

Responses received to the SEA2 Consultation Document

Responses from:

MCS
RSPB
SEPA
WWF
JNCC

Marine Conservation Society's response to DTI's Consultation Document: 2nd Strategic Environmental Assessment – Offshore North Sea

MCS welcomes the preparation of SEA 2 for the Department of Trade and Industry (DTI). MCS has been calling for a more strategic approach to be taken to assess the environmental impacts of oil and gas and all other marine activities for a number of years and believes this is a good step in the right direction. The information provided in SEA 2 was of considerable interest and the research undertaken very useful, but MCS feels that SEA 2 falls short in a couple of key areas and we have the following comments to make:

Marine Special Areas of Conservation

MCS requests that the DTI should take account of any areas *that may be designated* as marine SACs under the EC Habitats Directive, when considering individual block licences not just sites *that are designated* as is suggested in 11.4.1 of SEA 2. No licenses should therefore be given for blocks which include important areas of pockmarks such as Fladen Ground which according to 2.5.1 of SEA 2 could be designated as offshore conservation sites or sandbanks which are slightly covered by seawater all the time, such as the Dogger Bank. The DTI must leave these sites until the Statutory Nature Conservation Agencies have had time to determine the conservation status of these features (aided by the DTI's surveys for SEA 2) and whether as important representative examples of those habitats they should be designated as marine SACs.

Marine Mammals

MCS believes that the 20th licensing round of oil and gas will have a potential significant effect on the resident population of Bottlenose dolphins in the central N.Sea. The potential cumulative and synergistic effects on this Annex I species (under the Habitats Directive) are as follows:

- Disturbance from inshore oil and gas activities in the Moray and Cromarty Firth resulting from the 20th licensing round and existing activities, noise from seismic surveys, all vessel movements, noise from drilling and decommissioning explosions, which could effect feeding patterns and reproduction.
- Contamination from toxic discharges arising out of present and future oil and gas activities and other sources which could have an effect on the reproductive and immune systems of the dolphins.
- Potential for direct mortality resulting from contamination in the case of an oil spill affecting the Moray Firth area, from decommissioning explosives or from collisions with shipping.

MCS is also concerned that the 20th licensing round may result in similar effects on other marine mammals in the North sea particularly species which are more susceptible to seismic testings and others (harbour porpoise) which are caught as a fishery bycatch. Further research is still needed on the distribution of marine mammals and the cumulative and synergistic effects of all activities in the North Sea on these creatures.

Marine Reptiles

MCS requests that the records of marine turtles detailed in 6.6.2 of SEA 2 is updated as per the following JNCC report on marine turtles:

- Pierpoint C (2000). By catch of Marine Turtles in UK and Irish Waters. JNCC no 310.

Cumulative and synergistic effects

Annex I (f) of the SEA Directive states that a SEA should include information on the likely significant effects on the environment of a plan or project. A footnote states that likely

Marine Conservation Society's response to DTI's Consultation Document: 2nd Strategic Environmental Assessment – Offshore North Sea Cont'd

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

MCS agrees with the definitions described in 10.5 of SEA 2 that “cumulative effects are considered here as identified effects from E&P activities resulting from the proposed 20th Round licensing, which have potential to act additively with those from other oil and gas activity (including both existing activities and new activities in existing licensed areas). Synergistic effects are considered to be potential effects of E & P activities which act additively with those of other human activities (e.g. fishing and crude oil transport)”. However it is incorrect as stated in 10.5 paragraph 2 for the SEA 2 to only consider effects as being cumulative “if the footprint of a particular project overlaps with that of adjacent activities”. MCS requests that SEA 2 should assess the cumulative effect on the whole area or a particular biotope instead. So for example the cumulative effect of potential and existing physical damage from E & P activities on pockmarks may be significant.

MCS is also concerned that the 20th licensing round is being assessed as not significant in comparison to ongoing oil and gas exploration (see 10.4.2.4 for example), when it should be the cumulative effect of both existing, past and future activities which needs to be assessed considered in combination with ongoing oil and gas exploration. This is also the case with regard to assessment of other synergistic effects from activities such as fisheries and aggregate extraction. For example again with regard to physical damage SEA 2 should acknowledge that the synergistic effect of E & P along with other major activities such as fisheries and aggregate extraction may have a significant effect on Sandbanks which are slightly covered by seawater at all time.

Transboundary effects

Article 7 of the SEA Directive states that where a project or plan is likely to have a significant effect on another member state, then the plan should be forwarded to them. As discussed above MCS believes that the 20th licensing round will have a significant effect on the North Sea and as such under the SEA Directive Member States bordering the North Sea will need to have an opportunity to review the SEA 2 before the plan can be adopted.

