Comments received in response to the Consultation on the SEA5 Environmental Report

Comments received from:

Joint Nature Conservation Committee (JNCC)
Marine Conservation Society (MCS)
Royal Society for the Protection of Birds (RSPB)
Scottish Natural Heritage (SNH)
The Engineering Business, Northumberland
Whale and Dolphin Conservation Society (WDCS)
World Wide Fund for Nature (WWF)

JOINT NATURE CONSERVATION COMMITTEE
Dunnet House
7 Thistle Place
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Christine Weare
Department of Trade and Industry
Atholl House
86 – 88 Guild Street
ABERDEEN AB11 6AR

JNCC OIA Ref: 3078

30th December 2004

Dear Christine

SEA 5 - Strategic Environmental Assessment of parts of the northern and central North Sea to the east of the Scottish mainland, Orkney and Shetland

Thank you for consulting us on the content and conclusions of the 5th DTI Strategic Environmental Assessment (SEA5). As you are aware, JNCC is a member of the steering group for SEA5 and as such have fed our opinions into the planning and undertaking of this and past SEAs. We continue to support this iterative and open process and look forward to our involvement in future SEAs.

Overall, we would agree with the conclusion that, given the current licensing and regulatory framework, DTI should proceed with the licensing as alternative 3: To restrict the area licensed temporarily or spatially. We would also agree with the conclusion that 'Within the SEA 5 area, although the national and international importance of various populations and features is recognised, no blocks from the areas with good hydrocarbon prospectivity have been identified for exclusion since individual project consenting is expected to provide adequate spatial and temporal controls. Previous SEAs had identified a few blocks recommended for exclusion from licensing on environmental grounds or until better information becomes available. These recommended exclusions remain valid for the consideration of the blocks to be included in the 23rd licensing round.'

As with SEA 4, we note that for coastal areas of mainland Scotland and the Orkney and Shetland Isles it is estimated that, due to the limited hydrocarbon potential, no oil or gas activity is expected. We support the recommendation that 'These conclusions [of SEA 5] are based on the projections of the likely scale and location of activities that could follow licensing, and would need to be revisited if activity levels were substantially greater or technologies changed.' and if, in the future, new information shows coastal waters to be of greater prospectivity we would expect the DTI to undertake a further SEA of this area using revised estimates for potential activity.

We do have the following comments for the DTI:

1. Recommendations

   In the Post Consultation Report for SEA 5 (and future SEAs) we believe it would be useful if DTI describe how the recommendations made at the end of the SEA report will be taken forward

and provide some indication of the date when these recommendations will be implemented by. This would facilitate monitoring of progress on recommendations from year to year. If recommendations are not to be taken forward it would be useful if DTI could provide their justification for this.

For instance, in SEA 3 a recommendation was made that 'Feedback mechanisms should be explored to allow stakeholders access to information on the accuracy of predictions made in environmental statements, for example, through publicly available post activity reviews.' The same recommendation is made is SEA 4 'Feedback mechanisms should be explored with the DTI Licensing & Consents Unit so that the accuracy of predictions made in Environmental Statements including effectiveness of mitigation measures are assessed and documented, for example, through publicly available post activity reviews' and this seems very similar to the recommendation made in SEA 5 'Feedback mechanisms should be explored with the DTI Licensing & Consents Unit so that the accuracy of activity scenarios used as the basis for SEA can be monitored over time. With existing information sources there is a particular difficulty in relating seismic surveys to specific blocks considered in a SEA.'

We encourage the DTI to ensure that recommendations from the SEA are SMART (Specific, Measurable, Achievable, Relevant and Timed) or similar and that they can realistically be implemented. For instance, recommendations could be in the form of standards that the industry should adhere to when designing a development within the SEA area. One such standard that JNCC believe should be implemented is a base case for developments of only using Low NOx turbines for power generation. By setting such standards for new developments the SEA would encourage the use of the BPEO (Best Practicable Environmental Option) and raise environmental standards across the industry.

We also suggest that it would be helpful for the SEA steering group to review the outcomes of the recommendations in greater detail.

2. Marine Mammals and Noise

- Recommendation 3 of SEA 5 reads 'The improvements to the mitigation methods for seismic survey proposed in the recent JNCC Report No. 323 (Stone 2003b) and extended in Section 10.3.1.7 of this SEA should be considered in any revision of the regulatory regime and guidelines.' This recommendation is out of date as the JNCC Guidelines for minimising acoustic disturbance to marine mammals during seismic surveys were revised in April 2004. As DTI will be aware a copy of the new guidance is available here: http://www.jncc.gov.uk/page-1534 .

- We were also unable to find Section 10.3.1.7 within the SEA 5 document but we assume that the SEA is referring to Section 10.3.1.7 in SEA 4. We note that section 10.3.1.3 of SEA 5 reiterates the recommendation from SEA 4 '… that consideration should be given to establishment of criteria for determining limits of acceptable cumulative impact; and for subsequent regulation of cumulative impact (for example in terms of total 'exposure days' of individual blocks to received levels in excess of 120dB).' Within the post consultation report it would be useful if DTI would provide further details of how they plan to take forward this recommendation and timescales in which to do this.

- Recommendation 4 of the SEA 5 report states that the 'reduction of noise transmission into the sea should be considered in the design of new FPSOs (and other vessels) intended for use in this area.' JNCC fully support this recommendation and would request further details

on how DTI intend to pursue this recommendation. For instance, vessels such as offshore standby vessels or vessels used for logistics are not normally assessed in great detail as part of the Environmental Impact Assessment process for specific developments so we would be interested to know how DTI propose to encourage changes to the design of such vessels?

- Recommendation 5 – JNCC are under the impression that PON 5 applications to the DTI for well head abandonment (where explosives are used) are already subject to a specific risk assessment. We have definitely been consulted on such assessments previously. However this process could be improved and JNCC have already raised this issue with DTI on a number of occasions. Within the post consultation report it would be useful if DTI could provide an indication of when and how the PON 5 process may be improved.

3. Environmental Monitoring and Understanding

   Recommendation 7 states that 'For SEA monitoring, in addition to the project specific monitoring, the DTI chaired offshore monitoring group should develop an effects monitoring strategy for the offshore oil and gas activities, coordinating with the range of national and regional monitoring offshore monitoring efforts.' JNCC are a member of the offshore monitoring group and we are aware that limited progress has been made on this issue in the last year so we feel it would be useful to see some indication of when and how this recommendation will be achieved.

If you would like to discuss any of these further please feel free to contact me.

Yours sincerely

Zoë Crutchfield
Senior Offshore Advisor

cc: Mark Tasker (JNCC)
Sandy Downie (SNH)
Victoria Copley (EN)
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Dear Christine

Marine Conservation Society's response to DTI's 5th Strategic Environmental Assessment – East of the Scottish mainland, Orkney and Shetland, 23rd licensing round

Thank you for consulting the Marine Conservation Society (MCS) on SEA 5.

OVERALL
The SEA states that "The overall conclusion of the SEA is that there are no overriding reasons to preclude the consideration of further oil and gas licensing within the SEA 5 area or of blocks within areas covered by previous oil and gas SEAs."

MCS believes that there are overriding reasons why some blocks should not be licensed due to their conservation interest and recommends that:

- **the 23rd licensing round needs to be limited spatially due to the potential significant impacts on some habitats and species.**
- **no blocks within or adjacent to Special Areas of Conservation (SAC) or Special Protection Areas (SPA) should be licensed, nor blocks that contain habitats or qualifying species that the JNCC consider may be designated in the future.**
- **In particular we believe that no blocks within or adjacent to the Inner Moray Firth SAC for Bottlenose dolphin, should be licensed for seismic testing, exploration or production ie blocks 17 and 11/24.**
- **no blocks within 12 miles of the NE coast of Scotland and East of Shetland and Orkney should be licensed. This would be in line with the DTIs renewable policy that no offshore windfarms are licensed within 12 miles of the shore.**
- **Finally MCS objects to the licensing of any blocks which were not licensed during previous rounds due to conservation considerations.**

1. HABITATS AND SPECIES OF NATIONAL AND INTERNATIONAL CONSERVATION IMPORTANCE

MCS believes that the DTI must restrict the area licensed for oil & gas exploration and development and seismic testing spatially and not include in Round 23 any blocks within or adjacent to SACs, SPAs or sites with Annex I habitats that may be designated. Not to do so would be to ignore national and international measures to conserve habitats and species and the objectives of the SEA Directive.

> SEA 5 states that relevant coastal and marine habitats (listed under Annex I of the Habitats Directive) include large shallow inlets and bays (Sullom Voe, Berwickshire and North Northumberland Coast); reefs (Sanday, Berwickshire and North Northumberland Coast); estuaries (Dornoch Firth and Morrich More, Firth of Tay and Eden Estuary); mudflats (Dornoch Firth and Morrich More, Berwickshire and North Northumberland Coast), and submerged sea caves (Berwickshire and North Northumberland Coast). Other habitats protected by SACs include sea cliffs and a variety of dune habitats. Relevant species (listed under Annex II of the Habitats Directive) include common seal (Yell Sound Coast, Mousa, Sanday, Dornoch Firth and Morrich More, Firth of Tay and Eden Estuary); grey seal (Faray and Holm of Faray, Isle of May, Berwickshire and North Northumberland Coast), and bottlenose dolphin (Moray Firth). Other species protected by SACs include salmon and sea lamprey.
>
> DTI Energy SEA 5

1.1 Inshore SACs and SPAs

MCS believe sites already designated for their conservation interest, in particular SACs and SPAs should not be put up for licensing in this the 23rd round, ie the round should be restricted spatially. MCS is particularly concerned regarding the Moray Firth SAC and the population of Bottlenose dolphins for which this site is designated. MCS recommend that no sites should be put up for licensing that are within or that are in the close proximity to SACs and SPAs. In particular blocks 17 & 18 should not be licensed.

The SEA 5 area includes a diverse range of coastal habitats and species. This is reflected in the fact that there are SACs that cover a range of Annex I habitats from bedrock and boulder reefs to sea caves, estuaries and dunes. There are also a number of SACs covering the habitats of Annex II species including Grey and Commons seals and Bottlenose dolphins.

MCS is concerned that the SEA does not assess what the direct and cumulative effects of additional oil & gas licensing will have on these coastal SACs. MCS believe that further assessment needs to be undertaken before licensing proceeds. Given the disastrous effects that oil spills can have on the region, (witnessed by the Braer tanker spilling 83,000 tonnes off crude oil off Shetland in 1993) special consideration needs to be given to the impacts that oil activities can have on the region.

- **no blocks within or adjacent to Special Areas of Conservation (SAC) or Special Protection Areas (SPA) should be licensed,**
- **no blocks within 12 miles of the NE coast of Scotland and East of Shetland and Orkney should be licensed.**

1.2 Offshore SACs

As detailed in SEA 5, the UK has yet to fully identify and designate offshore marine sites for habitats and species of national and international conservation importance, whether under the Habitats Directive, OSPAR or national conservation plans. Without these designations in place the DTI will need to take extra care not to license oil & gas activities that could have a significant effect either individually or in combination with other activities on nationally and internationally important marine habitats and species. This includes those sites being identified by the JNCC under the Habitats Directive, but will also need to include other species and habitats being identified as important through OSPAR and DEFRA 's Review of Marine Nature Conservation.

The UK is committed to treating Annex I habitats as designated, (even before their details are registered with the European Commission). This is to ensure that their conservation status is not compromised prior to designation by activities such as oil and gas. The DTI should exclude habitats such as the East Shetland shelf and Pobie Bank which have been classified by JNCC to be designated as SACs for bedrock and stony reef habitats.

