



**UK Offshore Energy Plan  
SEA for Offshore Oil and Gas Licensing and Wind Leasing  
Environmental Report Consultation**

**Response by  
The Royal Society for the Protection of Birds  
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### **About the RSPB**

The Royal Society for the Protection of Birds (the RSPB) is the charity that takes action for wild birds and the environment. We are the largest wildlife conservation organisation in Europe with over one million members. We own or manage approximately 135,000 hectares of land for nature conservation on 200 reserves throughout the UK.

### **The RSPB's commitment to renewable energy**

The RSPB believes that climate change is the greatest long-term threat faced by people and biodiversity. Without rapid action to reduce greenhouse gas emissions, one third of all land based species may be committed towards extinction by 2050. We have welcomed the UK Government's plans to cut emissions by 80% by 2050 and we support the Government's pledge to deliver the UK's share of the EU renewable energy target for 2020. The UK Government's Renewable Energy Strategy has proposed that, to contribute its fair share to the target, it will seek to generate 15% of its energy (and up to 40% of electricity) from renewable sources. This will require a revolution in the way that we generate and use energy. The RSPB advocates that this revolution should take place in a way that minimises damage to the natural environment based on a mix of technologies as well as demand reduction and energy efficiency.

Given this context, the RSPB supports government's aspirations to generate 33GW of renewable electricity from Offshore Wind Farms by 2020.

### **The role of the UK Offshore Energy Plan SEA**

The role of this Strategic Environmental Assessment (SEA) process is to ensure that environmental considerations are incorporated into the Draft Plan so that the Government's 33GW target is delivered with minimal impacts on the marine environment. Although SEA is a regulatory process, and not a policy process for UK renewables, we believe it has a critical role to play in filling information gaps to support both the assessment of the Draft Plan and the faster delivery of a Marine Protected Areas (MPA) network and future marine plans.

The forthcoming system of marine spatial planning will play a valuable role in providing a joined-up process by which conflicts between present and future offshore energy developments can be resolved. In the meantime, this SEA process should serve the industry and the marine environment by playing a strategic role in helping to determine that areas which have been licensed stand a good chance of receiving consent at the project stage, and in identifying how any adverse impacts of future developments can be reduced and any positive outcomes enhanced.

## **Introduction**

The RSPB welcomes the Strategic Environmental Assessment (SEA) of the UK Offshore Energy Plan ('Draft Plan') covering the implications of further wind farm leasing, oil and gas licensing, and gas storage licensing in UK waters. Overall, we agree with the SEA's conclusion that there are no overriding environmental considerations that would preclude the UK Offshore Energy Plan from being adopted, given adequate avoidance and mitigation of potentially significant effects. However, we consider that significant displacement, barrier and collision effects on birds cannot be ruled out in the absence of a strategic-level Cumulative Impact Assessment (CIA) of the offshore wind element of the plan.

While the Environmental Report (ER) successfully collates large amount of data, it fails undertake a robust assessment and i) evaluate a wide range of spatial alternatives for each activity, ii) undertake a satisfactory assessment of likely cumulative effects, particularly for birds, and iii) adopt a rationale for judging the significance of effects. Moreover, the recommended avoidance and mitigation measures are inadequate to address potentially significant effects, particularly for birds.

The RSPB is seriously concerned that no Appropriate Assessment of the Draft Plan has been carried out to date, despite our advice that this would be required. We are of the opinion that the proposals may have a likely significant effect on Special Protection Areas and their bird populations, and that a strategic AA, based largely on the data compiled for the SEA is possible.

We would welcome the opportunity to discuss our comments further, in particular, the detailed recommendations made below.

### *Structure of this response*

Key issues, data needs and recommendations are summarised below. Further below, we make detailed comments on key sections of the ER.

## SUMMARY OF ISSUES

### SEA conclusions

- **We agree with the SEA's conclusion that there are no overriding environmental considerations that would preclude the UK Offshore Energy Plan from being adopted, given adequate avoidance and mitigation of potentially significant effects.**
- **However, significant displacement, barrier and collision effects on birds cannot be ruled out in the absence of a strategic-level Cumulative Impact Assessment (CIA) of the offshore wind element of the plan.** The assessment of Alternative 3, the preferred alternative, concludes that there are potential negative effects due to barrier effects and changes in food availability, and potential minor negative impacts upon birds due to collision and behavioural changes. However, the overall conclusion is that these effects are not significant at a strategic level. We believe that some of these potential negative/minor negative effects are as likely to be significant at the biogeographical scale as they are likely to be insignificant and as such, we cannot make a definitive determination either way.
- **We agree that existing oil spill controls are adequate and additional controls are not necessary at the strategic level.**

### Spatial considerations

- **The proposed 12nm non-exclusionary buffer zone:** We welcome recognition of generally greater sensitivity within 12nm from an ecological, fisheries and navigation and landscape point of view, but also the flexibility for consideration of developments within this area on a case-by-case basis.
- **The proposed 6nm exclusion zone around oil and gas infrastructure seems excessive** in our view and may also put additional pressure on current and proposed Marine Protected Areas. We realise that this generic buffer is linked to helicopter safety and do not wish to unnecessarily promote unsafe conditions, but consider that the 6nm buffer, like the 12nm buffer, should be a 'soft' constraint that can be negotiated on a case-by-case basis.