Consideration of the implications of alternatives

MCS does not believe that the matrix illustrated in 11.1 of SEA 2 summarizing the potential significant sources / effects arising from various alternatives and possible subsequent activities (exploration and production) is consistent or correct. MCS view on this is discussed as follows:

1. **Not to offer any blocks for Production Licence award** would clearly be of significant environmental benefit. For SEA 2 to state that there would be “no environmental benefit or disadvantage” for marine mammals, benthic communities, water quality etc of not offering blocks for Production Licence is therefore incorrect and needs to be corrected. MCS agrees that not licensing, would result in a definite negative socio-economic impact. Therefore we accept that until the UK government, industry and public are prepared to make the change over from polluting energy production to clean, renewable energy production that some oil and gas licensing will continue.
2. **To restrict the area licensed by offering only a proportion of the blocks nominated** would result in strong environmental benefits by removing environmental impacts in

- some blocks (from seismic surveys and physical damage to marine discharges and oil spills). If as suggested by the matrix - restricting the area licensed would only have minor socio-economic disadvantage, then this seems to be the most appropriate option.
3. **To stagger the timing of activity in the area** would as stated in the matrix have strong environmental benefits for marine mammals, but minor effects otherwise. .
 4. **To proceed with the licensing programme as proposed** would have “potential significant environmental effects” not as indicated in the matrix only “minor environmental effects”.

Conclusion

MCS believe that the potential secondary, cumulative and synergistic effects of oil and gas exploration and production resulting from the 20th licensing round will have a likely significant effect on the habitats and species of the SEA 2 area, including one Annex I species under the Habitats Directive and two internationally important habitats.

MCS recommends that the DTI adopt the second alternative identified for the 20th Round:

- **Restrict the area licensed by offering only a proportion of the blocks nominated.**

If researched properly this would have strong environmental benefits by removing environmental impacts in the most sensitive blocks (such as those that may be proposed as SACs) while only having a limited socio-economic disadvantage.

In addition substantial mitigation measures must be incorporated into licenses, including substantial reductions in toxic discharges and staggering the timing of activity in the area.

MCS calls for the UK government to undertake an ecological and economic assessment of all activities in UK waters. In the absence of this the full impact of all the activities of UK plc on regional seas such as the North Sea needs to be fully assessed.

Melissa Morton
Coastal and Marine Planning Officer
Marine Conservation Society

December 2001

cc.

1. Nature Conservation Agencies EN: Leigh Jones, SNH: David Doonan, JNCC: Mike Tasker
2. NGOs: Scottish Environment Link; WWF: Sian Pullen, Chris Berry (Offshore Forum member)
3. DEFRA: Andrew Osborne (Offshore Forum member)
4. DTI: Jim Campbell, DTI, Director, Environmental and Decommissioning (OG-ED) (Chair of Offshore Link), plus other offshore link members: Kevin O'Carroll: OG-ED; John Maslin: OG-ED; Robert Lilly: ENP; David Foskett: OG-ED
5. UKOOA: David Odling.; Mick Borwell, UKOOA – both Offshore Link members
6. Industry Offshore Forum members: Tim Smith, BP; Rob Mills, Talisman; Ian Buchanan, TotalFinaElf



for birds
for people
for ever

Ms Christine Weare
Oil & Gas Directorate
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09 January 2002

Dear Christine,

Re: SEA2 – Strategic Environmental Assessment of the Mature Areas of the Offshore North Sea

Please find enclosed the RSPB's response to the DTI's consultation on Strategic Environmental Assessment of the Mature Areas of the Offshore North Sea (SEA2). We welcome the opportunity to comment on this SEA.

The RSPB welcomes the production of SEAs covering the implications of further oil and gas exploration on the UKCS. The RSPB are committed to the SEA process. We see SEAs as key tools for integrating biodiversity considerations into decision-making to help avoid/minimise impacts on wildlife and habitats.

Implementation of The EU SEA Directive is mandatory in EU Member States by mid-2004. The RSPB believes that through this process of consultation and stakeholder meetings, the SEA can become a useful environmental tool in the UKCS by that time. If you have any queries or require further information, please do not hesitate to contact me.

Yours sincerely,

Dr Sharon Thompson
Marine Policy Officer

cc: Dr Quentin Huggett, Geotek Ltd
John Hartley, Hartley Anderson Ltd

Our Ref: C1/9/2

SEA2 - Strategic Environmental Assessment of the Mature Areas of the Offshore North Sea.

**Consultation Document, September 2001.
Response by The Royal Society for the Protection of Birds
10 December 2001**

GENERAL COMMENTS

Format

The format of SEA2 is a great improvement on that of SEA1. The document is generally much more user-friendly, being easier to read with a more logical flow of information.

SEA Directive

The stated aim of undertaking SEA2 in line with the provisions of the recently adopted SEA Directive (page iii) is welcome. SEAs for all future off shore oil and gas licensing rounds should also be undertaken in line with these provisions. If a strong SEA process for offshore oil and gas licensing rounds can be established this should facilitate sound decision-making. It will also enable DTI to prepare for carrying out SEAs when the Directive is implemented and compliance becomes mandatory by mid 2004.

The Directive requires monitoring of the implementation of plans and programmes to identify unforeseen adverse effects and enable appropriate remedial action to be taken, and we would urge DTI to implement monitoring measures for SEA2.

Alternatives/scenarios

More information should also be provided about each of the scenarios - what is envisaged in scenario 4 requires more explanation. An SEA should compare potential effects from different alternatives help inform a decision between alternative options – at present SEA2 concentrates on alternative 4 and places insufficient emphasis on the potential environmental impacts of the other scenarios and how and why these would differ from those of scenario 4 – see our comments relating to the basis of assessment below.

Spatial information about impacts

As currently presented, it is hard to get a spatial picture of likely impacts. More spatial information about potential impacts and about constraints *eg* areas of importance for seabirds, etc. is needed. Constraints need to be shown on the same maps as potential impacts so that possible interactions can be identified. This will enable an overall picture of constraints and impacts to be constructed and help to identify any blocks that should not under present circumstances be offered for licensing.