SEA 5 states that the area also supports a number of Annex II species for which offshore SACs may be designated including grey seal, common seal, bottlenose dolphin and harbour porpoise. Further research is needed to clarify the offshore distributions of these species but it is likely, given the importance of the area for seal breeding and foraging and cetacean distribution, that offshore areas may be protected in the future. 8 existing SPAs in the SEA 5 area are also likely to be extended.

- **no blocks that contain habitats or qualifying species that the JNCC consider may be designated in the future should be licensed.**

1.3 Cetacean

On advice from the DTI the SEA states in Section 5 and then again in the Economics chapter that "There are areas of greater prospectivity in the Inner Moray Firth. The Sutherland and Caithness coast runs coincident with the "Great Glen Fault Zone" and seaward of this, prospectivity has been proven close to the coast in Block 11/24". The majority of anticipated 2D and 3D activity is expected in Quadrants 11 to 18 which is the Moray Firth including the Inner Moray Firth. MCS is concerned that this will be the focus of 2D and 3D activity.

The following seismic survey effort is envisaged:

- in the year of award – 2 x 2D seismic surveys
- in the year following award – 4 x 2D seismic and 3 x 3D seismic surveys
- in the year 2 years after award – 2 x 2D seismic and 3 x 3D seismic surveys
- in the year 3 years after award – 2 x 3D seismic surveys
- in the year 4 years after award – no seismic envisaged.

DTI Energy SEA 5

SEA 5 states that the area is of undoubted importance internationally for cetaceans and lists the following as regularly occurring in the area ".The six most frequently recorded species of cetacean in the SEA 5 area are the harbour porpoise, white-beaked dolphin, Atlantic white-sided dolphin, killer whale, bottlenose dolphin and minke whale".

Bottlenose dolphin and harbour porpoise are listed as Annex II species under the Habitats Directive. JNCC must therefore designate sites for these species or establish management measures to protect them. One of only two sites in the UK designated to date for cetacean is the Moray Firth, which is designated as an SAC under the Habitats Directive for bottlenose dolphin.

All dolphins, porpoises and whales are listed on Annex IV of the Habitats Regulations. Regulation 10 of *The Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001* makes it an offence to deliberately disturb these animals or cause deterioration or destruction of breeding sites or resting places of any such creature. Under the Habitats Regulations, the competent authority, the DTI, must not grant a licence unless they are satisfied that the action authorised will not be detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range.

MCS is concerned that the level and scale of seismic testing that is proposed in SEA 5 in combination with past seismic testing, pollution, habitat alteration, fishing and noise may be detrimental to the maintenance of the population of bottlenose dolphin in the Moray Firth at a favourable conservation status in their natural range.

SEA 5 states that marine mammals in the SEA 5 area will suffer biologically significant sound levels the effects of which remain an area of uncertainty and that mitigation is limited, but then conclude that there is an unacceptably low risk. MCS are surprised by this conclusion and disagree. Partly it seems the conclusion is based upon the fact that recent years have seen similar levels of seismic testing, but this should not justify licensing more, rather it adds to the cumulative impacts that cetaceans in the SEA 5 area will be likely to suffer from additional licensing over the next few years. MCS believe that the DTI must work with the oil & gas industry to establish greater co-operation and sharing of seismic data – in fact this should be a condition of licence. While research is still needed on the distribution of cetaceans and the cumulative and synergistic effects of all activities in UK waters on these creatures, the precautionary approach must be adhered to. Special conservation measures are required to ensure the conservation of the species. These special conservation measures must include reducing activities that have an impact on the species either directly or indirectly. The EU can take action against the UK if wider conservation measures don't protect habitats and species.

The SEA states that "further research is recommended into possible cumulative effects of seismic noise on whales and dolphins." MCS believes that the cumulative effects are significant and supports the recommendation for further research. We oppose any licensing in Round 23 until further research is undertaken into the potential cumulative impact on cetacean, in particular the Moray Firth population of bottlenose dolphin.

The potential cumulative and synergistic effects on cetaceans that MCS is concerned about are as follows.

Disturbance:

- from noise from seismic surveys, causing disturbance, barriers to migration, exclusion and long term behavioural effects

- additional vessel movements, drilling and decommissioning explosions all of which could effect feeding patterns and reproduction.
- oil and gas activities in the 23rd licensing round in combination with existing activities such as shipping

Damage

- Noise-induced hearing loss, shifts in hearing thresholds, auditory damage

Contamination:

- from toxic discharges arising out of existing and proposed oil and gas activities including chemicals discharged in produced waters and discharges from oil refineries
- other industrial landbased sources which could have an effect on the reproductive and immune systems of the dolphins e.g. chemical and radioactive discharges
- Possible oil spills

Food loss:

- Impacts from contamination on fish in the region
- Fishing industry impacts on target species and ecosystem as a whole

Potential for direct mortality:

- from internal bleeding and strandings
- as a fishery bycatch in the case of harbour porpoise.
- from decommissioning explosives

- **To conclude 1.3 MCS believe that no blocks within or adjacent to the Inner Moray Firth SAC for Bottlenose dolphin, should be licensed for seismic testing, exploration or production ie blocks 17 and 11/24.**

- **All past seismic testing undertaken by industry should become the property of the government. Only a limited amount of future seismic testing should be licensed and data sharing between companies is made a condition as detailed above.**

1. 4 Birds

The DTI will need to ensure that licensing of the 23rd round will not have a direct or cumulative adverse affect on the integrity of existing SPA's in the SEA 5 area or on the offshore areas that may be designated as SPA due to their importance for feeding, breeding or overwintering seabirds and wildfowl.

- **No blocks should be licensed within or adjacent to existing SPAs or sites that are considered, may have qualifying numbers of birds.**

1.5 OSPAR's MPA programme

To meet commitments under OSPAR's Sintra Statement Britain will need to have identified an ecologically coherent network of MPA sites by 2006 and having a well managed network established by 2010. Work on identifying habitats and species under OSPAR is ongoing. MCS is concerned that while SEA 5 did print the list of OSPAR sites MASH identified it did not fully assess the significance of impacts from the 23rd round against each of the habitats and species listed.

- **The DTI should hence avoid licensing activities and development that may have a significant effect on habitats or species identified under OSPAR.**

1.6 Nationally important marine habitats and species

Nationally important marine habitats and species need to be conserved in addition to internationally important habitats and species. Without action at this level too, such habitats and species can become endangered.

The following rationale and criteria for the identification of nationally important marine nature conservation features was developed by JNCC under the Review of Marine Nature Conservation (RMNC) and while the RMNC has now completed its work this work on national features is ongoing:

a. Sites which best represent the range of sea landscapes, habitats and species present in the UK – nationally important sites
b. Protection for those sea landscapes, habitats and species for which we have a special (national/regional/global) responsibility – nationally important seascapes, habitats and species
c. Additional protection measures for those sea landscapes, habitats and species that have poor status.

MCS is concerned that the SEA did not include any comprehensive assessment of marine features and species in the SEA 5 area that may be of national importance to the UK and receive protection accordingly.

- **The DTI should hence avoid licensing activities and development that may have a significant effect on habitats or species identified as nationally important as part of ongoing work by the JNCC.**

2. POLLUTION

2.1 Produced water:

SEA 5 states that "Fundamental to the consideration of potential effects of produced water in the SEA 5 region is the assumption that reinjection will be the normal method of produced water disposal (at least 95% by volume), although under certain circumstances (e.g. injection pump maintenance) the effluent may be routed to sea." As the SEA states no produced water from new developments should be discharged to sea, rather it should be re-injected.

- **All produced water should be re-injected as a condition of licensing blocks in this round in line with OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations which includes a presumption against the discharge to sea of produced water from new developments.**

2.2 Drill cuttings

As SEA 5 states the discharge of oil based and other organic phase fluid contaminated material is now effectively banned through OSPAR and this must be reflected in any consent conditions. Water-based mud and cuttings will however still be discharges and while considered to have minimal ecological effects by the SEA consultants due to the dispersive environment of the North Sea, MCS believe that all anthropogenic sources of pollution should be reduced where possible and prevention or mitigation at source should form consent conditions. The cumulative impacts of these pollutants in the environment should be considered. In addition there will as the SEA states be localised

accumulation in areas where reduced current allows the particles to settle on the seabed.

- **Consent conditions must prohibit the discharge of oil based drill cuttings and other contaminated materials in line with OSPAR. All other anthropogenic sources of pollution, including water-based mud, should be reduced where possible and prevention or mitigation at source should form consent conditions.**

2.3 Oil spills

While most oil is transferred from the platform to the land by oil pipes it is then transferred from an oil terminal by ship around the UK and beyond. There are some sites in the SEA 5 area, however, where oil would also be transferred to land by ship e.g. If a new field was discovered in the northern part of the SEA 5 area the oil would most likely be landed at the Sullom Voe terminal via tankers. Oil spills can result in a devastating impact on birds, cetacean, fish and benthic communities. Chemical dispersants can add to this damage. The potential for oil spills will therefore be increased by Round 23. Measures to limit the potential for oil spills should form part of conditions of license.

The MV *Braer* ran aground off the coast of Shetland on the 5 January 1993, spilling 85,000 tonnes of oil and killing some 5,000 seabirds. The *Braer* grounding could have been a much greater disaster. Breeding birds were away from Shetland, and the stormy weather dispersed the oil. However, oil has settled into the sediment and now large quantities of oil can be found in the Fair Isle Channel. The SEA states that there was no significant lasting impact of the Braer yet the oil in the sediment means that the langoustine fishery has still not been reopened. The light crude oil the *Braer* was carrying dispersed quickly, but is more toxic than the heavier crude oils which were carried by the *Prestige* and the *Erika*.

- **DTI or JNCC should assess whether the potential for environmental impact is greater in the region to the East of the Shetland and Orkney by shipping oil or by using oil pipelines and make recommendations and consent conditions accordingly.**

3. SEA DIRECTIVE

MCS applaud the work of the DTI in implementing the SEA Directive prior to a legal obligation to do so and producing 5 SEAs to date covering oil & gas and one for offshore wind. However, MCS would like to raise a couple of issues regarding interpretation of the Directive:

3.1 Sustainable Development

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

- **MCS recommends that for future SEAs the DTI needs to be careful not to misinterpret the SEA Directive by bringing in too many social and economic considerations. Although an SEA may consider sustainable principles, an SEA is not supposed to be a Sustainability Appraisal. It is an environmental assessment and as such the environment is and should be the key consideration**.

If the DTI decides to go for the ODPM interpretation of the SEA Directive and make the SEA a Sustainability Appraisal as well as an SEA, then it will have to accept that the exploitation of reserves on the UKCS has been unsustainable to date, in that few reserves are now remaining for this generation let alone future generations and our over consumption has been a key contributor to climate change.

- **MCS recommend that the government should be considering holding back in licensing some blocks so that productive reserves are maintained as reserves for future lean times and possible energy crisis ahead.**

Table I Sustainable Development Definitions

Sustainable development is the process by which we move towards sustainability. The most widely used definition appeared back in 1987:
"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"
The Brundtland Report

This was endorsed five years later at the Earth Summit in Rio

The UK s Sustainable Development Strategy, published in May 1999, defines sustainable development in terms of four objectives:

1. Social progress which recognises the needs of everyone
2. Effective protection of the environment
3. Prudent use of natural resources
4. Maintenance of high and stable levels of economic growth and employment

Forum for the Future's definition of sustainable development:
"A dynamic process which enables all people to realise their potential and improve their quality of life in ways which simultaneously protect and enhance the Earth's life support systems"

3.2 Cumulative impacts

MCS is concerned that SEA 5 has not fully addressed the issue of cumulative impacts.