### Appropriate assessment

- **Appropriate Assessment of licensing/leasing proposals:** The RSPB is extremely concerned that no Appropriate Assessment of the Draft Plan has been carried out to date, despite our advice that this would be required. We are of the opinion that the proposals will have a likely significant effect on Special Protection Areas and their bird populations, and that a strategic AA, based largely on the data compiled for the SEA is possible. Therefore, in the absence of a strategic AA, the RSPB finds it difficult to see how DECC can proceed to leasing and licensing decisions and comply with the legal requirements of the Habitats Directive.

### SEA approach

**The assessment is not robust.** In our response to the UK Offshore Energy Plan SEA scoping report in January 2008, we emphasized the need *"for the assessment to consider a wider range of reasonable alternatives for each activity, [and] focus on evaluating cumulative effects..."* While the ER successfully collates large amount of data, it fails to i) assess a wide range of spatial alternatives for each activity, ii) undertake a satisfactory assessment of likely cumulative effects, particularly for birds, and iii) adopt a rationale for judging the significance of effects. Moreover, the recommended avoidance and mitigation measures are inadequate to address potentially significant effects, particularly for birds.

- **The alternatives considered minimalist, non-spatial and fail to address each activity separately.** We are seriously concerned that the alternatives considered in the ER are minimalist at best and fail to address each activity separately (i.e. offshore wind, oil and gas, and gas storage). We are also concerned that the SEA does not consider spatial alternatives to licensing and leasing using the Round 3 Crown Estate map of proposed development zones as one alternative amongst many.
- **The assessment of potential cumulative effects on birds is inadequate:** The claim made in section 5.5.4 that there are unlikely to be cumulative effects on biogeographical populations is not supported by a robust assessment. This effect cannot be ruled out for specific species depending on the scale of multiple wind farms and other developments affecting species across occupied sea areas, including transboundary effects. We note that most of the RSPB's objections to Offshore Wind Farm proposals have related to the cumulative effects of multiple wind farms on the relevant SPA population (e.g. Sheringham Shoal), rather than relating to population level impacts of individual wind farms. Adequately addressing cumulative effects is key to minimizing any potential adverse environmental impacts of offshore wind farms.
- **The methodology for determining significance of effects is unclear.** The ER does not define the significance criteria used to assess the likely environmental effects of the Draft Plan. For example, it is unclear how a minor negative effect is distinguished from a major negative effect and how their relative significance is decided. More detailed significance criteria should have been developed, taking into account the SEA Directive's requirements in Annex 1.
- **In our view, negative transboundary effects on birds cannot be ruled out.** This is because i) bird populations are transboundary, and ii) the Round 3 zone extends to the edge of UKCS, e.g. Dogger Bank, therefore potentially abutting other Member State offshore wind farms and oil and gas proposals as well as existing infrastructure and the effects of fishing activities.
- **Existing arrangements are inadequate to monitor the likely environmental effects of the Draft Plan.** The ER finds that existing monitoring arrangements are sufficient to understand the evolution of baseline conditions in respect of biodiversity effects across the SEA area. However, we disagree as most Food and Environment Protection Act (FEPA) monitoring requirements are compliance monitoring and not necessarily helpful in advancing our knowledge of effects/impacts on birds.
- **We welcome the receptor-based assessment, the adoption on many fronts of the precautionary approach and the incorporation of SEA Steering Group and COWRIE contributions.**

#### SEA Recommendations

- **Recommendation 6 (Marine Protected Areas):** Recommendation 6 needs to make it explicit that in some cases, Natura 2000 sites (and other MPAs) may not be leased at all. As currently drafted, this recommendation seems to indicate that environmental objectives are secondary to economic ones.
- **Recommendation 14 (Marine Protected Areas):** This recommendation runs counter to some other recommendations and is inconsistent with the precautionary approach and should be rephrased to state: "*Where offshore wind developments do not impact on the conservation objectives of MCZs, wind farms may be located in such areas...*" While offshore wind farms and Marine Conservation Zone objectives can be compatible, they cannot be defined as 'coincident'.

- **Recommendation 19 (expansion of Round 1 and Round 2 sites):** We agree that Round 1 sites should not be expanded and note that seaward expansion of Round 2 sites, while preferable to landward expansion, may cause adverse cumulative effects on some bird populations. Therefore, Round 2 expansions should be considered on a case-by-case basis.
- **Recommendation 21 (offshore database):** We strongly support this recommendation and urge the Crown Estate to tie in data deposition requirements within offshore wind farm consents. There needs to be a long-term resolution of how this database is used and managed (currently there is a backlog of data and the database is not used effectively).