Basis of assessment of impacts

Scoping – the Stakeholder Workshop was useful but the transcript could have been synthesised into an issues report summarising key concerns and would then have been more accessible. Preparation and circulation of a scoping report summarising the proposed scenarios, potential impacts and approach to the assessment (*eg* new surveys to be carried out, experts to be used, timing, methodologies of assessment, etc) for comments/agreement prior to commencement of the main body of the work for the SEA would be useful. It should help ensure all concerns are addressed and that a consensus of approach is adopted.

The background expert reports are good as far as they go, but these are essentially state of the environment reports. We were expecting the experts to comment on likely impacts from each of the scenarios, as is usual practice in environmental assessments.

SEA2 needs to be clearer about the basis of the assessments presented in Section 10, *eg* who exactly made these, and on what basis? It appears that the consultants in charge of overall coordination of the SEA have made these, whereas we would have expected some input from the relevant experts – see above. Hence, at present there appears to be a stage missing between the general statements made in the state of environment reports and assessments of the different scenarios. The Tables in Section 10 are helpful, but again SEA 2 needs to state who made the judgements in each of these and to explain the basis on which these were made. All statements in section 10 based on opinions/professional judgement need to make clear whose judgment/opinion this is and on what it is based.

Incremental and cumulative effects

Potential incremental effects are downplayed. SEA 2 presents these effects as small in comparison with existing/historic effects and concludes that therefore these are not a concern. This ignores the possibility that small incremental effects may exceed a threshold and lead to potentially severe consequences. This issue needs to be explored more fully for each impact type.

Cumulative effects have not been considered in sufficient detail. At a recent meeting with Jim Campbell and Kevin O'Carroll (DTI), we offered to provide a note on cumulative effects assessment practice generally and this will follow.

Decision-making

The timing of SEA and its input into decision-making are crucial. It is essential that the SEA is used to inform the licensing decisions and that it is also seen to have been used. When the licensing decisions are published these should be accompanied by reasons for the decisions, including a statement on how the environmental information has been taken into account.

SPECIFIC COMMENTS**Non-Technical Summary**

Contamination, p.vi, last 2 sentences: The discharge of oil-based drill muds and rock cuttings from oil and gas well drilling has now ceased (1 January 1997) in the North Sea. However, although water-based muds are now used wherever possible, synthetic and mineral oil-based muds may be employed after consultation with UK Government departments. The statement in SEA2 implies that the only remaining source of contaminants from oil industry activities results from produced water from existing activities in the SEA2 areas, which is misleading.

Assessment, pp.vi-x: While noting that this is a non-technical summary, some of the results from the Assessment section are very short. For example, the section on Noise (p.vi) would benefit from one or two lines stating why the noise from seismic surveys are considered unlikely to cause physical damage or significant behavioural disturbance to marine mammals. Similarly, in the section on Wider Policy Objectives (p.x), all that is provided is a list, which on its own does not really inform the reader – brief reasons should be given.

6 Ecology, pp.51-101: This section is slightly confusing as some of the sections only refer to the ecology, while others also include a small analysis of the conservation significance, status and/or framework, while still others also include a short analysis of the implications for the SEA. As noted above, the format of SEA2 is much improved on that of SEA1 and, in general, is easier to read and to follow the flow of information. However, this particular chapter lacked some of that clarity. It would make easier reading, and add to the consistency of the SEA, if this section dealt with description of baseline ecology, with reference to the analysis of conservation significance and potential designation of sites in Section 7, and the full assessment of potential impacts analysis, including the comparison of the different alternatives, in Section 10.

6.7 Seabirds, pp.79-90: We are pleased to see that SEA2 contains a wide range of data sources for the seabird section, including those references which the RSPB suggested. However, in light of the comments made in the second paragraph on p.90 (6.7.5 Sensitivities & Vulnerability), regarding the age of the data and the significant ecological changes that may have occurred since the surveys were conducted, updating this data and filling any seasonal gaps should be a priority. This will be particularly pertinent once the criteria for offshore SPAs are published.

6.8 Marine Mammals, 6.8.6 Conservation Frameworks, p.99, last para: In England and Wales, the implementation of the Countryside & Rights of Way (CROW) Act 2000 amended the Wildlife & Countryside Act 1981 and added further legal protection for cetaceans through this amendment. (See also 10.4.1.5 Control & Mitigation, p.149).

7.2.3 Submarine Structures made by Leaking Gases, pp.104-107: The RSPB would recommend the precautionary approach to the three pockmarks in Block 15/25. The remaining portion of this block should not be re-licensed until further studies have been completed on pockmarks and their associated fauna. Also, the technical report on pockmarks (Dando 2001) indicates that all types of actively seeping pockmarks are of biological interest and although those without cemented sediment features may not fall into any of the categories in the Habitats Directive, the RSPB would recommend precautionary measures until further data has been collected on these pockmarks.

10 Consideration of the Effects of Licensing, pp.135-182: The effects of licensing can not be fully explored until the offshore SACs have been designated and in the case of the offshore SPAs, we are still waiting for criteria as a precursor to designation. The assessments in this chapter do not take full account of this problem, which the RSPB sees as a very serious omission.