For example it compares proposed seismic testing with past seismic testing rather than considering the cumulative impact of both.

Another example and concern is the fact that the SEA has not fully considered the cumulative impact of the proposed licensing round with past and ongoing licensing e.g. the Buzzard oil field.

The Buzzard oil field is a major new development in the outer Moray Firth where probably the largest find of oil in 21 years recently occurred. The field was not included in the original area of SEA3 and hence was not fully assessed under SEA 3. However, it was tagged on to SEA 3 at the last minute in the winter of 2002. As it was not fully assessed under SEA 3 but rather was tagged on at the last minute, it hence should be more fully assessed under SEA 5. MCS is concerned that this oil field in combination with proposed E & P including seismic testing through round 3 will have an adverse affect on the Moray Firth Bottlenose dolphin population, amongst other species.

- **The DTI need to fully consider the cumulative impact of the proposed licensing round with past and ongoing licensing e.g. the Buzzard oil field. Will the cumulative impact of all this additional E & P activity in the Moray Firth adversely affect the Bottlenose dolphin population.**

3.3 Consideration of alternatives

MCS is concerned that there are not more detailed options available particularly given the conservation importance of the area and the fact that the area has limited potential for commercial oil and gas reserves anyway. The SEA should make recommendations for which blocks should not be open to licensing in Round 23 if one option is to limit the round spatially.

- **MCS suggest that if the SEA is truly to attempt to provide alternative options, then the spatial dimension should be detailed on a map.**

- **No blocks within 12 miles of the NE coast of Scotland and East of Shetland and Orkney should be licensed. This would be in line with the DTIs renewable policy that no offshore windfarms are licensed within 12 miles of the shore.**

3.4 Mitigation, monitoring and research

SEA 5, like previous SEAs, makes a number of recommendations for mitigation and monitoring. However, it is not clear to MCS whether these recommendations get implemented or not. For example MCS asks whether all the recommendations made in SEA 4 with regard to cetaceans have now been completed; namely:

- Updating JNCC Guidelines
- Further acoustic research on cetacean distribution
- Establishing criteria for determining levels of unacceptable cumulative impact and regulating accordingly
- Developing objective criteria for establishment of measures (as opposed to sites) for the protection of cetacean species and reviewing the SEA 4 area against such criteria.
- A systematic approach to assessing sensitivity to acoustic disturbance in fish and mammals is also welcome

- **MCS therefore recommends that for SEA 5 the DTI consultants produce a table with all recommendations in it and suggestions for conditions of consent and mitigation measures and confirm when these are implemented; or explain delays, change of policy**.

3.5 Mapping

- **Future SEAs should detail the location of Annex I habitats in the SEA 5 area which should be available from the JNCC.**

- **In future SEAs it would be helpful if the exact area of the SAC's were mapped rather than just providing points on the map. Also detailing all the terrestrial SACS is also not very helpful.**

4. MARINE SPATIAL PLANNING

MCS welcome the DTI's production of SEA 5, but believe that for cumulative and synergistic effects of developments and activities in each regional sea to properly be assessed at the ecosystem level, Marine Spatial Planning is needed which would be informed by an SEA and vice verse. MCS with other partners in Wildlife and Countryside Link have developed a couple of discussion papers on Marine Spatial Planning to help inform discussions by the UK and devolved administrations on how we might meet international commitments on MSP under the North Sea Conference and OSPAR. See www.wcl.org.uk

CONCLUSION

The Marine Conservation Society believes that SEA 5 does not provide sufficient justification to 'proceed as proposed'. Instead the DTI should 'restrict the area spatially' of both seismic testing, exploration and development in order that nationally and internationally important habitats and species are fully protected.

- **The 23rd licensing round needs to be limited spatially due to the potential significant impacts on some habitats and species.**
- **MCS believe that no blocks within or adjacent to the Inner Moray Firth SAC for Bottlenose dolphin, should be licensed for seismic testing, exploration or production ie blocks 17 and 11/24.**
- **MCS also believe that no blocks within 12 miles of the NE coast of Scotland and East of Shetland and Orkney should be licensed. This would be in line with the DTIs renewable policy that no offshore Windfarms are licensed within 12 miles of the shore.**
- **Finally MCS objects to the licensing of any blocks which were not licensed during previous rounds due to conservation considerations.**

Marine Conservation Society January 2004
Melissa Moore melissa@mcsuk.org

for birds
for people
for ever

Christine Weare
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23 December 2004

SEA5 – Strategic Environmental Assessment of the Areas to the East of the Scottish Mainland, Orkney and Shetland

Dear Ms Weare

Please find enclosed a copy of the RSPB's comments on the SEA process and in particular the consultation on SEA5, the Strategic Environmental Assessment of the Areas to the east of the Scottish Mainland, Orkney and Shetland Islands. The RSPB welcomes the opportunity to comment on this SEA.

The RSPB strongly supports production of this SEA covering the implications of further oil and gas exploration in UK waters. SEA is a key tool for integrating environmental considerations into decision-making, thereby enabling the impacts of development on wildlife and habitats to be avoided or at least, minimised. However, we believe that the DTI should take a stronger precautionary approach to the present lack of conservation designations in the SEA5 area, and the other marine areas re-offered in this Round. In particular, sensitive nearshore blocks and blocks containing Natura 2000 qualifying or other protected habitats and species, should be excluded from the 23rd Licensing Round until the exact sites and boundaries have been designated.

If you have any queries about any of our comments please contact the RSPB for further information.

Yours sincerely

Sharon Thompson

Dr Sharon Thompson
Senior Marine Policy Officer

SEA5 – Strategic Environmental Assessment of the Areas to the East of the Scottish Mainland, Orkney and Shetland

RSPB Comments, 23 December 2004

The RSPB welcomes this opportunity to comment on this SEA and the DTI's acknowledgement that further improvements will continue to feedback into the SEA process. We have included comments on the SEA process in general, including the UK's recently published SEA *Draft Practical Guide*, SEA5 and the re-offering of blocks in areas previously assessed by SEA.

The RSPB strongly supports production of this SEA covering the implications of oil and gas exploration the areas to the east of the Scottish mainland, Orkney and Shetland. SEA is a key tool for integrating environmental considerations into decision-making, thereby enabling the impacts of development on wildlife and habitats to be avoided or at least, minimised. However, we believe that the DTI should be taking a stronger precautionary approach to the present lack of information about sensitive sites in the SEA5 area and in the other marine areas re-offered for license. We believe that the sensitive nearshore blocks and blocks containing qualifying habitats and species, particularly those under the EU Birds and Habitats Directives, should be excluded from the 23rd Offshore Oil and Gas Licensing Round until the sites have been designated.

We would also draw attention to the scope of SEA5. Originally, SEA5 was to include a draft plan for the next round of offshore renewables as well as oil and gas exploration. However, the offshore renewables plan has not been included in this assessment, and the SEA5 document should make this clear and also note that any future rounds for offshore renewables will need to complete a separate SEA for that plan.

A Draft Practical Guide to the Strategic Environmental Assessment Directive[1] – In July 2004 the Government published its *Proposals by ODPM, the Scottish Executive, the Welsh Assembly Government and the Northern Ireland Department of the Environment for practical guidance on applying European Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'*. The purpose of the *Practical Guide* is to provide key facts along with best-practice and guidance on how to comply with the EC SEA Directive. With the Directive now in force (since 21 July 2004) and the development of this *Practical Guide*, we would like to highlight some points where changes should be made to the Offshore Energy SEA that would bring it in line with the new UK SEA Regulations and this guide, and have included them with our other comments below.

[1] Office of the Deputy Prime Minister, Scottish Executive, Welsh Assembly Government and Northern Ireland Department of the Environment (2004*) A Draft Practical Guide to the Strategic Environmental Assessment Directive.* http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/page/odpm_plan_030405.hcsp

SEA5

1. S4. The Draft Plan – With the experience gained through the previous SEAs we feel that it is time to add further detail to the plan(s) being assessed. In particular, although we recognise that the predictions of potential activity (S4.4) are best estimates made on current understanding, we still believe that it would benefit the assessment if for example, we were also given the likely impacts (and risks) should potential activity be half or double that predicted. In addition, for SEA4 we welcomed the explanation of possible activities by area rather than by activity type (*eg* seismic, exploration wells and developments as in SEA3), as the area basis is clearer for the reader, however, the latter format has been used for SEA5.

2. Active *vs* passive environmental protection – Following on from point 1, we welcome that the SEA5 report makes reference to the caveats related to the predictions made in the assessment, *eg* (S12.3) "*the recommendations made below are predicated on the understanding that because of poor hydrocarbon prospectivity, nearshore blocks are unlikely to be applied for*" and (S12.4) "*the conclusions are based on the projections of the likely scale and location of activities that could follow licensing, and would need to be revisited if activity levels were substantially greater or technologies changed*". However, we would like to see more proactive protection in the SEA5 area. For example, by putting a coastal buffer zone in place and not offering it for license and by not offering any areas containing sensitive habitats and species, particularly those qualifying under the EU Birds and Habitats Directives, until the exact sites and boundaries have been designated. See also comments on oil spill response below.

3. S4. Plan Alternatives – From an overview of SEA5, it is not immediately clear how the impacts of the plan would differ from the impacts of each of the alternatives. The consideration of alternatives is not very explicit. The requirements of the UK's Regulations[2] transposing the EC SEA Directive into UK law on alternatives are as follows:

> *12 (2) The report shall identify, describe and evaluate the likely significant effects on the environment of –*
> *a) implementing the plan or programme; and*
> *b) reasonable alternatives, taking into account the objectives and the geographical scope of the plan or programme.*

   The wording of the UK's Regulations suggests that alternatives should be considered in a similar level of detail to the plan itself – or at least the alternatives should be regularly referred to throughout the text of the main assessment stage in the report.

4. The Environmental Report – The *Practical Guide* recommends that the environmental report is either separate from the plan, or that it is clearly distinguishable from it. The

[2] The Environmental Assessment of Plans and Programmes Regulations (2004). Statutory Instrument 2004 No.1633. http://www.legislation.hmso.gov.uk/si/si2004/20041633.htm

Practical Guide also recommends that consultation take place on the plan in addition to, and at the same time as, consultation on the SEA environmental report.

In this case, the plan that is being appraised under SEA5 is embedded within Chapter 4 of the environmental report. Contrary to the guidance presented in the *Practical Guide*, the current consultation does not appear to include the plan itself. We would suggest that future SEA licensing round consultations explicitly include the draft plan in addition to the environmental report. Also, the SEA5 report and the Offshore Energy SEA website could more clearly distinguish between the environmental report and the draft plan.

From the *Draft Practical Guide*:

> Para 5.C.14. *While the Environmental Report does not need to be issued as a separate document from the draft plan or programme, it must be clearly distinguishable from it*.

From the UK's SEA Regulations:

> 13(1) *Every draft plan or programme for which an environmental report has been prepared in accordance with regulation 12 and its accompanying environmental report ("the relevant documents") shall be made available for the purposes of consultation in accordance with the following provisions of this regulation*.