#### Ornithological data needs

- **Additional surveys are essential to cover all those SEA areas that may attract interest from offshore wind developers (within suitable depth parameters), and that have not already been covered in Rounds 1, 2 and 3 surveys.** There is a need to continue surveys beyond this year and to review priority areas. The programme put forward for 2007 / 08 should be extended to provide data over a minimum of two to three years before planning applications are submitted in order to address gaps in knowledge about the distribution and abundance of birds at sea
- **In order to utilise the same survey platform before and after construction, a solution must be found to the problem of low flying in post-construction wind farms.**
- **Additional boat surveys are necessary to enable simultaneous collection of behavioural observations and environmental variables.** These types of boatsurveys are more suitable for identifying some species of seabirds, and therefore should be integrated into data collection programmes.
- **In terms of practical survey work, it will be necessary to strike an appropriate balance between expedient coverage of large survey areas, and adequate coverage to enable robust density estimations.** Transect separation will be the means to address this potential conflict, but caution is needed in increasing transect separation too much and thereby missing concentrations – a potential problem especially for species with clumped distributions.
- **There is scope for expanding current tracking studies (mainly using GPS loggers) to other species and other colonies with funding input from government and industry to assist with information provision for R3.**
- **A GIS atlas of bird distribution and abundance would be an extremely useful component of a constraints assessment for offshore energy, whilst also enabling information gaps to be identified.** If such an atlas is to be relevant to R3, it needs to be progressed as soon as possible.
- **It is recommended that a minimum of two years data collection precede a planning application, but that data collection should continue during the pre-construction period.**

## RSPB'S RECOMMENDATIONS

1. **Undertake Appropriate Assessment of the Draft Plan:** In our view, the Draft Plan is likely to have significant effects, and may potentially have adverse effects on coastal and offshore Natura 2000 sites, and therefore will require a strategic-level Appropriate Assessment. The SEA Environmental Report contains most of the data necessary for a strategic-level AA.
2. **Undertake a strategic-level Cumulative Impact Assessment:** A strategic level Cumulative Impact Assessment (CIA) should be undertaken, ideally led by DECC, as CIA at the project level is unlikely to adequately predict likely cumulative effects. This CIA could underpin the assessment of in-combination and cumulative effects for the Appropriate Assessment of the Draft Plan. Note that a strategic CIA does not need to be entirely quantitative and can be based on a straightforward evaluation of whether additive effects are likely or not. For example, the SEA could have predicted, without the use of Populations Viability Analysis, that cumulative effects on gannet near Dogger Bank may be significant depending on levels of activity. We believe that it is possible to carry out a strategic CIA now, e.g. of the Crown Estate potential development zones for Round 3, together with Scottish Territorial Water proposals, using a combination of quantitative and qualitative methods. We would be happy to discuss this point in more detail.
3. **Publish a research plan for collecting environmental data in the marine environment:** This research plan should address the data needs outlines in the RSPB Round 3 offshore wind farm report (Annex 1). We would be happy to discuss these points further.
4. **Coordination and effective long-term use of the offshore environmental database:** There needs to be a long-term resolution of how the offshore database is used and managed. We strongly support Recommendation 21 and recommend that the Crown Estate tie in data deposition requirements within offshore wind farm consents. We note that data collected for Offshore Wind Farms and marine SPA designation should be integrated to i) progress the designation of marine Special Protection Areas (SPAs) and ii) to provide baseline information to determine suitability of proposed development zones for Round 3 offshore wind.
5. **The current Scottish Territorial Waters SEA should adopt an appropriate buffer zone based on environmental rationale:** We recommend that the ongoing SEA for Scottish Territorial Waters (STW) adopt an appropriate buffer zone for STW based on environmental rationale.
6. **The current Northern Ireland offshore and marine renewables SEA should provide a starting point for the future planning of marine renewable energy projects in NI.** The forthcoming NI Marine Bill and system of marine spatial planning will play a valuable role in providing a joined-up process by which conflicts between present and future offshore energy developments are resolved. In the meantime, the NI offshore wind and marine renewables SEA process should be used to integrate environmental issues into the formulation of marine renewable energy policy.
7. **Develop guidance for EIAs for offshore wind farms, oil and gas and gas storage:** In our view, additional guidance is needed on the above.
8. **Pre-application data collection:** We recommend a minimum of two years data collection preceding a planning application plus ongoing annual pre-construction data-collection (Langston 2008, C. Barton pers. comm.)
9. **In our view, existing arrangements are inadequate to monitor the potential effects of the Draft Plan.** The inadequacies of monitoring arrangements should be addressed

through incorporating detailed monitoring and reporting requirements into leases and licenses.

10. **Future SEAs in the marine environment should carry out fresh assessments of new proposals:** DECC proposes to update this SEA on a rolling basis. As long as this is carried out with due process, includes any new information or data and the potential environmental effects of future plans are freshly assessed, we support this proposal.

## **DETAILED COMMENTS ON THE ENVIRONMENTAL REPORT**

### **2.1 Overview of the Draft Plan & relationship to other initiatives**

We acknowledge that the UK Offshore Energy Plan is a high level plan. However, in our response to the scoping report in January 2008 we highlighted the importance of adding further detail to the Draft Plan as it covers licensing for three very different activities. In particular, though we recognise that predictions of oil and gas activity are best estimates made on current knowledge and understanding, we suggested that the assessment would be improved if it were able to predict the likely impacts should activity be half or double that predicted. The draft plan as described in section 2.1 does not include predictions of oil and gas activity, and consequently the assessment falls short of adequately assessing the likely effects of such activity.