10.4.4 Marine Discharges, 10.4.4.8 Conclusions, p.161, para 2: After attending the UKOOA Drill Cuttings Initiative (Research & Development Phase II Results) workshop on the 20 November 2001, the RSPB was concerned to see that SEA2 advocates that the rapid and wide dispersal of drill cuttings is the least damaging ecologically. This seminar produced no clear generic decision as to the best way forward for management of drill cuttings, rather there was a general position of dealing with each pile on an individual site basis using the assessment criteria to provide specific recommendations. With this study giving no conclusive evidence on the least ecologically damaging way to deal with drill cuttings and work still in progress, it would seem premature of SEA2 to be endorsing dispersal.

11 Conclusions, pp.183-190

11.1 Conclusions, pp.183-186: In this section, the significance of each of the potential impacts is considered. For example:

- discharges (p.183) of produced water, as a result of SEA2 licensing, are not considered significant at maximum of 2.4% (incremental contribution) of the whole of the North Sea produced water discharges;
- the predicted incremental annual discharge of water-based mud chemicals from SEA2-related drilling represents a maximum increase of 4.2% (in 2002) on 1999 values, the dispersal mechanisms at work in the North Sea could, in theory, lead to localised accumulation in relation to topographic features although this is considered unlikely to be detectable;
- atmospheric emissions from both platform flaring and power generation (at 2.4% of 2000 emission levels for UKCS production) are not considered to represent a major contribution to the UK's total annual emissions; and
- all the cumulative effects (pp.184-185) are considered limited or unlikely, and the synergistic effects are insignificant.

However, the socio-economic effects (p.185) give us peak employment figures of 8977 extra jobs being created, of which 858 are estimated to be direct over the next 8 years. We are not told what percentage this number of (in)direct jobs represents or whether these values are significant in terms of UK, Scottish or even local (un)employment figures.

The section on the wider policy objectives (pp.185-186) does not give much insight or train of thought on this conclusion.

11.1.1 Consideration of the Implications of Alternatives, p.187, last para, last 2 sentences: SEA2 concludes that *“the benefit of withholding nominated blocks is not considered significant. No localised areas within the SEA2 area were considered of outstanding environmental sensitivity”*. However, as the areas likely to be designated as SACs (or SPAs) have not been identified yet, nor are the criteria (or even draft criteria) for designation available in the public domain, this statement would appear to be premature, especially in relation to the blocks which contain pockmarks with solid sediment features or sandbanks, eg the Dogger Bank with distinctive sediment types and fauna. Therefore, through the precautionary approach, the alternative of *“withholding nominated blocks”* (eg the remaining unlicensed section of Block 15/25, pockmarks with solid features) should still be considered, as there are areas of the North Sea which have been highlighted in SEA2 as features of environmental interest and/or sensitivity (see above).

11.3 Recommendations, pp.189-190: The RSPB agrees with all the recommendations and would expect to see significant work on all these targets being met.

11.4 Overall Conclusions p.190, 11.4.1 Conservation Areas & 11.4.3 Alternatives:

In all the conclusions and recommendations, there was the possibility of restricted activities or new/extra conditions attached to the licence, in the event of the area being designated as an SAC/SPA. However, the possibility of activities being stopped completely or the licence being revoked in the event of the area being designated is never explored.

FAO Mr Kevin O'Carroll - By email to Website

11 December 2001

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File: ORG13 - A881

Dear Mr O'Carroll

**SEA of the Mature Areas of the Offshore North Sea - SEA2
Comments From the Scottish Environment Protection Agency**

Thank you for consulting the Scottish Environment Protection Agency (SEPA) on the SEA of the mature areas of the offshore North Sea. SEPA is pleased to make the following comments on the methodology of the SEA and upon its specific findings. It should be noted that SEPA's duties extend only to tidal waters out to the three mile limit offshore. Accordingly, we can offer little comment on the detail of marine impacts described in the SEA as this is beyond the Agency's geographic area of control.

General Comments on SEA Method

Generally, the methodology of the SEA follows the requirements laid down in Directive 2001/42/EC. In particular, analysis of the current environmental characteristics of the area covered by the SEA is well recorded. However, there are three areas which are required by the Directive which are not considered to have been given adequate reference or analysis :

Alternatives - Article 5(1) of the SEA Directive requires the assessment of "reasonable alternatives taking into account the objectives and the geographical scope of the plan or programme". This is further detailed in Annex 1 (which describes the requirements of the SEA Environmental Report) which states (para h) that the Environmental Report should "outline the reasons for selecting the alternatives dealt with". It is SEPA's view that this part of the SEA has been poorly developed - for the following reasons:

- There is no presentation of the reasons why the four alternatives chosen were used, or indeed of what other alternatives exist;
- The analysis of the environmental and socio economic outcomes of each alternative are weakly presented and do not in our view provide adequate evidence that alternatives to the proposed arrangements have been effectively analysed;

Accordingly, it is considered that further work on this aspect is desirable.

Mitigation - Annex 1 of the Directive states that Environmental Reports should present “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”. Many parts of the analysis of the proposals as outlined in Chapter 10 do not detail mitigation possibilities or dismisses them as being not applicable at this level of assessment. Given the requirement for mitigation to be evaluated and built in to recommendations as outlined in the Directive, SEPA would wish to see greater emphasis given to this - for each of the significant environmental effects described in Chapter 10. Wastes to shore is, in particular, weakly assessed in terms of mitigation, which results in the conclusion that “landfill may be the eventual solution” (which does not accord with the provisions of the National Waste Strategy: Scotland (1999)) and that “long term residual liability for disposal of this material under duty of care legislation has not been resolved”.