5. SEA Objectives – Although not explicitly required by the EU SEA Directive, it is generally considered good practice to set SEA objectives at the start of the process that form a framework for assessment – these can also be used as a starting point to test the objectives of the plan being assessed to check compatibility between the plan and SEA. For example, biodiversity SEA objectives could include: 'ensure protection for proposed marine SACs'; or 'ensure protection for habitats or species qualifying under the EU Birds and Habitats Directives'; 'maintain current population levels of marine BAP species'; etc. SEA indicators could then be devised which could structure the monitoring programme once the plan is implemented. SEA aims for the process of SEA are set in the present SEA5 report, *eg* 'consider potential activities in the area', but these would be quite distinct from SEA objectives for the desirable environmental outcomes.

   In future rounds of offshore licensing, we recommend that consideration be given to setting SEA objectives at the start of the assessment process in line with current good practice guidance.

   From the *Draft Practical Guide*:

   > Para 5.A.10. *While not specifically required by the Directive, SEA objectives are a recognised way of considering the environmental effects of the plan or programme and comparing the effects of the alternatives… . SEA objectives can include both externally imposed environmental protection objectives laid down by law or policy and others devised specifically in relation to the context of the plan or programme*

   Also see para 5.A.10-12 and Appendix 3: Devising SEA objectives, indicators and targets.

6. S10. Consideration of the Effects of Licensing the SEA5 Area – As we have stated previously, the presentation of the assessment results in S10 is made on an impact type basis. While we appreciate that this approach can be helpful to highlight impact types for which mitigation will be needed for individual project EIAs, we do not believe that alone it is sufficient to provide the reader with a clear view of the likely significant effects on different receptors/components of the environment, which is an essential part of an SEA. Indeed, it is a requirement of the EU SEA Directive (Annex I(f)) to have this information presented in the SEA report. While the table in S12 is a helpful addition and goes some way to improving on previous SEAs, we continue to believe that it, and S10 should cover the full range of the assessment in a larger table with columns covering: issue/effect; receptor; impact; impact significance; and mitigation. This approach would also enable the judgements of significance and their basis to be presented more clearly, illustrate the proposed mitigation measures and whether this was considered acceptable or not. We also believe that it would aid in identifying significant cumulative impacts (see S10.4).

7. S7.2.1. The Northern Isles: The Orkney Islands – In Table 7.4 Coastal protected sites on Orkney, the number of RSPB Reserves on Orkney should be 13.

8. S10.3.8. Accidental Events – The summary in the Non-Technical Report for this section states that "*For some potential exploration or development locations, the time it would take a spill to beach under worst case weather conditions may not be sufficient to allow the deployment of usual response measures, and additional local resources may be necessary*". Even though the consequences of a major spill in much of this area are considered 'severe' (S10.3.8.8) and the areas of highest prospectivity are close to the shore, no areas are going to be excluded from the licensing round. We strongly disagree with this assessment. Where the time it would take a spill to beach under worst case weather conditions is less than 24 hours, we suggest that it is highly unlikely that resources can be deployed effectively in time to prevent oil reaching coastal waters, particularly where concentrations of vulnerable seabirds may occur. Consequently, the precautionary approach should be adopted and blocks for which the time it would take a spill to beach under worst case weather conditions is less than the minimum time needed to deploy containment measures (at least 24 hours) should be excluded from the licensing round.

9. S11. Consideration of the re-offer for licensing of blocks – We welcome the recognition for the need to re-visit the areas previously 'SEAed' but being re-offered during this round, as this is in addition to the plan assessed for the SEA5 area. We believe that greater detail could be put into this consideration if the previous SEAs were audited (see below) to examine whether the actual level of environmental impact was more or less significant than predicted. S11.4 notes that two specific areas (the Darwin Mounds and potential Annex I reef areas on the Wyville Thomson Ridge) have been found to be more environmentally important since the original SEA(s) were carried out, therefore these, and any similar areas should be excluded from the re-offer for this reason.

10. S12.3. Recommendations – We welcome the recommendation that the DTI LCU will explore feedback mechanisms "*so that the accuracy of activity scenarios used as the basis for SEA can be monitored over time*". We believe that strategic auditing/ monitoring would provide information about how the SEA assessment predictions compared with actual licensing and through the lifecycle of the development.

11. S12.2. Information Gaps: Seabirds – This section states that there are "*seasonal data gaps in the information on offshore seabird distribution*". We would go further than that and, as we have highlighted in all the previous SEAs, there are **temporal and spatial gaps in the offshore seabird at sea data sets** and much of the existing data is now old. As this was identified in earlier SEAs, it would be helpful to include an explanation of why plans to fill these gaps were not in place prior to and/or as part of SEA5 and to detail plans to urgently address these issues in the future and for future SEAs. In addition, while we acknowledge that some of these offshore seabird data gaps are now being filled through the offshore renewables process, this lags behind that of the oil and gas SEA process and funding is always an issue (as such we welcome Recommendation 10). On a positive note, the review of seabirds covered in S6.7 (Birds) and Appendix 5 (Coastal and seabirds of the SEA5 area), is a thorough review of the status of these species, in particular following the publication of *Seabird 2000*. For future work, particularly in the SEA5 area, we would call attention to the recent seabird breeding (recruitment) failures, particularly in sandeel dependant seabirds along the east coast of England and Scotland and in Orkney and Shetland brought about by the recent regime shift in plankton species.

12. S12.2. Information Gaps – The conclusion from this section is that these gaps do not result in the assessment being invalidated. While we agree that invalidation is a strong term, we do believe that certain of the highlighted gaps do result in the assessment being incomplete. For example, as well as the gaps in offshore seabird data, we would draw attention to the lack of designated sites in the offshore SEA5 area. We would urge that all areas that contain qualifying marine habitats and species, legally and under international agreements, be excluded from the 23rd Round license offer. Examples include the potential marine extensions to seabird breeding colonies, specific areas particularly within the Moray Firth (which should be excluded from the license round where they are used by moulting birds, as this is a very vulnerable group), areas important for cetaceans, the potential chemosynthetic seep communities on the Pilot Whale Diapirs, etc.

13. Appendix 2. Expert Assessment Workshop – Taking an overview of the SEA5 document, it appears that, though, it has concentrated on describing the environmental baseline, less, and arguably insufficient effort appears to have been put into assessing the impact of implementation of the plan or its alternatives. The actual assessment itself and the methods used have become summarised and almost 'lost' in an appendix. We found that those closely involved in the SEA process could follow the logic of the assessment but that it was not as clear to colleagues who were less familiar. The Expert Assessment workshop is a valuable step in the assessment process and both the process and the findings from that workshop need to be communicated more clearly to the reader in the main report.

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Ms Christine Ware
Department of Trade and Industry
88-86 Guild Street
Aberdeen
AB11 6AR

22 December 2004

Dear Ms Ware

SEA 5 ENVIRONMENTAL REPORT - CONSULTATION

Thank you for inviting the comments of Scottish Natural Heritage (SNH). We welcome the continued commitment to undertake SEA (Strategic Environmental Assessment) for the licensing of oil and gas areas and are impressed with the content and detail of this report. Indeed, our comments are general in nature, confined mainly to minor points of clarification of detail.

This consultation principally includes new material relating to an area known as SEA 5, an area rich in biodiversity terms with large areas of adjoining onshore land designated for supporting European and national interests – both habitats and species. The SEA process has considered a number of natural heritage interests, and has also provided recommendations for further research where knowledge is limited or impacts need to be considered further. In terms of these recommendations, we particularly support the following:

Noise

- Acoustic research into cetacean distribution and passive acoustic monitoring, prior to and during surveys.
- Consideration is given to the establishment of criteria for determining limits of cumulative impact and for subsequent regulation of cumulative impact.

Protected Sites and Species

We recommend that where any such applications arise within proximity to designated or proposed sites, (both onshore and offshore) and/or where conservation species, i.e. species afforded protection under the Habitats and/or Birds Directives and the new Nature Conservation (Scotland) Act, are likely to be present, that any licensing is limited to individual applications and careful consideration is given to the temporal span of licence consents in order to assess any impacts arising cumulatively.

We would also highlight the importance of the Natura legislation and the further steps that may be required, both by the competent authority and the developer, to ascertain significant effect and whether or not appropriate assessments are required prior to licences being consented. There are a number of European Protected Species (EPS) that could be affected by developments within the combined area covered by this consultation process. Similarly, regard to the relevant legislation will need to be undertaken again by operators and the DTI, should any development(s) go ahead.

Some more detailed comments, regarding information in the main body of the report are attached.

Finally, however, we do have some concerns about the way this particular consultation for SEA 5, which also includes the re-offer of licensing blocks under SEAs 1-4 as part of the proposed 23rd offshore oil and gas licensing round, was advertised. Despite being a member of the Department of Trade and Industry's (DTI) Offshore Energy SEA Steering Group and, therefore, party to the work that went into the production of this report, we did not formally receive an invitation to comment on this report. We are unclear, therefore, as to whether other appropriate consultees have been made aware of its existence.

I hope these comments are helpful. If you wish to discuss these issues further, please contact Dr Sandy Downie (Tel: 0131 446 2439; e-mail: sandy.downie@snh.gov.uk) in the first instance.

Yours sincerely

Iain Rennick
Head of Secretariat

Cc. Zoë Crutchfield, Senior Offshore Advisor, JNCC

Chapters 6 & 10

In sections 6.2.6 & 10.3.4, the report addresses the issue of introduction of non-native species but only through the vector of ballast water discharges, thereby ignoring the possible vector of ships' hull transfer. In our view this is a significant omission, which needs to be addressed. Further no mention is made of the IMO Ballast Water Convention that was agreed earlier this year. We would also like to point out that the non-native red algae *Heterosiphonia japonica* was, earlier this year, identified from Alturlie Point near Inverness, on the southern shore of the inner Moray Firth, where it is growing in abundance.

Chapter 7

Regarding the tables for consideration, we believe that additional material is required to be added namely, those river sites that feed into the areas and have qualifying species with a marine part of their life cycle (e.g. salmon and sea lamprey) or partly depend on salmon (i.e. freshwater pearl mussel). The relevant details of tables to be amended are as follows.

Add the information, highlighted in italics, to the information for the sites indicated in the following tables:

Table 7.9

River Spey	*salmon, sea lamprey, freshwater pearl mussel*
Berriedale and Langwell Waters	*salmon*
River Oykel	*salmon, freshwater pearl mussel*
River Evelix	*freshwater pearl mussel*

Table 7.12

River Dee	*salmon, freshwater pearl mussel*
River South Esk	*salmon, freshwater pearl mussel*
River Tay	*salmon, sea lamprey*

Table 7.14

Imperial Docks Leith	*common terns*

Table 7.15

River Teith	*salmon, sea lamprey*

We are also concerned that the sites of international importance for birds include Important Bird Areas (IBA) (e.g. table 7.5 includes reference to South Westray as an internationally important area because it is an IBA even though it is not an SPA or Ramsar site) as IBAs have no status in law.

Finally, within three of the tables in Chapter 7, namely 7.7, 7.10, 7.13, and the accompanying text, reference is made to the term Preferred Conservation Zone (PCZ). It is our understanding that such areas no longer exist as a result of the updating of coastal planning guidance by the publication of NPPG13. NPPG13 specifically states that it "*replaces*" and "*supercedes*" the 1974 and 1981 versions. As PCZs were created under earlier guidance and are not mentioned in NPPG13, by default they no longer exist. Instead, they have been replaced by the need to identify developed, undeveloped and isolated coastal types and to set out the policies that should apply in these areas.

Chapter 8.

We are is surprised that no mention is made of the proposed decommissioning of Talisman's Beatrice installations in the Moray Firth, given the second draft of the Beatrice Decommissioning Programme which was recently consulted on by the DTI. We are also surprised by the lack of information regarding the current use of the Beatrice installations by the MoD, and indeed of their possible future use by the MoD post-decommissioning.