### **2.2 Further spatial considerations - Marine Protected Areas (MPAs)**

There are likely to be conflicts between energy licensing applications (oil and gas, offshore wind, CCS), and the, as yet incomplete, Natura 2000 network and forthcoming Marine Conservation Zones (including highly protected MCZs) network. The RSPB is extremely concerned that no Appropriate Assessment of the licensing/leasing proposals has been carried out to date, despite our advice that this would be required. The RSPB is of the opinion that the proposals will have a likely significant effect on Special Protection Areas and their bird populations, and that a strategic AA based on the data compiled for the SEA is possible. Therefore, in the absence of a strategic AA, the RSPB finds it difficult to see how DECC can proceed to leasing and licensing decisions and comply with the legal requirements of the Habitats Directive. In addition, any locations known to incorporate nationally important features should be treated as if they were designated MCZs until the network has been completed.

## **3. SEA approach**

We welcome the receptor-based assessment, the adoption on many fronts of the precautionary approach and the incorporation of SEA Steering Group and COWRIE contributions.

However, while this SEA successfully collates vast amounts of environmental and socio-economic information, it falls short of rigorously assessing the Draft Plan's effects on the environment.

In our response to the UK Offshore Energy Plan SEA scoping report in January 2008, we emphasized the need "for the assessment to consider a wider range of reasonable alternatives for each activity, [and] focus on evaluating cumulative effects..." However, this SEA fails to consider a wide range of alternatives for each activity (section 5.16), nor has it undertaken a satisfactory assessment of likely cumulative effects (sections 5.5.4 & 5.14), particularly for birds. The rationale for determining the significance of effects is also unclear because it is not adequately defined. These points are discussed in more detail below.

## **4. Environmental information**

Despite data collation and collection through previous SEAs 1-7, there are still significant information gaps, especially for seabirds at sea, that will necessitate new data collection. To some extent, this has been recognised, with some additional aerial and, for the purpose of the SEA, boat-based bird surveys. A project involving satellite tracking of whooper swans on migration between the UK and Iceland is underway, funded through COWRIE.

We fully agree with the recommendation in this section to integrate data collected for various purposes, notably for Offshore Wind Farms (OWFs) and marine SPA designation, which is necessary to progress the designation of marine Special Protection Areas (SPAs) and to



provide baseline information to determine suitability of proposed development zones for R3 offshore wind.

## 4.2 Overview of environmental baseline

### *i) Additional aerial and boat bird surveys*

Additional surveys are essential to cover all those SEA areas that may attract interest from offshore wind developers (within suitable depth parameters), and that have not already been covered in Rounds 1, 2 and 3 surveys. There is a need to continue surveys beyond this year and to review priority areas. Survey areas need to provide contextual information as well as information specifically for the proposal area. Many of the proposed Crown Estate (CE) zones are of sufficient size to encompass both potential wind farms plus a wider contextual area. However, some of the zones in the English Channel in particular are relatively small and will therefore require larger areas surveyed to enable the information for the zone to be placed in a wider context, i.e. is the zone typical or does it contain higher or lower densities of a particular bird species.

The programme put forward for 2007 / 08 should be extended to provide data over two to three years before planning applications are submitted in order to address gaps in knowledge about the distribution and abundance of birds at sea (updating the European Seabirds at Sea (ESAS) database and providing data at a finer resolution more suited to the requirements of offshore wind energy). Recent analysis by the BTO for COWRIE<sup>1</sup> has highlighted that several years of baseline data are necessary in order to detect any post-construction effects on birds. Therefore, as discussed at a recent meeting of the Scottish Renewables Forum, it is recommended that a minimum of two years data collection precede a planning application (Langston 2008, C. Barton pers. comm.), but that data collection should continue in order to provide up to five years pre-construction data.

Just as with earlier rounds of offshore wind farms, aerial surveys enable more rapid coverage of large areas and are generally considered better at detecting species susceptible to disturbance (notably divers and seaducks). However, some of the large concentrations of divers in the Thames were observed from boats and, in the case of the large offshore zones relevant to R3, both approaches have their limitations in terms of coverage because of the longer distance offshore before reaching survey areas. In particular, in order to utilise the same survey platform before and after construction, a solution must be found to the problem of low flying in post-construction wind farms.

Currently, COWRIE and some industry members are assessing the suitability of HiDef video survey from higher elevations as compared to conventional aerial survey techniques in order to determine whether the HiDef approach will deliver high quality results. This problem of low flying in post-construction wind farms has presented an unforeseen problem and one not faced by the Danes, who used extensive boat surveys. Boat surveys enable simultaneous collection of behavioural observations and environmental variables, are more suitable for identifying some species of seabirds, and therefore should be integrated into data collection programmes.