Indirect/Synergistic Onshore Impacts - The Directive requires that analysis of significant effects includes (among others) secondary, cumulative and synergistic impacts. There is little analysis in the SEA of the indirect and synergistic impacts that the licencing round would have onshore through the need to enhance existing facilities or the development of new ones. Consideration of potential onshore development arising from the licencing is desirable, along with assessment of the significant environmental effects that this may bring. This will be useful in informing future SEA of land use development plans, which will likely become mandatory under the SEA Directive.

Specific Comments on text

Wastes to Shore - Page viii and 164 - 165

It is questioned whether there is there adequate capacity to deal with the oil based drill mud and cuttings. No analysis of this is made - eg What quantity is predicted to be produced, how and where will the disposal take place ?

Oil containing drill muds are considered to be hazardous waste pursuant to Directive 91/689/EEC and are subject to the provisions of that Directive, unless Article 1(5) of that Directive applies. Wastes that are destined for deposit at a landfill site must fulfil the pre-treatment requirements of the Landfill Directive(1999/31/EC). Furthermore, hazardous wastes will only be permitted to be deposited at landfill sites that are permitted to accepted hazardous waste. That is, the deposition of hazardous and non-hazardous wastes at the same site will be phased out under the Landfill Directive. The number of hazardous waste landfill sites (if any) that will be operational in Scotland is as yet unknown.

(Page 165 refers to storage) It should be noted that under the Landfill Directive (Article 2 - definitions), wastes can only be stored **prior to recovery or treatment** for a period less than three years. Storage of waste prior to disposal will be limited to a year. Long term storage will therefore not be permissible under this Directive, unless the long term storage area is permitted for landfill activities.

Accordingly, SEPA considers that the whole issue of wastes to shore has not been adequately addressed in terms of the amount of waste generated, how it will be treated,

where and how it may be stored and what policy frameworks (such as the National Waste Strategy: Scotland) are in place which will need to be taken cognizance of. Despite this apparent lack of analysis, the report concludes that “the associated environmental effects of onshore treatment and long term storage of OBM cuttings are not considered to represent significant environmental effects”, which SEPA would obviously question given the concerns above.

Page 15 - Control of Operations

This list of legislation should be extended to cover those affecting onshore requirements of the oil and gas exploration and production industry. This includes for example the Town and Country Planning Acts, the Environmental Impact Assessment Regulations, Environmental Protection Act, Waste Management legislation etc - See general comments about indirect/synergistic onshore impacts

Page 18 - EPA 1990

Carriers don't require a licence to transport, they have to register as a waste carrier.

Page 18 - Special Waste Regulations 1996, as amended

These Regulations are due to be amended in 2002, as the current Regulations do not fully reflect the requirements of the Hazardous Waste Directive (91/689/EEC).

Page 162 - Atmospheric Emissions

Clarification required on the regulatory authority for local air quality at offshore facilities

Page 170 - Spills - Spill Trajectory and Consequences

This section refers to the management of spills using chemical dispersion, however the success of this depends upon external factors such as the type of oil or, more frequently, the prevailing weather conditions. Accordingly, this mitigation cannot be relied upon as being the most effective. In addition, it may not be desirable in ecological terms to use chemical dispersants.

This section also refers to the closest landfall (at Bempton, North Yorkshire) being designated as a Special Protection Area but being at low risk from spill due to the fact that the adjacent SEA2 area is predominantly gas, not oil. Little reference is made however to the potential for Scottish Special Protection Areas to be affected by spills - In Scotland, the predominant hydrocarbon reserves will be oil and therefore the potential for damage to SPAs along the Moray coast for example should be considered.

Page 173 - Spills - Conclusions

No reference to mitigation. Conclusion that established contingency measures are in place assumes that conditions will always allow for these to be enacted.

Page 173 - Chemical Spills

No reference to potential effects of transport, storage and processing of chemicals required for offshore purposes.

Page 174 - Gas Releases

Almost all individual emissions from any source will be negligible in global terms, however it is the cumulative effect of “negligible” emissions which combine to create air quality problems.

Page 183 - Conclusions - Discharges

How significant are the increases projected ? - There is a need to analyse the significance of these in terms of impact on environment

Page 184 - Conclusions - Emissions

How significant are the increases projected ? - here is a need to analyse the significance of these in terms of impact on environment

Page 184 - Conclusions - Wastes to Shore

This does not take into account the context within which individual Waste Management Licence decisions are made.

Page 186 - Wider Policy Objectives

The Scottish Coastal Forum is currently working on a Scottish Coastal Strategy which will provide in some form an integrated approach to managing the pressures on the Scottish coast.

I hope that these comments are useful to you. Please do not hesitate to contact Neil Deasley should you require any additional information.

Yours sincerely,

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WWF Response to SEA2 Consultation

General Comments

WWF welcomes the initiation of the SEA process, especially in light of the fact that there is no formal requirement for such a procedure to be undertaken under the auspices of the European SEA Directive until 2004. SEA2 represents a considerable advancement in the mechanisms available to potentially address the impacts associated with offshore oil and gas activities.