Finally, we believe the issue of possible interaction with renewable energy development projects has not been adequately addressed and are not sure how this relates to work on the DTI atlas for renewables technology in the marine environment. Given the proposed offshore wind farm at the Beatrice site and Talisman's advanced plans to install two test turbines as part of the first phase of a Demonstrator Project, why have the two issues of oil and gas and marine renewables not been considered together?

It is our understanding that sanction of the Beatrice demonstrator project was expected for the second half of 2004, following which detailed engineering would then commence along with activities required to gain the necessary regulatory approval, for example completing all the Environmental Impact Assessments and statutory consultations. Final regulatory approval for the project is expected during the second half of 2005, at which time construction activities would be well advanced. And following installation, the first electricity from the Demonstrator Project is planned for mid-2006.

We believe this to be relevant because the information we have received from Talisman states that, besides proving the concept of deepwater wind farms, the Demonstrator Project will also provide benefit to the ongoing oil production operations at Beatrice. Electricity from the demonstrators will be used to power the platforms, thus providing significant OPEX savings and helping to extend the economic life of the field. This may be relevant in the context of this consultation in relation to potential co-operation with any existing operators that might develop adjacent licensing blocks taken up under SEA 5.

The full 1GW wind power scheme would follow on from the success of the Demonstrator Project which is touted as having the potential to be the forerunner of several very large offshore wind farms, capitalising on the UK's oil and gas service, supply sector infrastructure and supply chain. In addition

to Beatrice, it may well also develop potential re-use opportunities for existing oil infrastructure in a number of UKCS oil and gas fields in the Southern and Central North Sea and the Irish Sea. This is again of relevance with respect to any new blocks being taken up under the 23rd licensing round.

Scottish Natural Heritage
December 2004

From: Chris Lomax [mailto:Chris.Lomax@engb.com]
Sent: 04 October 2004 12:09
To: christine.weare@dti.gsi.gov.uk
Subject: SEA 5 Environmental Report

Dear Ms Weare,

We have reviewed the SEA 5 Environmental Report and would like to make the following comments:

Section 8.8.1
This section states:
Stingray, the world's first large scale tidal stream generator system, was deployed in Yell Sound off the Shetland coast in 2002 for preliminary testing. The success of these tests has lead to the redeployment of Stingray for additional testing, with plans for installing the Stingray power station, connected to the local network, in 2004.

As the developer of Stingray, we would suggest that this section could possibly be rewritten as:

Stingray, the world's first large scale tidal stream generator system, was deployed in Yell Sound off the Shetland coast in 2002 for preliminary testing. The success of these tests led to the redeployment of Stingray for additional testing in 2003. Depending on funding, a 5MW (10 unit) Stingray power station, connected to the local network, could be in place within 2 years of the funding becoming available.

Section 11.2.4
With regards SEA 4 relicensing (and any new licences within SEA 5), we recognise that it is unlikely that there is any spatial conflict between potential oil and gas development areas and marine renewable areas. However, any potential effects on the wave or tide resource areas, particularly in Shetland, Orkney, the Pentland Firth, or the Scottish West Coast (wave sites in particular) should be considered.

Best Regards
Chris Lomax
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To: SEA Coordinator,
DTI Oil & Gas Directorate

16th December 2004

WDCS comments on the 5th Strategic Environmental Assessment of the 23rd round of offshore oil and gas licensing, to the east of the Scottish mainland, Orkney and Shetland.

WDCS welcomes the opportunity to comment on the 5th SEA and we hope that our comments will prove useful and can be taken into account.

WDCS are very supportive of the SEA process and believe that it has the potential to be a positive tool in integrating environmental considerations into offshore oil and gas licensing plans. We continue to be concerned however that the SEA process is unable to ensure effective protection for cetaceans from the impacts of oil and gas development because the necessary information on cetacean distribution and abundance, or the impacts of noise pollution, is not currently available to allow us to make confident and informed decisions.

In light of these significant data gaps, we believe a highly precautionary approach must be taken to licensing of oil and gas developments. Indeed, WDCS believes that these gaps in knowledge are so significant that no further licensing should go ahead until headway is made in filling these gaps in our knowledge. Once a better understanding is achieved, more informed decisions will be possible on how to integrate cetacean considerations into licensing plans.

Comments on the SEA Environmental Report

Section 6.8.2 Distribution and Abundance - Cetaceans
Figure 6.12 serves to illustrate that the survey work in the SEA 5 area has not been wholly comprehensive. Gaps remain in the coverage on the area and these are only magnified when it is considered that the work has been carried out over a number of years, that the majority of cetacean records to date are for example, only from the summer and that in order to assess movement patterns and important habitat areas there is a need for more detailed survey effort.

A reference is not given for the survey work, shown in Figure 6.12, carried out in the Moray Firth by Hastie *et al*. (2003).

We are concerned, and have stated this before, that the information presented in the species sighting rates maps from Reid *et al*. (2003) should not be considered as a comprehensive picture of cetacean occurrence in the SEA 5 area. The SEA 5 Report and Reid *et al*. (2003) admit that the maps represent sightings made from many different platforms over a 20 year time period. We urge that it be made clear that this data are a only 'snapshot' of animals over this period rather than a true indication of current population sizes, seasonal movements and habitat use depending on environmental conditions or variability. Indeed, Hammond *et al*. (2004) refer to the maps as representative of *crude sightings rates*. In fact, there remains a particularly limited knowledge of the abundance and distribution of coastal species, and very little is known about those populations that inhabit offshore waters.

In this section, information on threats is given in the species account for harbour porpoise yet no such information is provided for the other primary species outlined in section 6.8.2. The threats mentioned in the porpoise section are common to the other species. These threats could, therefore, equally be raised in the respective sections of the other species.

Furthermore, the brief summary of the threats facing the harbour porpoise (and other cetaceans) does not do the extent of the problems justice. Particularly, the sentence that mentions acoustic disturbance should be expanded. A reduction in available habitat, although an important factor/influence, is not the only potential impact of acoustic pollution. Not only can noise cause avoidance and associated habitat loss it has the potential to disrupt vocal, feeding and breeding behaviour, cause physical injury and in extreme circumstances lead to death. Hammond et al. (2004) give a detailed account of noise sources and the effects of man-made noise on marine mammals that should be better represented in the SEA text.

The bottlenose dolphin section should note that this is a small, geographically isolated population and is the only resident population of bottlenoses in the North Sea. It is essential to include this information as it helps to demonstrate why this is such an important and vulnerable group of animals. The lack of any mention of threats to this population is a particularly large gap given the population's precariousness, demonstrated by the level of protection deemed to be appropriate for this species. Hammond *et al.* (2004) mention the recorded incidences of infanticide and the prevalence of skin lesions. These are indications that the heightened pressure the population is sustaining is causing real impacts on the fitness of the animals and that the bottlenose dolphin is not coping with the threats it faces in the region. This is highlighted by the population viability analyses mentioned in the SEA 5 Report. All the evidence points to the need for a highly precautionary approach to be taken with regard to the management of any activities that are likely to cause further impacts on this population.

The northern bottlenose whale has been missed off the list of other species that have been recorded in the SEA 5 area. Hammond *et al.* (2004) list this species because it has been recorded a number of times in the SEA 5 area.

Section 6.8.3 By-catch and other non-oil management issues

Bycatch - Illegal salmon nets are known to be a problem in the Moray Firth, in inshore areas. Small populations such as the Moray Firth bottlenose dolphin are more sensitive to losses than larger populations. Thus, even a small mortality of bottlenose dolphins in these nets may have significant ramifications for their status in the region.

Shipping - Not only does shipping (and other vessel traffic) have the potential to cause serious physical injuries and death through collision but it is known to cause disturbance (Janik & Thompson, 1996). Disturbance disrupts natural behaviour patterns and effectively reduces the time and energy the animal can spend on reproduction and survival. If a full consideration of the impacts on cetacean species in the area is to be achieved in this SEA then this issue should be noted.

Boat disturbance itself can vary in frequency and intensity at different times and in different areas. In busy coastal areas with a high amount of recreational boat use, such as the Moray Firth, disturbance may be sustained and the intensity of its impact may vary depending on the species, the situation and the degree of direct vessel harassment. Boat disturbance is identified in the Moray Firth cSAC Management Scheme (MFP, 2001) as having varying degrees of likelihood (low to high) and consequence (moderate to severe).

Noise pollution from shipping should also be noted. Whilst the noise produced is not as 'loud' as some other sources, such as seismic surveying, ship noise is continuous so may have long-term effects and the total amount of energy transmitted into the water is high.

Section 7.4 Coastal and marine nature conservation initiatives
It is noted the SEA 5 area supports a number of Annex II species for which offshore SACs may possibly be designated, including bottlenose dolphins and harbour porpoises. Hammond *et al*. (2004) concludes that this is an 'important area' for these 2 species so it would seem highly likely that areas within SEA 5 will be given protection in the future. WDCS would like to see a precautionary approach being taken by DTI and for any potential SAC sites to be excluded from licensing. The same applies for potential OSPAR and nationally important sites. Further research will be necessary before these can be identified for cetaceans and this should proceed before licensing commences.

Section 10.3.1 Underwater noise
It appears that the area that has had the most intensive seismic exploration in *Figure 10.2*, the Outer Moray Firth, matches an area of low survey coverage shown in *Figure 6.12*. Although there may have been marine mammal seismic observations during these explorations the only way to assess the relative importance of this area for cetaceans is to conduct proper dedicated cetacean surveys there.

It should be noted in this section that whilst most energy from seismic airguns is at low frequencies, high frequency noise is also emitted incidentally and this is where small odontocetes greatest auditory sensitivities lie (Stone, 2003).

There appears to be no discussion in this SEA document of the intense noise likely to be produced by decommissioning activities and the potential impacts of this on marine mammals. These activities are of significant concern because of the great potential for physical injury or death. We understand that guidelines to mitigate the impacts of decommissioning are under development and this is to be welcomed. We urge that industry is encouraged to comply with the current draft version of these and that once finalised they will be made a licence condition.

10.3.1.1 Specific consideration of the SEA 5 area
Figure 10.2 would have been more helpful if it indicated how many 2D and 3D surveys were represented by the yellow lines. At present it is impossible to judge if the proposed 8 2D and 8 3D surveys represent a 'modest increment to existing coverage in the area' as is suggested in the text.

The information detailed in this section from audiograms, observations from seismic surveys and other incidents of recorded response to seismic noise, combined with the topography of the SEA 5 area indicate that behavioural responses and even physical trauma are possible for the cetaceans inhabiting this area. WDCS do not agree with the subsequent comment that precautionary levels of protection are not considered justified because the area does not support populations of species with threatened status. The population of bottlenose dolphins in the Moray Firth can be considered threatened and our knowledge of other cetacean populations in the region is not complete enough to make a full assessment of their status. Cetacean species are recognised as being of national and European importance, whilst the impacts of noise pollution are not fully

understood but thought to be potentially significant – this should result in a precautionary approach being taken.

We would further dispute the statement:-

> 'Against precautionary (and claimed ethical) considerations, should be balanced the lack of observed effects in one of the most intensively studied cetacean populations (in close proximity to more than 30 years of intensive seismic survey effort)'.

Where is the evidence to show that there has or hasn't been an effect on the Moray Firth bottlenose dolphins, who we presume are the population mentioned? Very little study has been completed on these dolphins outside of the inner Moray Firth, not an area where seismic work takes place. Further, to our knowledge, no study has specifically looked at the impact of seismic work on the population and if it has been done, it should be mentioned in this document.