### *ii) Achieving both expedient and adequate coverage of large survey areas*

The critical issue in terms of practical survey will be striking an appropriate balance between expedient coverage of large survey areas, with adequate coverage to enable robust density estimations. Transect separation will be the means to address this potential conflict, but caution is needed in increasing transect separation too much and thereby missing concentrations – a potential problem especially for species with clumped distributions. This

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<sup>1</sup> Maclean IMD & Rehfishch MM (2008). Developing Guidelines for Ornithological Cumulative Impact Assessment: Draft Discussion Document. British Trust for Ornithology Research Report No. 513 for COWRIE, 41pp. BTO, Thetford.

will to some extent be overcome by adopting transects across environmental gradients and by collecting data for wind farm proposal areas at a finer resolution than for coverage of the whole zone, e.g. 4km separation across the zone and 2km between transects across proposal sites. We note that the ESAS survey snapshots for the SEA were conducted at 5km separation (C. Barton pers. comm.)

### *iii) Tracking studies*

The use of satellite tags to obtain positional information about several species during their migration to/from the UK and to identify foraging areas at sea by birds from onshore breeding colonies (notably SPAs) is underway. For example, there is a study underway to follow whooper swans during their migration between Iceland and the UK (e.g. Pennycuick et al. 1996<sup>2</sup>, Pennycuick 1999<sup>3</sup>), as species of concern relating to the possible cumulative effects of the proposed Walney and West of Duddon Sands offshore wind farms in the Round 2 area of SEA 6. A similar study on pink footed geese has been proposed, but so far not progressed any further.

There are several tracking studies (mainly using GPS loggers) on several seabird species associated with several breeding colonies. There is scope, as recommended in Langston 2008<sup>4</sup>, for expansion of these studies to other species and other colonies with funding input from government and industry to assist with information provision for R3. Most work to date, mainly by academic research institutions, with involvement of CEH, RSPB, JNCC and some other organisations, has been to identify foraging areas associated with specific SPAs.

Additionally, there have been radio tracking studies of terns in relation to several R2 offshore wind farm proposals (Perrow et al 2006)<sup>5</sup>.

### *iv) Radar tracking of bird migration*

Whilst generally of limited potential for identifying bird species responsible for the tracks observed on radar, nonetheless, military radar has been used in the past to determine migration volume across the North Sea (e.g. Lack 1959<sup>6</sup>, 1960<sup>7</sup>, 1963<sup>8</sup>).

### *v) GIS atlas of bird distribution*

A GIS atlas of bird distribution and abundance, pulling together all available information, would be an extremely useful component of a constraints assessment for offshore energy, whilst also enabling information gaps to be identified (thereby updating the DTI gaps analysis by Pollock & Barton 2006<sup>9</sup>). Inclusion of down-weighted ESAS data where older than 10 years would be advisable. A proposal for this work was prioritised for progression by DECC RAG, but unfortunately stalled when it is was becoming most relevant to produce a

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<sup>2</sup> Pennycuick, C. J., Einarsson, O., Bradbury, T. A. M. & Owen, M. 1996. Migrating Whooper Swans *Cygnus Cygnus*: Satellite Tracks and Flight Performance Calculations. *J. Avian Biol.* 27: 118-134

<sup>3</sup> Pennycuick, C. J., Bradbury, T. A. M., Einarsson, O. & Owen, M. 1999. Response to weather and light conditions of migrating Whooper Swans *Cygnus Cygnus* and flying height profiles, observed with the Argos satellite system. *Ibis* 141: 434-443

<sup>4</sup> Langston 2009. Round 3 offshore wind farm developments and birds at sea. April 2009 reissue of formerly confidential RSPB report November 2008. RSPB, Sandy.

<sup>5</sup> Perrow M. R. Skeate E. R., Lines P., Brown D. and Tomlinson M. L. 2006. Radio telemetry as a tool for assessing impacts of windfarms: the case of Little Terns *Sterna albifrons* at Scroby Sands, Norfolk, UK. *Ibis* 148:57-75.

<sup>6</sup> Lack, D. 1959. Migration across the North Sea studied by radar: 1. Survey through the year. *Ibis* 101: 209-234

<sup>7</sup> Lack, D. 1960. Migration across the North Sea studied by radar: 2. The spring departure 1956-59. *Ibis* 102: 26-57

<sup>8</sup> Lack, D. 1963. Migration across the southern North Sea studied by radar: 4. Autumn. *Ibis* 105(1): 1-54

<sup>9</sup> Pollock, C. & Barton, C. 2006. An analysis of ESAS seabird surveys in UK waters to highlight gaps in coverage. Report to the DTI by Cork Ecology.

GIS atlas of bird distribution. If such an atlas is to be relevant to R3, it needs to be progressed as soon as possible.

#### 4.2.1 UK Context – Biodiversity, habitats, flora and fauna

With respect to the description of bird fauna on p.40, there are additionally birds that occur on passage, during their migrations between more northerly breeding areas and southerly wintering areas, when they stopover in the UK (applies also to p.vii).

In addition, in the description of Regional Sea 2 & 3 (p.45-46) there is no mention of migratory waterbirds.