The SEA itself appears to be comprehensive, having assimilated both existing available data and that derived from dedicated survey work. It has also identified areas where knowledge gaps exist and where further investigative work should be undertaken. The efforts undertaken to maximise stakeholder participation and comment within the SEA process are also noted.

Whilst the information provided by the SEA document is considerable, there remain a number of areas where data are apparently lacking. Taking these into account holistically, and bearing in mind the need to apply a precautionary approach, WWF therefore disagrees with the conclusion of the SEA that there are no overriding reasons why blocks within the SEA 2 areas should not be considered for oil and gas licensing as part of the 20th Licensing Round.

Concerns relating to information provided in various sections of the SEA2 document are detailed below: Headings relate to appropriate sections of the SEA document.

Areas Requiring Further Clarification or Presenting Particular Concern

Section 5

Figure 5.6 - The majority of sandbars appear to have only one survey transect undertaken in a transverse direction. Has the assumption been made that they are uniform in geology and ecology along their length and if so on what basis?

Figure 5.7 – Pockmarks - Here it is stated that until the SEA survey little work had been undertaken on the impact of the distribution of pockmarks on the regional patterns of distribution of biodiversity. Given the limited amount of research in this area to date, could further work be considered necessary in order to gain a comprehensive understanding of the relationship between biodiversity and pockmark distribution?

It is also stated that exceptionally carbonate cements may have been reported from pockmarks, as the case in block 15/12, and that these are associated with active methane venting have an associated hard substrate epifauna. Given that such structures are covered under the European Habitats and Species Directive, it might be prudent to afford particular attention to the conservation value and possible vulnerability of this site.

5.3.2 – Climatic Conditions – It is stated that climatic conditions are beyond the scope of consideration of the SEA. However it could be argued that potential changes in climatic conditions may have an influence on both the oceanographic processes and temperature regimes, which in turn may impact the distribution of biota and the physical conditions under which future hydrocarbon exploitation may occur. Therefore considerations of climatic conditions should be considered as appropriate within the context of the SEA.

5.4.2 – Circulation – This section identifies the presence of a number of fronts within the North Sea, one of which appears to be within the area of the southern North Sea under consideration in SEA2. Given the high levels of productivity usually associated with such features has sufficient consideration been given to the possible impacts resulting from offshore-related pollution resulting from offshore discharges within the region?

5.4.4 – Implications of Circulation for SEA - This identifies that while the hydrography of the North Sea is relatively well described, long term variability in circulation patterns and physical processes remain subject to long term investigations. Climate forcing is likely to influence circulation and this will therefore have obvious implications to physical and biological characteristics of the areas under consideration in the SEA. This therefore has implications in relation to the patterns of impacts resulting from oil and gas development within the SEA2 area, and this should potentially be given greater consideration.

5.5.3.3 – Evidence of Biological Effects - Much of the scientific evidence cited in this section appears to be in excess of five years old and relates to directly observable toxicological effects. Little consideration seems to have been given to the potential cumulative or synergistic impacts resulting from the release of significant quantities of a large range of chemicals utilized during the oil exploration and production process. Furthermore, no mention appears to be made of the potential hormone mimicking properties that such contaminants may possess and the potential impact of these may exert at sublethal and population/ecosystem levels.

Section 6.7.5 – Vulnerability and Sensitivity of Seabirds – Within this section the overall vulnerability of seabirds to pollution incidents within the SEA2 area is identified. It is indicated that for a number of blocks – especially those in southern North Sea – seabird vulnerability may be very high for much of the year. This in itself might be considered sufficient reason for a precautionary approach to be adopted, especially in light of the potential for the establishment of offshore-protected areas under the European Birds Directive. However, the SEA document further identifies potential deficiencies in the data base upon which the assessment of seabird vulnerability within the SEA2 area is based.

These deficiencies result from:

- The fact that a number of blocks within the SEA area have not been surveyed over a complete 12 month period, with data missing for a period of two or more months; and
- Much of the available seabird data is derived from surveys undertaken in the early to mid 1980s, and significant ecological change is believed to have occurred in the North Sea since then.

Given that the area covered by SEA2 has been subject to oil and gas activity for a considerable period of time, it is clearly unacceptable that the data set for seabird vulnerability in this area remains incomplete. Furthermore, given that the data sets on which the existing assessment of vulnerability is based may be some 20 years old, and that they may now be unrepresentative of the current situation as a result of ecological change, this clearly represents a significant shortcoming within the SEA. This therefore potentially draws into question conclusions made within the SEA in relation to seabird vulnerability within the SEA2 area. At the very least a precautionary approach should be applied to further development until an up to date and complete data set is available for seabird vulnerability within the areas encompassed by and adjacent to SEA2.

Section 6.8.2 – Distribution of Marine Mammals – Here it is identified that the northern and central North Sea are ‘very important’ areas for harbour porpoises during the summer months. Given that the UK has yet to meet its obligations under the European Habitats Directive in designating SACs for this species, and that SACs can now extend beyond the 12 mile territorial limit, it is possible that the northern and central North Sea may be of significant conservation importance for this species, and this should be reflected in the decision-making process.