10.3.1.3 Conclusions and data requirements

There are several points that must be made in response to the conclusion that:-

> 'As with previous SEAs, it is considered that there is an acceptably low risk of potential effects of underwater noise resulting from forecast activity in the SEA 5 area. The proposed level of activity does not represent a significant increment to recent seismic survey effort; which does not appear to have resulted in significant changes in sightings frequency or behavioural responses. Mitigation measures already implemented, together with proposed modifications, appear to provide some degree of protection from acute effects and are generally followed by the industry.'

Firstly, we do not believe that the evidence included in this document and previous SEA's demonstrates that there is an acceptably low risk of potential effects. The conclusion that recent seismic survey effort has not resulted in significant changes in sightings frequency or behavioural responses is not illustrated by Stone (2003), the major piece of work looking at the effects of seismic activity on marine mammals in UK waters. This paper concluded that:

- With all small odontocete species combined, there were significant declines in sighting rates during periods when the airguns were firing. They more often headed away from vessels during shooting, obvious avoidance was displayed and increased swimming speeds.
- When results of all species of baleen whales were combined, they stayed further from the airguns during periods of shooting, altered course and headed away from the vessel more often. There was also a tendency by fin/sei whales to remain near the surface, where received sound levels are generally lower, during periods of seismic activity.
- Different cetacean species appear to react to seismic activity in different ways. Baleen whales orient away from the vessel and increase their distance from the source but do not move away from the area completely. As slower moving animals it is possible the strategy they have adopted is remaining near the surface where sound levels may be less, whilst moving slowly away from the source. Avoidance exhibited by small odontocetes appears to be mostly temporary although it is not known whether the animals seen later in a survey are the same individuals or new animals that have moved into the area. It is possible that animals may have no choice but to remain in an area, if there is some reason (e.g. food) that they need to be there. Hammond et al. (2004) states that marine mammals are important predators in the region, feeding on a wide range of prey types.
- It is not known to what extent this disturbance poses a serious threat to the health of marine mammals. Many potential effects of seismic activity remain largely unknown, for example long-

term effects, effects on vocalisations, social behaviour and physiology, consequences of auditory masking and the potential for damage to hearing.

The mitigation measures currently employed probably do provide some degree of protection but whether this is sufficient to prevent acute effects remains unknown. The extent and seriousness of the many actual and potential behavioural effects of seismic activity detailed by Stone (2003) are not known and we cannot with any confidence determine that physical impacts have not occurred. The link between possible behavioural responses and the onset of physical damage cannot currently be determined. Further to this, no obvious or measurable response does not mean there is no impact.

Any prevention of effects by the employment of mitigation measures depends entirely on compliance by industry. When dedicated marine mammal observers were used, compliance was high and high quality data was provided. However, the review of seismic activities from 1998-2000 (Stone, 2003) showed that dedicated marine mammal observers were only used on 19% of surveys, lessening the effectiveness of the mitigation employed.

Data Requirements – Data gaps and recommendations for research and mitigative measures have not been detailed in this SEA. Given the likely significance of noise pollution as an issue and the importance of the data gaps that relate to it and cetaceans as a receptor, we feel they should be listed here again, with details of how they are being filled. By not including them, the impression given is that they are not very important.

Finally, we would like to re-iterate our concerns about controlled exposure experiments for assessing the acoustic effects of noise on cetaceans. Whilst we recognise the urgency of the need for an improved understanding of how noise may impact these animals, we are concerned that the exposure of the target animals (and other animals in the vicinity of the experiment) could be harmful and, therefore, we believe that it should only be conducted with great care and where aims, methods and independent scrutiny have been agreed according to an internationally defined protocol that should now be developed

Comments on Post Public Consultation Report

Although we accept there has been much discussion surrounding the findings by Jepson *et al*. (2003), this is an important piece of work, highly relevant to the issues in this SEA, and should be discussed in more detail. This work identified unusual lesions and a possible mechanism for noise-related injury in some of the animals stranded around the UK in the last 13 years as well as from the Canary Islands. The species considered included common dolphins (*Delphinus delphis*) and a harbour porpoise (*Phocoena phocoena*), as well as other deep diving animals, including Risso's dolphins (*Grampus griseus*) and various beaked whales.

Internal damage – holes in tissues - that can lead to death in cetaceans was reported and appears to be caused by a condition similar to that known in humans as decompression sickness or 'the bends'. It is currently unclear whether this happens as a result of fright response as an individual attempts to swim away from the sound and exceeds its physiological tolerances as it comes to the surface, or as a direct result of the physical impact of the sound. Whatever the mechanism of injury, the authors of the article show that the damage is caused to vital internal organs, in particular the liver of the animal, and this leads, at least in some cases, to death.

Although a number of cetaceans in the study had stranded coincidently with naval exercises there were animals that had lesions that had stranded on the UK coast at times when naval exercises

were not being carried out. The potential cannot be ruled out that the injuries found in these individuals, by the same mechanism, were caused by other loud noise sources, such a seismic.

10.4 Cumulative effects
Decommissioning should be considered in discussion of incremental and cumulative effects of noise.

Discussion of the cumulative effects of underwater noise in this section again relies on assumptions about the distribution of cetaceans in the area which we believe are not proven. Additionally, whilst there may not be direct evidence that activity to date has resulted in 'direct mortality or acute trauma to marine mammals', there is enough evidence to indicate the potential for these impacts. Cumulative impacts from seismic survey, military sonar and shipping noise have been identified but no discussion is offered as to how significant overall this might be. Section 10.3.1.3 notes that progress on establishing criteria for determining limits of acceptable cumulative impact and subsequent regulation has been slow. If this is the case then a **truly precautionary approach to the regulation of underwater noise associated with seismic exploration is necessary and should be initiated with this SEA.**

11. Consideration of the re-offer for licensing blocks in the previously SEAed areas
The same concerns apply in relation to the consideration of the re-offer for licensing of blocks in the previously SEAed areas. We do not feel an adequately precautionary approach has been taken in relation to the impacts of oil and gas exploration on cetaceans, particularly in such areas as that covered by SEA 4 which is recognised as a nationally and internationally important for cetaceans.

Conclusions

Every SEA undertaken so far has identified the distribution and abundance of cetaceans and the effects of noise pollution as being significant information gaps but we can see little evidence that a serious attempt is being made to fill them. This must be addressed as a matter of priority. WDCS believes that these gaps in knowledge are so significant that a precautionary approach must be employed and no further licensing should go ahead until headway is made in filling these gaps in our knowledge. Once a better understanding is achieved, more informed decisions will be possible on how to integrate cetacean considerations into licensing plans.

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WWF for a living planet

WWF-UK's response to SEA 5

Drafted by Louise Johnson
on behalf of WWF-UK

February 2005

1) Process and Scope

The requirements of the SEA Directive[1] are clear, and state unambiguously that effects such as synergistic, indirect and cumulative effects need be considered[2]. A rigorous process to achieve the SEA requirements is critical in ensuring that the assessment is carried out effectively, ensuring relevant information is sourced for analysis, and that stakeholders have the opportunity to provide adequate, timely input into the scope and detail of the environmental report.

Using the requirements of the Directive, the process of undertaking an SEA can be broken down into several stages (ODPM, 2004)[3], namely:

- setting the context and establishing the baseline;
- deciding the scope and developing strategic alternatives;
- assessing the effects of the plan;
- appropriate consultation and influence on decision making; and
- monitoring implementation of the plan, and adjusting the plan accordingly.

SETTING THE CONTEXT AND ESTABLISHING THE BASELINE

Context has been set in that the plan seeks to address only the SEA of the 23rd licensing round, not the totality of oil and gas industrial impacts affecting the area. This is a very narrow interpretation of the SEA Directive, missing the opportunity to:

- expand the assessment to impacts from *all* oil and gas activity, so as to assess the effects from both new developments and existing fields/infrastructure. "*Modest increments*" are continually mentioned, but a continuation of several modest increments eventually adds up to a larger accumulation of impact. This point is specifically related to synergistic and cumulative effects as stipulated in the Directive; and
- take into account the cumulative impacts and subsequent effects on receptors from all users of the sea in the region.

As the area contained within the SEA 5 boundary has been offered up for licensing since 1964, it is not necessarily easy to determine the baseline of the area (whether environmentally, ecologically or socio-economically) prior to any hydrocarbon exploration or production activity. Some attempt at developing a retrospective baseline, perhaps through comparison with a similar but undeveloped control area may offer some insight into the original state.

Nevertheless, in assessing the current state of the environment a variety of additional independent studies have been conducted (SEA 5 Environmental Report, 2004)[4] which provide useful additional expert input where gaps in knowledge exist, or where existing information needs updating i.e. plankton communities, benthic environment, marine mammals, conservation sites, etc. In addition, an offshore mapping and surveying exercise was conducted during September-October 2003 to provide valuable additional information on the geophysical and

1 EC SEA Directive 2001/42/EC of the European Parliament and Council

2 Annex 1(f) (including footnote 1) of the EC SEA Directive 2001/42/EC

3 Adapted from A Draft Practical Guide to the Strategic Environmental Assessment Directive, Office of the Deputy Prime Minister, July 2004

4 DTI SEA5 Environmental Report, September 2004

biological environment of the area. These studies have contributed to identifying the current baseline understanding and provide an evidence base from which to assess future environmental problems.

DECIDING THE SCOPE AND DEVELOPING STRATEGIC ALTERNATIVES

The scope of each of the oil and gas SEAs so far developed has concentrated on the process of application for and provision of licences for oil and gas development on the UKCS[5]– therefore the SEAs address the incremental addition of offering further licences on top of the already existing operations in the area. The scope as it stands covers the award of a licence to a potential operator, the subsequent exploration and production of any new hydrocarbons found, but does not assess the transport, refining or use of the products.

Scoping specifically for the SEA 5 was conducted via a consultation exercise in spring 2003. Stakeholder input at that time indicated some believed the scope of the environmental assessment should be extended to incorporate use of the products derived from the anticipated additional oil/gas production – WWF supports this view, acknowledging the very real indirect impacts further down the supply chain from hydrocarbon exploitation. Unfortunately, this has been excluded from the assessment.

The alternatives provided for SEA 5 are:

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

The SEA Directive states "*the likely significant effects on the environment of implementing the plan or programme, and reasonable alternatives….. are identified, described and evaluated*" (Annex 5.1).

Although alternatives to the plan were stated at the outset of the SEA, there were no scenarios developed to enable the alternatives to be properly envisioned and assessed i.e. no scenarios exploring what effects would occur if only partial licensing was allowed, or temporal restrictions were applied. The Office of the Deputy Prime Minister recommends[6] a hierarchy of alternatives, the first priority being to identify whether the plan is actually necessary i.e. "*alternative option 1*". There are a variety of ways this alternative may be viable, for example through provision of equivalent energy through further development of renewables or reducing energy demand through efficiency improvements – indeed this month the Scottish Executive has just committed to such an approach in using less fossil fuels[7]. Again, this has not been considered as a viable alternative within the assessment.

In the Environmental Report, comparison tables, enabling an easier understanding of how alternatives were compared and assessed, are lacking. As a result, there is little opportunity to identify potential environmental impacts (whether positive or negative) of **all** potential alternatives. This provides the impression that serious systematic comparison of the proposed plan versus the alternatives, as required under Annex 1(h) of the Directive, has not been properly undertaken – as a description of the comparison assessment has not been included, the presumption appears to be that full licensing of the SEA 5 area would prevail.