#### 4.3 Relevant existing environmental problems

Table 4.1 on environmental problems relevant to offshore oil and gas licensing and wind should also note under the 'Fishing and changes to fishing communities' heading on p.52 that there are various bird species also susceptible to fishing bycatch, although totals in UK waters are unknown.

The 'Vulnerability of seabirds, coastal waterbirds etc' heading on p.52 should include that SPAs also include birds on passage (Stroud et al. 2001)<sup>10</sup> and coastal colonies also provide safe areas for moulting.

#### 4.4 Likely evolution of the baseline

The inferences for waterbirds in this section are not borne out by Austin et al. 2008, with the notable exception of ringed plover which continues to decline. Note that ringed plover and turnstone are both species whose declining population trends (until recent years for turnstone) were attributed as being indicative of short-stopping due to climate change. Dark-bellied Brent geese have shown a strong increase in recent years following declines during the 1990s. Shelduck is showing a pattern of decline from a stable level held for quite a few years; this merits keeping a close watch to determine whether this trend continues. Bar-tailed godwit is a species of international importance at several UK sites that is showing a steady decline of considerable concern

### 5. Assessment & significance of effects

#### *i) Overall conclusions*

The SEA Environmental Report concludes that a further round (R3) of offshore wind development should proceed within a spatially restricted area. The only spatial restriction proposed is the recommendation for limited development with 22km of the coast. We agree with the conclusion that there are no overriding environmental considerations that would preclude the UK Offshore Energy Plan from being adopted, given adequate avoidance and mitigation of potentially significant effects.

With respect to birds, the assessment concludes that the Draft Plan's "...displacement, barrier effects and collisions are unlikely to be significant to birds at a population level." (p.127). The ER does acknowledge that there are important uncertainties in relation to bird distribution (and temporal variability) as well as the sensitivity of this conclusion to modelling assumptions (notably avoidance frequency in modelling collision risk; and several important factors in modelling of population dynamics). In our view, the above conclusion does not adequately reflect the likely significance of the Draft Plan's effects on birds at a population level. While significant displacement, barrier and collision effects **might be unlikely**, significant effects cannot be ruled out in the absence of a strategic-level Cumulative Impact Assessment (CIA) of the offshore wind element of the Draft Plan.

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<sup>10</sup> Stroud, D. A., Chambers, D., Cook, S., Buxton, N., Fraser, B., Clement, P., Lewis, P., McLean, I., Baker, H. & Whitehead, S. 2001. *The UK SPA network: its scope and content*. JNCC, Peterborough.

## ii) Significance of effects

While some rationale for determining significance is cited in certain sections of the ER, the report does not adequately define the criteria used to determine significance during the assessment. For example, it is unclear how a minor negative effect is distinguished from a major negative effect. More detailed significance criteria should have been developed, taking into account the SEA Directive's requirements in Annex 1 to include secondary, cumulative, synergistic, short, medium and long-term, permanent and temporary, positive and negative effects, and that assessments take account of magnitude, sensitivity of the receiving environment, and whether they likely to be reversible or irreversible, probable or improbable, frequent or rare. See p.42 of the [Wales Rural Development Plan SEA](#) for an example of generic significance criteria.

### 5.1 Assessment approach and methodology

At a strategic level, a distinction has been drawn between impacts which may be significant in terms of conservation status of a species or population (and hence are significant in strategic terms), and impacts which may be significant to individual animals, but which will not influence sufficient numbers to have a significant effect on population viability or conservation status (and hence strategically significant).

There are two levels of assessment necessary. There is a legal requirement to determine the risk of an adverse effect on an SPA. There is also a need to assess the effect on the relevant biogeographical population, which may or may not be likely for an individual project, but necessitates cumulative impact assessment.

#### 5.3.2.4 Other receptors

Page 76 states that:

*“Direct effects on seabirds because of seismic exploration noise could occur through physical damage, or through disturbance of normal behaviour. Diving seabirds (e.g. auks) may be most at risk of physical damage. The physical vulnerability of seabirds to sound pressure is unknown, although McCauley (1994) inferred from vocalisation ranges that the threshold of perception for low frequency seismic in little penguins would be high, hence only at short ranges would penguins be adversely affected. Mortality of seabirds has not been observed during extensive seismic operations in the North Sea and elsewhere. A study has investigated seabird abundance in Hudson Strait (Atlantic seaboard of Canada) during seismic surveys over three years (Stemp 1985). Comparing periods of shooting and non-shooting, no significant difference was observed in abundance of fulmar, kittiwake and thickbilled murre (Brünnich's guillemot). It is therefore considered unlikely that offshore seismic noise will result in significant injury or behavioural disturbance to seabirds.” (p.76)*

This section makes an assumption that it is visual, rather than noise, cues that lead to a disturbance response, which may not be correct in all cases. Separation of noise and visual stimuli in disturbance response by birds is often not possible.