Section 6.8.4 – Sensitivity or Disturbance, Contamination and Disease – It is stated in this section of the report, relating to marine mammals that ‘current mitigation methods [in relation to seismic survey activity] are probably generally effective in preventing physical damage’. The use of the word ‘probably’ in the above statement would suggest that there is some uncertainty in this assessment. Furthermore, there appears to be no scientific evidence identified to back up the statement in general.

Section 6.8.4.2 – Contaminants - No direct mention seems to be made of the potential endocrine related impacts of contaminants – including those released by E&P activity upon cetaceans and pinipeds in this section..

Section 7.2.3 – Submarine Structures Made by Leaking Gases – Here it is stated that “It has been suggested (the Dando commissioned study) that consideration be given to designating the “best” examples of seeping pockmarks, as Special Areas of Conservation (SACs), because of their biological interest, as well as for their roles as fish refugia and dispersal centres for otherwise less common species in the central North Sea”
The seeping pockmark structures identified to date should be considered for designation as SACs as a matter of urgency. However further survey work should be considered in order to identify if other examples of these structures exist within the SEA2 area, and whether these too are suitable for designation.

Section 7.2.4 – Special Protection Areas – Here it is stated:

“In the event of offshore SPAs being designated, project-specific assessment and permitting procedures available to the DTI under existing legislation, including *The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001*, are considered to provide adequate control over exploration and production activities (including management of oil spill risks)”.

The above approach should be considered as not concurring with the ethos and principles of SEA. The process of project-specific assessment will not adequately consider cumulative and synergistic impacts, especially as many of the existing installations within SEA2 area will not have been subject to a formal EIA process. This together with identified deficiencies in the database relating to seabird vulnerability suggests an apparent significant inadequacy in the SEA process.

Section 7.2.5 – Implications for SEA – This section identifies that in the event of a designation of an offshore SPA, an appropriate assessment will be made by DTI after receiving advice from JNCC. It is of concern that in relation to the vulnerability of seabirds such advice might be based on a data set that has been identified elsewhere within the SEA as being incomplete and potentially out of date, and this should be addressed

Section 10.4.1.5 – Control and Mitigation of Noise – It is stated in this section that: “Drilling noise has been considered in Environmental Statements for exploration wells, although noise from production facilities has received little attention. Recent observations suggest that significant noise intensities may occur, and this issue is likely to be assessed in more detail in future Environmental Statements. Project assessments will, however, continue to be limited by the uncertainties noted above”.

As has been identified before in this response, it is unlikely that individual project EIAs will be able to take account of the synergistic and cumulative effects resulting from multiple projects. These uncertainties mentioned may therefore throw into doubt the accuracy of the conclusion of this section that:

“...it is considered unlikely that physical damage or significant behavioural disturbance of marine mammals will result from the activity scenarios associated with proposed licensing”

Section 10.4.4.4 – Potential Effects of Produced Water – In this section it is noted that:

“The potential effects of endocrine disrupting compounds (e.g. alkylated phenols present in many produced waters) require further investigation (OLF 1998), although research is currently limited by a lack of *in vivo* and *in vitro* bioassays. In addition, current understanding of cumulative and synergistic effects of produced water components is inadequate. Improved understanding will require research on both chemical behaviour and toxicological effects”.

This lack of understanding with regard to the endocrine disrupting properties of certain chemicals present within produced water, together with an apparent inadequacy in the understanding of cumulative and synergistic effects of components of produced water components represents a serious knowledge gap within the SEA. This is especially important in the context of the areas of SEA2 as these represent mature production areas where significant quantities of produced water are already being discharged. Once again a precautionary approach should be adopted until such time as it can be established that further development within the SEA2 area will not contribute significantly in terms of hormone-mimicking, synergistic or cumulative impacts resulting from the discharge of produced water.

10.4.7.4 – Spill Trajectory and Consequences – Though mention is made of data gaps within seabird vulnerability indices as resulting from incomplete survey data, there is no apparent consideration that the spill vulnerability indices may also be inaccurate as a result of ecological change occurring in the North Sea subsequent to the undertaking of the original surveys on which such data is based.

Section 10.5 – Cumulative and Synergistic Effects - Here it is stated in relation to discharges of produced water that:

“Produced water plumes must ultimately commingle to produce a wide scale dispersion following residual circulation patterns of the North Sea. However, available evidence indicates that NECs (with reference to toxicity and other biological effect) are reached in close proximity to the point of discharge, and it is unlikely that the “effects zones” of individual discharges will overlap”.

While it is unlikely that zones of immediately obvious toxicological effects resulting from the discharge of produced water will overlap, the dispersion of chemicals in produced water could result in both cumulative and synergistic effects in combination with other produced water discharges from existing projects within the SEA2 area, especially in relation to hormone mimicking components. As has already been identified in section 10.4.4.4, considerable knowledge gaps exist in this area.

Overall Conclusions

Whilst the SEA is of a high standard, and appears to have made effective use of available information and data – supplemented with original survey work where this was considered appropriate – it is clear that significant gaps exist with regard to key areas of the physical and biological characteristics of the SEA2 area and impact that oil and gas development – either existing and/or proposed - may produce.