5 Petroleum Act 1998

6 A Draft Practical Guide to the Strategic Environmental Assessment Directive, Office of the Deputy Prime Minister, July 2004

7 News release - Energy Efficiency Strategy, Scottish Executive 7th December 2004

It would have been useful to represent linkages to other relevant plans and programmes or environmental objectives documented as such (ODPM, 2004):

Other plans/programmes	Objectives or requirements of the other plans/prog's	How objectives and requirements might have been taken on board

This would ensure the SEA 5 process was part of a coordinated attempt to address the appropriate priority issues.

ASSESSING THE EFFECTS OF THE PLAN

'Optimistic' and 'pessimistic' scenarios have been developed for the financial predictions relating to the amount of additional oil and gas to be extracted – we do not feel the terms optimistic and pessimistic are appropriate for use within an environmental assessment.

A single scenario of anticipated exploration and production has been provided by the DTI. It would have been useful to expand this financial high/low approach to the prediction of potential licence take up and anticipated activity. This would allow impacts from development of alternative "*minimal take-up*" and "*greater than anticipated take-up*" scenarios to be envisaged.

The contribution to climate change foreseen as a result of the SEA 5 plan has been excluded from the assessment. The SEA Directive specifically requires SEAs to consider "*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*" (Annex Ig). Climatic factors and the interrelationship with other environmental issues are a specific requirement to be incorporated into SEA (Annex If). But in several areas the opportunity to interlink these has been overlooked. For example, the Report details how plankton are thought to be responding to climate change through re-distribution of populations and changes to timing of peak production - yet the link is not made that the primary reason for these required responses is believed to be due to climate change brought about by the historical and continued use of hydrocarbons, which further licensing rounds can only contribute towards.

An interesting change in approach is that North Sea operators such as BP now accept responsibility for not only reducing their own emissions from sourcing and producing hydrocarbons, but are now also targeting emission reductions specifically from use of their products[8]. In this respect the responsibility for addressing climate change is now laid directly at the door of decision-makers; not just oil and gas producers, but in the case of SEA, at Governments whose actions clearly need to achieve large and rapid reductions in greenhouse gas emissions to reach the legally binding Kyoto Protocol targets and IPCC recommendations.

In their Guidance for Practitioners[9], the UK Climate Impacts Programme (UKCIP) agreed that greenhouse gas emissions "*from future activities must be reduced so as to minimise further*

8 BP Sustainability Report 2003

9 Strategic Environmental Assessment and Climate Change: Guidance for Practitioners, UKCIP, May 2004

climate change, over and above the unavoidable changes due to past actions". Even though there may be a lack of clarity over the impact further expansion of the oil and gas industry in the UK could have on future climates, this does not mean it should not be tackled in relation to the restriction of future licensing of additional oil and gas exploitation - we believe a precautionary approach is required here.

CONSULTING AND DECISION MAKING

Consultation opportunities during the SEA 5 development phase have been provided as follows:

1 An initial scoping exercise in early 2003
2 An expert assessment workshop session in May 2004
3 A stakeholder dialogue workshop in June 2004
4 Production of the Environmental Report in September 2004

It is not clear how the input received at the first three consultations has actually influenced the further development of the SEA process. The post-workshop report from the stakeholder dialogue session[10] provides a tabulated summary of points made during the session, although there is only limited context provided. In the interests of making the consultation process more transparent, information is lacking on how the stakeholder inputs stimulated and contributed to alternative thinking within the SEA 5 development process and how this input has affected decision-making. These are points specifically stipulated as requirements within the SEA Directive (Article 9[b]).

MONITORING IMPLEMENTATION OF THE PLAN

At this stage, it is premature to comment on how well monitoring will be managed as the licensing round progresses, although it is a concern that indicators developed for the purpose of monitoring for future impacts are lacking from the Report. It is not obvious what indicators will be used to measure impact against presumed baseline. Neither are there any indicators specified which will measure the effectiveness of the plan itself, ensuring that future plans can be improved. Indicators should be identified to assess whether the SEA accurately assesses the environmental impacts, and should be developed to monitor the effect of mitigating actions. Several suggested indicators related to objectives are available in the SEA and Biodiversity Guide[14].

Once monitoring is underway, the SEA should detail what response will occur once results are available, e.g. who has overall responsibility for ensuring monitoring is assessed, how will the feedback loop work in reality, how will adaptive management techniques be used to reduce impacts, etc.

2) Assessment within the Environmental Report

The assessment requirements as set out in EC SEA Directive are explicit and detailed in Article 5 and Annex I. The Environmental Report is produced as part of the Governments' responsibility in undertaking that environmental assessment. It provides a further opportunity for stakeholders to understand the assessment completed to date, and provide feedback on that assessment and further development of the plan.

10 DTI Offshore Energy Strategy Environmental Assessment, SEA 5 Stakeholder Workshop, June 2004

The Report developed for SEA 5 is a valuable up-to-date synthesis, replacing previously scattered and sometimes outdated information. It is an important resource for users and conservers of the sea and their decision-makers. The Report addresses the majority of the requirements as laid out in the Directive. Areas where the Report could have better addressed the requirements, or developed further the concepts, are detailed below:

GENERAL POINTS

SEA should look strategically at the impacts felt by an area as a whole, not specifically by one particular sector, but should look to assess the cumulative and synergistic effect of impacts from all sectors on a particular area, before agreeing to plans and programmes by one sector. (Ref Article 3.2)

SEA and sustainable development – "*the UK Govt published a Sustainable Development Strategy in 1999 which defines the aim of sustainable development as "ensuring a better quality of life for everyone, now and for generations to come"* " (from section 4.1 of ODPM Draft Practical Guide to the SEA Directive). Releasing further blocks for exploration and exploitation does not easily fit within the UK's stated strategy, knowing that climate change is a very real threat, causing impacts not only now, but also for the medium and longer term.

By licensing blocks for oil and gas it may preclude development of other, less polluting sea uses and even forms of energy production, e.g. wind and wave power and other renewables. An SEA should be actively considering alternatives like wind, not precluding them.

EFFECTS

As with the previous energy SEA's, it is unfortunate that this assessment is only now being performed at a time when the baseline situation of the environment is difficult to assess, being four decades since oil and gas exploration and development first started in this part of the North Sea.

In addressing the issue of noise and impact on marine mammals, the Report states "*consideration should be given to establishment of criteria for determining limits of acceptable cumulative impact and for subsequent regulation*" – this is a very woolly statement and needs to be much more robust (in line with the recommendation made for further environmental studies on effects of noise on marine mammals ~ SEA 5 p.261). Equally, fish are affected by noise associated with seismic reflection. Impact reduction measures such as temporal bans on noise generating equipment e.g. during breeding season(s) and mitigation measures such as soft starts, bubble curtains etc. should be adhered to. The JNCC[11] considers special temporal and spatial attention especially important within the Moray Firth area – this is primarily due to the resident bottlenose dolphin population. Acknowledging that cetacean sensitivities are high in the SEA5 area, specific mitigation measures such as passive acoustic monitoring (PAM)[12] should be used, in addition to the increased requirement for marine mammal observers (MMO). Due to the relatively shallow waters and topography (and the increased sound propagation distances associated with these characteristics), and in combination with the number of surveys already completed, WWF does not agree with allowing any further seismic activity in the coastal Moray Firth areas.

11 JNCC Guidelines for minimising acoustic disturbance to marine mammals from seismic surveys, April 2004

12 Noting the suggestions made in the DTI's Position Paper on the Mitigation and Management of Oil & Gas Marine Seismic Survey, Sept 2003

Assessment of emissions and discharges – the way the scope has been approached i.e. only considering the increment of discharges likely from a single licensing round, produces a very piecemeal approach to the impact of discharges in the area. WWF agrees with the OSPAR recommendation 2001/11[13] that no new developments be allowed to routinely discharge produced water into the sea. Zero routine flaring should be stipulated as a requirement for all developments. No well tests were included in the contribution to atmospheric emissions in the assessment (p.198). Well tests can include substantial periods of prolonged flaring. Why was this activity excluded from the assessment?

Cumulative effects – the Report needs to bear in mind that the scope of cumulative impacts can be much wider than the scope of this assessment. Comments made at the June 2004 stakeholder consultation workshop stated some concern at the techniques that were being used to assess the cumulative impact issue. Regardless of this, the assessment of cumulative effects in the Report is qualitative and lacks a systematic, quantitative approach.

- A variety of more qualitative approaches are available. Causal chain analysis, suggested by ODPM[6], would allow stakeholders to better understand the likely accumulating impacts and direct effects, as per the intention of the SEA Directive (Annex II).
- GIS is a useful technique to perform spatial analysis of biodiversity critical information, as highlighted within the report SEA and Biodiversity: Guidance for Practitioners[14]. Overlay mapping would be useful to better represent information on vulnerable areas, with layers of information such as higher prospectivity, protected areas, biodiversity hot spots, commercial fishing areas, tidal flows, etc.

The environmental impacts of eventual decommissioning of the predicted infrastructure and installations are not addressed. A plan which allows the development of new resources via a series of offshore installations and pipelines to extract them, should look at the full life cycle of that decision, and should account for the eventual removal for re-use of tens of thousands of tonnes of steel. An example of early design good practice is the development of the Maureen platform, designed from the start to be removable at the end of its producing life[15]. The environmental impacts of the subsequent decommissioning of anticipated development should at least be factored into the environmental impact discussion, instead of only being addressed within the expenditure section (Section 10.6.2.5).

SPILLS

There is extensive vulnerability of many SEA 5 shorelines to oil pollution, already identified as SACs and SPAs. Again the Report highlights only the "*incremental risk*", although continuing to develop hydrocarbon resources in the area will only increase the already major risk of significant oil spills that is associated with increased tanker transport of crude oil and refined products. The high vulnerability (low wave energy & high productivity) of sheltered tidal flats (inner areas of the Moray Firth, Tay and Forth estuaries) and saltmarshes (sheltered areas of Shetland and Orkney, south coast of Moray Firth, local areas on NE coast and within Tay and Forth estuaries) should not be overlooked, and their variety of protected status should be respected.

13 OSPAR Recommendation 2001/11 for the Management of Produced Water from Offshore Installations, 2001

14 SEA and Biodiversity – Guidance for Practitioners, CCW, English Nature, Environment Agency and RSPB (prepared by SW Ecological Surveys, Levett-Therivel and Oxford Brookes University), June 2004

15 "Maureen platform successfully refloated", Phillips Petroleum Company UK Ltd press release, 27th June 2001

- Forty of Scotland's sixty identified Bathing Waters[16] (SEPA classified as "*good*" or "*excellent*") are located in the SEA 5 area
- The Report acknowledges that predominantly S and SW coastal winds characterise the area, which could divert an oil spill away from the sensitive coastal areas (p.51), but this should not be relied upon. The extensive range of oil spill management equipment and procedures are highlighted.
- Planktonic larval stages and eggs were found to be most susceptible to the spill from the Braer (SEA5 p.73), with higher mortalities and an enhanced level of premature hatching. The Report recognises that impacts such as this can have severe repercussions at the base of the food chain.

CONSERVATION/VULNERABLE AREAS

The consortium behind the SEA & Biodiversity guide[14] believe that the use of restrictive conditions and exclusion of areas valuable for biodiversity is a useful mechanism to support positive planning for biodiversity. This is not a mechanism considered appropriate in the SEA 5 Report, although few would doubt the high conservation priority status afforded to certain habitats and species prevalent in the SEA 5 area.