### 5.5 Physical presence – ecological implications

This section states that:

*“Furthermore, some receptors (birds and marine mammals) are the focus of considerable attention from a range of NGO and conservation organisations with occasional lack of distinction between conservation, welfare and ethical concerns. This assessment aims to draw balanced conclusions based on credible scientific evidence, while recognising that some precautionary concerns are valid given current uncertainties and information gaps.” (p.108)*

This criticism stems from the perceived NGO opposition to any additive increase in mortality, however small. However, there is often considerable uncertainty around estimates, which may differ by orders of magnitude, leading to accountable significance levels ranging from

major to negligible. If there is not reasonable confidence in the figures presented, conservation organizations are obliged to take the precautionary approach where potential receptors are notified or qualifying interest features. The reference population is critical to determining level of effect and the SEA confuses the need to assess both;

- a) potentially biologically significant effects at the scale of the relevant biogeographical population; and
- b) the legal requirement to maintain favourable conservation status at the level of individual or multiple SPAs or qualifying sites.

#### 5.5.2.1 Displacement and barrier effects

The Shell Flat case study on p.138 highlights several points:

- a) the risks associated with proposing OWFs in areas of particular nature conservation importance, in this case particularly high densities of common scoter, at a time when knowledge of impacts was scarce and inadequate to avoid applying the precautionary principle;
- b) there were protracted negotiations to find a satisfactory resolution to Shell Flat;
- c) the authors imply that environmentalists unnecessarily impeded progress of this development proposal, when there were other constraints also squeezing the location of options; and
- d) the essential requirement for research and monitoring at consented sites to improve knowledge.

Recent Danish studies have provided some insights to common scoter behavioural response to OWF, but even these robust studies missed the opportunity to obtain longer-term information to enable a distinction to be made between short-term and longer-term effects and so resolve the uncertainty relating to displacement effects on common scoter and red-throated diver.

Subsequent surveys indicate that common scoters may now be distributed in comparable densities inside and outside the development; and the possibility cannot be excluded that changes in food availability rather than displacement by disturbance led to the observed changes in distribution (Petersen *et al.* 2007)<sup>11</sup>. It is also possible that these changes reflect habituation to wind farm presence and associated activities.

We note that the DECC RAG study at Aberdeen University investigating aspects of energetic costs of potential barrier effects is absent from the list of case studies in this section. We would appreciate clarification as to why, and assume that it is because the study is not yet available.

#### 5.5.2.2 Bird collision risk

In Table 5.3 it should be made clear that (presumably) the interpretations are those presented in the respective ESs from which the information is drawn, i.e. “worst case scenario”, “precautionary collision avoidance”, “SNH Collision Risk Model (CRM) assumes no avoidance” etc.

The SNH collision risk model at stage one does assume no avoidance, but the guidance for applying the model does not assume that there is no avoidance behaviour. The point of contention is the appropriate avoidance rate to use for most species; there are very few for which a robust and comprehensive avoidance rate is available. Avoidance is the key factor in

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<sup>11</sup> Petersen, I.K., Clausager, I. & Fox, A. D. 2007. *Changes in bird habitat utilisation around the Horns Rev 1 offshore wind farm, with particular emphasis on Common Scoter*. Report to Vattenfall A S by NERI, University of Aarhus, Denmark.

the CRM that has a large impact on the model outputs for just a small change in avoidance rate. Avoidance is not only likely to be highly species specific, but also variable seasonally and for different age/status of birds within species. Only through thorough post-construction monitoring at consented wind farms, will this situation be improved.

The main conclusions which can be reached from Table 5.3 are that;

- a) numerical predictions are highly sensitive to assumptions on avoidance rates; and
- b) excluding scenarios with zero avoidance, the maximum predicted collision rates for any species are of the order of a few tens (per year, per development).

Most of the RSPB's objections to OWF proposals have related to cumulative effects of multiple wind farms and impacts on the relevant SPA population (e.g. Sheringham Shoal), rather than implying biogeographical population level impacts. In the case of Walney, our concern related primarily to migratory waterbirds, notably whooper swans which do not appear in the Table 5.3 and for which the question raised was whether data were adequate to assess volume of movement through the wind farm. This prompted a COWRIE study now underway to determine collision risk for swans on migration between the UK and Iceland. We note that not all OWF are included in this table, e.g. London Array.

Additional references relevant to, but not quoted in, this section include Drewitt & Langston (2008, *Annals of the New York Academy of Science*)<sup>12</sup>.

### 5.5.3 Spatial considerations - the proposed 12nm buffer zone

The conclusion of the spatial mapping exercise is that the generation target of 25GW (additional to Round 1 & 2 capacity) can be achieved, even with the implementation of a 12nm buffer zone around our coasts. The major potential receptors identified are birds (5.5.3, p.118). Therefore, the ER acknowledges that potential effects are likely to be related to bird distribution and the relative sensitivities of species.

*i) Table 5.4 - Species-specific Sensitivity Index and other information pointing to focal species in relation to proposed wind farms.*

The Garthe & Hüppop (2004) sensitivity index would require extension to a wider range of species and to be updated from a UK perspective. We welcome the acknowledgment on p.119 that the scores in Table 5.4 represent an initial assessment that is not suitable for updated baseline data collection.