Indeed, section 11.2 of the SEA identifies some 10 specific areas where gaps in understanding have been shown to exist, and many of these have also been highlighted elsewhere in this response. Of particular concern is the lack of sufficient understanding relating to:

- Benthic communities of specific localized habitats – pockmarks etc;
- Long-term trend in hydrographic variability, as this could have significant influence on the characteristics of the ecology of the North Sea;
- Wide area and regular monitoring of benthic community structure

- Wide area and regular monitoring of chemical contaminants with regard to long term trends, cumulative & synergistic effects and hormone-mimicking properties;
- Data gaps in marine mammal distribution;
- Data gaps in seabird distribution and the potential inaccuracy of existing data resulting from the occurrence of major ecological change subsequent to the original survey work being undertaken; and
- The impacts of noise upon marine mammals.

While many of these gaps in knowledge and data are significant in themselves, taken holistically they potentially present a major deficiency in the understanding of the SEA2 area, so much so that the conclusion drawn by the SEA2 - that there will be no significant impact resulting from further oil and gas development – must be placed into question. Consequently it is the opinion of WWF that further work needs to be undertaken before the impacts of potential licensing within the SEA2 area can be adequately quantified. WWF therefore recommends that a precautionary approach be adopted in respect to the 20th licensing round and that either no blocks are offered for licence at present, or a very limited number of blocks are licensed, subject to there being sufficiently robust information available to determine that such action will not result in significant environmental impact

Comments on SEA2 from JNCC placed directly on the web site:

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: The SEA process in general

The Joint Nature Conservation Committee and the statutory UK nature conservation agencies (English Nature, Countryside council for Wales and Scottish Natural Heritage) welcomes the decision by DTI to work ahead of the statutory implementation of the EU Strategic Environmental Assessment Directive by producing this (and the first) SEA. We have welcomed the opportunity to sit on the steering group and feel the results produced by the contractors working on the project bring great credit to the process. We shall use the SEA and comments made on it in formulating our formal advice to DTI on the 20th oil licence round.

We further congratulate DTI for publishing this SEA on this web site, thus moving the process of electronic government forward and opening up the governmental decision-making and advice process to many more than previously.

Further detailed comments will be sent marked against individual parts of the SEA.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 7.2.1 Sandbanks

Section 7.2.1 We recommend that no activities that might affect the shallow sandbanks in blocks 43/13, 43/14, 43/15, 43/18, 43/19, 43/20, 44/11, 44/12, 44/13, 44/14, 44/16, 44/17, 44/18, 47/14, 48/13, 48/15, 48/18, 48/22, 48/23, 49/12 and 49/13 be permitted, pending resolution as to the choice of candidate sites for protection under the Habitats Directive.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 7.2.3 Submarine structures made by leaking gases

Section 7.2.3 We recommend that no activities that might affect the large pockmarks in Block 15/25 be permitted, pending resolution as to whether or not the structures in these pockmarks are relevant for protection under the Habitats Directive.

Name: Mark Tasker, Nature Conservation Committee

Topic: 8.3.3 Demersal fisheries

I was a little surprised that the very poor state of North Sea fish stocks is not mentioned here (given that the herring stock failure is mentioned in the next section). I note that there is mention of the state of stocks under the management section (8.3.7). There are also other stock management areas not marked here. It is odd that the largest fishery (sand eels) is not mentioned at all.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 10.4.1.4 Conservation sites

Section 10.4.1.4 This section is not accurate with respect of the present process for determine SACs for marine mammals. The EU Habitats Directive calls for the identification of SACs for bottlenose dolphins, harbour porpoises, grey seals and common seals if various conditions can be met. JNCC is presently undertaking a process to determine if these conditions might be met anywhere in UK waters (beyond those sites presently identified and submitted to the European Commission). Given the rarity (compared with other parts of UK waters) of bottlenose dolphin, grey seal and common seal in the SEA2 area it is unlikely that any such areas will be found. We cannot yet say this for harbour porpoise as the process for

identification is still under way. If such sites are found, then appropriate assessments of activities would be required under the Habitats Directive. The main damaging activity for this species is however bycatch in certain types of bottom set fishing nets. Effects from seismic surveys are not known, but are unlikely to be significant at the population level.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 10.4.1.5 Control and mitigation

Section 10.4.1.5 Some slight factual corrections. 1. The present seismic guidelines are published by JNCC (the earlier set were drawn up by JNCC and published by the then DETR). 2. There is no requirement under these guidelines for acoustic survey for cetaceans. Acoustic surveys are recommended in certain areas and may be used elsewhere.

Name: Mark Tasker, Nature Conservation Committee

Topic: 10.4.2.4 Conclusions

Section 10.4.2.4 This section makes no mention of physical effects on conservation areas - in particular shallow sandbanks. JNCC will continue to advise against activities that might disturb these habitats in the southern North Sea until the SACs in this habitat has been selected. We note that oil related disturbances are likely to be deeper into the habitat (pipeline trenching, anchor holes) than other forms of disturbance (otter trawl doors) though more limited in their extent. We agree that the current project related controls, coupled with our advice in relation to this oil licence round are sufficient to minimise damage.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 10.4.7.4 Spill trajectory and consequences

Section 10.4.7.4 We agree with the analyses of seabird vulnerability presented in this section, and have made recommendations that activities with the highest risk of oil spill in those areas with highest seabird vulnerability be especially controlled. These recommendations have been supplied as part of our formal response to the licence round and will be taken fully into account in considering individual EIAs.

Name: Mark Tasker, Joint Nature Conservation Committee

Topic: 11.4 Overall conclusion

Section 11 We agree with these conclusions and recommendations.