Cetacean species found in the assessment area, including the bottlenose dolphin (*Tursiops truncatus*) and the harbour porpoise (*Phocoena phocoena*), and pinnipeds, including the grey (*Halichoerus* grypus) and harbour seals (*Phoca vitulina*), are incorporated into a variety of different pieces of European and UK legislation recognising the priority of their conservation status. Situations such as this SEA process provide the opportunity to minimise oil & gas related disturbance of these species, ensuring proper conservation action is taken, and they are not just protected on paper.

The Moray Firth, recently fully designated as Scotland's only Marine SAC[17] for dolphins, warrants the utmost protection, owing to the resident bottlenose dolphin population being listed under Annex II and IV of the Habitats Directive[18]. Species listed under Annex IV are in need of strict protection and as such it is illegal to cause disturbance to this species. Indeed this area supports the only known population in the North Sea. The UKBAP[19] cites potentially 130 individuals resident in the Moray Firth area; it also states seismic survey as a possible threat to the species, as direct auditory damage may cause potential harm. As noted in the Report, there are areas of "*greater prospectivity*" of interest to oil and gas producers, in both the inner and outer Moray Firth (Section 4.1). Seismic, and therefore licensing, should be excluded from this area on a precautionary basis until research providing a better understanding of the effects of this impact is available (as is indeed suggested by Recommendation 8 in the Report).

Other protected species found within the SEA 5 area include grey seals and harbour seals, which are both listed under Annex II of the Habitats Directive. Certain cSAC areas are clearly of particular ecological importance for these pinniped species[20] where they choose to haul out, breed and forage, e.g. Mousa (Shetland), Sanday (Orkney), Dornoch Firth and Morrich More

16 As meeting the mandatory and/or quality standards within the Bathing Waters Directive (76/160/EEC)

17 Commission decision adopting, pursuant to Council Directive 92/43/EEC, the list of sites of Community importance for the Atlantic biogeographical region, Dec 2004

18 Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna

19 Grouped Species Action Plan for small dolphins, www.UKBAP.org

20 Hammond et al, 2004, as above

(Moray Firth), Firth of Tay and Eden Estuary (NE coast), Isle of May (Firth of Forth), and important foraging area around the southern and north-west SEA5 boundaries. Acknowledging that these areas are cSACs or may possibly be designated for offshore SACs, it is considered prudent to delay development of these areas until further research can clarify the offshore distributions of these species[21]. In this instance perhaps once further research has been completed, these blocks can then be licensed at some later date.

As several of the important cetacean and pinnipeds in the region are mobile within the SEA 5 area, it is difficult to suggest appropriate broad spatial limitations in order to protect some of these species from the effects of licensing. Instead, where licensing is eventually allowed, temporal limitations should be considered with regard to peak population densities in differing areas, and known moulting and pupping periods.

- The Report should more clearly detail mitigation measures required to counteract potential impacts, e.g. observers on vessels, ramping up, avoiding exploration during breeding seasons, use of hydrophones, etc.
- The Report states "*clear-cut conclusions on the significance of potential effects of seismic exploration in the SEA 5 area on marine mammals, cannot be reached on the basis of available scientific evidence*". To quote from the SEA and Biodiversity guide[22] "*the precautionary principle implies a presumption in favour of biodiversity protection where the knowledge required to ensure effective mitigation or compensation for a significant adverse impact is lacking. It should also apply in situations where there is sufficient evidence to suggest that adverse impacts are possible, but not enough to confirm "no significant impact"*" – therefore the precautionary principle should prevail.

Many bird colonies along the Scottish coast have been afforded protection status as SPAs for the internationally protected species, and internationally important numbers of individuals breeding there. Given that within the SEA 5 region there are 18 areas which qualify under Article 4.2 of the Council Directive on Conservation of Wild Birds[23], 9 wetlands of international importance for over-wintering species and 45 coastal International Bird Areas (IBAs), special protection from development should be given to these critical areas and they should be excluded from licensing. This would include those inshore areas proposed to expand seawards from existing onshore SPAs (Johnston et al, 2003)[24].

As detailed in the Report, the potentially important benthic habitats include areas such as East Shetland Shelf, the Pobie Bank (large submarine rocky banks), and Sandy Riddle (linear sand feature). As the East Shetland Shelf and Pobie Bank have been classified as Group 2 for bedrock and stony reef habitats through the offshore Natura 2000 process (Johnston et al, 2003)[25], such areas should be excluded from development. Due to the importance of *Arctica islandica* (bivalve mollusc) noted at the Fladden Ground, and the Horse mussel, (*Modiolus modiolus*) noted in Shetland, Orkney and the Firth of Forth, areas found to include such species should be excluded from development. Although not discovered live within the SEA 5 area yet, any areas found to contain *Lophelia pertusa* should immediately be marked off limits to development.

21 Conservation Sites in the SEA5 area, 2004, University of Aberdeen with Hartley Anderson Ltd

22 SEA and Biodiversity – Guidance for Practitioners, CCW, English Nature, Environment Agency and RSPB (prepared by SW Ecological Surveys, Levett-Therivel and Oxford Brookes University), June 2004

23 Council Directive of 2 April 1979 on the conservation of wild birds (79/409/EEC)

24 Johnston CM, Turnbull CG & Reid J, Marine Natura 2000, JNCC (2003)

25 Johnston CM, Turnbull CG & Reid J, Marine Natura 2000, JNCC (2003)

Pockmarks are the only features known to occur in UK offshore waters which may conform to the Annex I habitat 'Submarine structures made by leaking gases' of the Habitats Directive. Johnston et al (2002)[26] identify that there are potential areas to the east of Shetland and an extensive area centred on the Fladen and Witch Grounds which may contain the Annex I habitat, and may be found to fall within the SEA 5 area. Recognising the biodiversity interest within these features, it may be worthwhile recommending that these areas are withheld from licensing at this time, until further assessment can be made to identify their potential presence.

Of the data gaps identified within Section 6.3.9 of the Report, specifically the distribution and ecology of specific habitats, a condition of licence should be that potential operators must contribute their ecological survey data, or alternatively Remote Operated Vehicle (ROV) time, to surveying specific habitats within their survey block. The UNEP/WCMC[27] is looking to collate ecological survey data from organisations willing to share data gathered as part of their environmental assessments. Several North Sea operators are already participating in this Eco-i-share project.

CLIMATE CHANGE IMPACTS

As highlighted in the previous section (on how well the assessment met the requirements of the Directive), climatic factors were not adequately addressed in the SEA 5 Report. The eventual emissions produced through use of the resources developed as a result of the licensing round are a very real indirect effect which has not been adequately dealt with in this assessment. This should be revisited and included.

In their Review of Policy Makers Information Needs[28], UKCIP stakeholders recognised that directives such as the Habitats and Birds Directives required that designated sites must be managed to maintain favourable conservation status. They agreed that climate change will affect this, and that it needs to be considered at a policy level now, not solely in the future. Several points of concern are made within the Report that acknowledge the negative influence of climate change:

- "*Sea level may increase the magnitude of erosive processes and lead to the accelerated erosion of intertidal and coastal habitats*" (SEA 5 p.47)
- Hiscock[29] regarding "*the potential effects of climate change on seabed wildlife in Scotland…*" (p.199)
- "*increase in wind stress also reduces stratification of the surface waters, delaying the onset, or altering the community structure of the planktonic spring bloom. These conditions have been more predominant in the last few decades and there is suggestion that this may be an effect of global warming*" (p.72)

Specifically the changes in movements of plankton populations (and changes in timing of peak productivity) through the North Sea provide evidence of changes of a larger scale, indicative of the changes expected to be observed through climate change - which solely concentrating attention on the limited scope of hydrocarbon licensing for this area seems to overlook.

26 Johnson CM, Turnbull CG & Tasker M (2002), Natura 2000 in UK Offshore Waters: Advice to support the implementation of the EC Habitats and Birds Directives in UK Offshore Waters, JNCC Report 325

27 World Conservation Monitoring Centre (part of the United Nations Environment Programme organisation), Eco-i-share project (www.unep-wcmc.org)

28 Draft report of the UKCIP workshop for marine decision-makers, 'Climate Change impacts – what do we need to know?', April 2004

29 Hiscock K, Southward A, Tittley I, Jory A & Hawkins S, 2001, The impact of climate change on subtidal and intertidal benthic species in Scotland

- OSPAR[30] in it's assessment of the Quality of the North Sea agrees that a reduction of the input of greenhouse gases is necessary.

SOCIO-ECONOMIC

Socio-economic boosts vs. placating conservationists – the Report states the plan "*could make significant contributions to overall UKCS production, employment and tax revenues*" (summary p.XIX), yet it also states there is (p.27) "*limited potential for commercial oil and gas reserves*" and elsewhere states that the DTI expect licence take-up to be low… there is a contradiction here.

With the increase in oil prices seen recently (currently at a record high levels), it could be argued that increased interest in blocks previously deemed non-economically viable may now become more viable, and therefore more attractive. This is especially so for smaller scale operators with the possible risk of less stringent environmental practices. Therefore it may be likely that an additional increase in block uptake is experienced, and therefore a larger impact could be expected than is indicated by the predictions used in SEA 5.

What if uptake of SEA 5 blocks is higher than expected? If this is the case, should this trigger additional further SEA assessment (as cumulative impact will be expected to be bigger).

Currently there is only one producing installation in the whole SEA 5 area (Beatrice). The DTI Licensing and Consents Unit predict that depending on the success of the exploration and appraisal drilling, some three new standalone developments are anticipated, with potentially one new pipeline to shore. This could mean that the environmental impacts currently seen from the existing installation may increase by at least a factor of three in the area (Beatrice noted as "*a significant point source of hydrocarbon discharge*" SEA 5 p.63).

COMMENTS ON CONCLUSIONS AND RECOMMENDATIONS

WWF disagree with the overall conclusion that no blocks from the SEA 5 should be excluded from licensing, regardless of whether they have been identified as having good hydrocarbon prospectivity (section 12.4).

We disagree that the recommendations are made on the understanding that because of poor hydrocarbon prospectivity, nearshore blocks are unlikely to be applied for. It is impossible to predict what licences will be taken up, and a precautionary approach is more appropriate. Considering the sensitivity of the habitats around the Scottish coast, it would be prudent to exclude those areas mentioned from licensing, specifically for their conservation value and not because of their lack of hydrocarbon value.

Recommendation 7 regarding the development of an effects monitoring strategy for offshore oil and gas activities is extremely important, and we would suggest that this concentrates specifically on monitoring impacts, not just discharges, and that cumulative impacts are especially considered, recognising the difficulty found in quantifying these.

We agree in line with Recommendation 8, and suggest that operators awarded licences should be required to contribute to a research fund whose objective is to eliminate those areas of uncertainty about the environmental effects of hydrocarbon exploration and production e.g. the effects of noise on marine mammals and the sub lethal effect of drilling discharges.

30 OSPAR QSR 2000 Section 6.2.1

The Report states that take-up is expected to be low in the SEA 5 region, and SEA 2 about 50%, SEA 3 10-15%. The overall conclusion states that if the locations of, or level of licensing activity, differs from that which is predicted, the conclusions would need to be revisited. In the interests of the precautionary principle, this is a refreshing approach, although it is difficult to see how this could work in reality. Is the DTI suggesting that some operators would have their licences withdrawn if their exploratory searches become a little too successful? Or at least defer the development of some of these licences? Or would further assessment be triggered? It would be valuable to have clarification on this issue if this is the case, and not just alluded to, bearing in mind the difficulties of predicting licence take-up or exploratory success.

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