but version in Appendix 2 does not appear to have been changed. The phrase “internationally or nationally protected populations” should be “internationally or nationally protected or listed populations” as some species and habitats may be listed for protection but not yet formally protected.
- This is accepted but does not materially affect the conclusions of the SEA 4 assessment document.*
- b. RSPB A brief summary of the criteria and receptors identified as needing further assessment should be included in main body of text.
- Noted. The SEA process is continually evolving and suggestions that promote stakeholder understanding will be considered for future SEAs.*
- c. RSPB Clarify who carried out final stage of “detailed consideration of the interactions”.
- See Section 1.5 of the SEA 4 assessment document - the detailed consideration of the interactions was made by the DTI offshore energy SEA consultants in conjunction with the DTI and its statutory consultees.*

3.2.11 Issues raised on Appendix 3 Stakeholder Workshop

- a. RSPB Clarification of whether/how stakeholder discussion changed the issues considered or assessment process.
- A summary of the issues raised, information sources and suggestions for future SEA process improvements made at the stakeholder workshop was provided in Appendix 3. Comments were categorised under headings which directed them to specific sections of the SEA 4 report for consideration. Examples of stakeholder meeting feedback incorporated into the SEA 4 document include new sources of and updated information, consideration of Fair Isle in SEA 4, consideration of the implications of Promote licences and amplification on the adequacy of fisheries data.*