The Offshore Vulnerability Index (OVI) depends on ESAS data and therefore suffers from all the problems associated with over-reliance on ESAS data. It is currently the best data available for many offshore areas but is recognized to be of limited value owing to age of data (most >20yrs), coarse spatial resolution and gaps in data (DTI "Gaps Analysis" Cork Ecology); see the critique in Langston 2008. At the very least, there needs to be sample resurvey to determine the suitability of continuing to depend on ESAS data in terms of how relevant it is to today's distributions and abundance.

*ii) Table 5.5 showing priority risks in relation to Round 3 wind leasing*

We largely agree with Table 5.5 showing priority risks in relation to Round 3 wind leasing, which is largely based on Langston 2008 and converted to regional seas (p.123). It would be advisable to include a caveat here relating to future findings of baseline surveys. However, we agree that this table reflects current knowledge based on existing data.

*iii) The 12nm / 22km proposed buffer zone*

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<sup>12</sup> Drewitt, A. L. & Langston, R. H. W. 2008. Collision effects of wind-power generators and other obstacles on birds. *Annals of the New York Academy of Sciences* 1134: 233-266.

Because of the sensitivity of multiple receptors, and the complexity of decisions regarding major infrastructure near the coast, the SEA concludes that the 25GW should be sited well away from the coast and recommends a 22km or 12nm buffer zone in which proposed wind farms of 100MW or more would not normally be permitted. The recommended R3 buffer is not exclusionary and we note that Crown Estates recently granted 10 exploration licences for offshore wind within Scottish Territorial waters, i.e. within 12nm. These licenses are all for big developments between 280-1500MW. The only areas recommended as an exclusion zone for oil and gas, is the area 14 degrees west of the Hebrides (a recommendation made in SEA7).

In our response to the SEA scoping report in January 2008 we expected the existing exclusion buffer zones of 8-13km set up during Round 2 to be retained for future offshore wind leasing rounds, unless further general or site specific survey or research showed that it was not necessary. The Round 2 SEA recommended a coastal buffer zone based on the ecological rationale of protecting sensitive habitats and species, e.g. to ensure that feeding seabirds were adequately protected, as well as to reduce impacts on seascape from the coast. Developments in Round 2 were permitted at a minimum distance offshore of 8km, increasing to 13km in areas of particular sensitivity such as those in close proximity to Areas of Outstanding Natural Beauty (AONBs) and areas where the seabed was less than 20m below the sea surface, in order to incorporate common scoter in the Irish Sea. Specifically in the North West strategic area, Liverpool Bay, developments were also restricted to water depths greater than 10 m to reduce the potential for overlap with common scoter concentrations.

The R3 22km buffer zone reflects the great sensitivities of inshore waters, not only for ecological receptors but for all interests including fisheries, navigation and other users, and highlights to developers the additional risk/likelihood of conflict in coastal waters. We welcome the flexibility of this non-exclusionary buffer zone.

*iv) The 6nm exclusion zone around oil and gas infrastructure*

We realise that this generic buffer is linked to helicopter safety and do not wish to unnecessarily promote unsafe conditions, but understand that the buffer can be negotiated on a case-by-case basis. Therefore, a *de facto* 6nm exclusion zone seems excessive in our view and may also put additional pressure on current and proposed MPAs (Table 5.17).

*v) Scottish territorial waters and offshore SEA*

A similar 22km buffer zone will not be workable for Scottish territorial waters as it would automatically exclude the vast majority of potential offshore wind farm sites. We recommend that the ongoing SEA for Scottish Territorial Waters (STW) adopts an appropriate buffer zone based on environmental rationale.

As noted above, that Crown Estates recently granted 10 exploration licences for offshore wind within Scottish Territorial waters, i.e. within 12nm. It seems these exploration licensed areas are all >20m deep and unlikely to hold many, or regular, seaducks/divers. However, some are known to be important seabird feeding areas, e.g. Wee Bankie, off the Firth of Forth. All areas have so far been poorly surveyed.

*iv) Northern Ireland offshore wind and marine renewables SEA*

We note that there is an ongoing SEA of offshore wind and marine renewables in Northern Ireland (NI) waters. The SEA coverage will extend out from baselines to 12 nautical miles and will focus on several sites, including the north coast. It is expected to be completed in early 2010, including the public consultation phases. We recommend that this SEA also adopt a buffer zone based on environmental rationale.

Given that this SEA is Northern Ireland's first offshore SEA, we hope that the process will reflect SEA good practice (see Box 1 below).

The forthcoming NI Marine Bill and system of marine spatial planning will play a valuable role in providing a joined-up process by which conflicts between present and future offshore energy developments could be resolved. In the meantime, the NI offshore wind and marine renewables SEA process should be used to integrate environmental issues into the formulation of marine renewable energy policy. This SEA should provide a starting point for the future planning of marine renewable energy projects in Northern Ireland.

**Box 1: Selected SEA good practice points (SEA: Learning from Practice, RSPB, 2007<sup>1</sup>)**

- In line with the aims of the SEA Directive, ensure the assessment process gives a high level of protection to the environment and contributes to sustainable development. SEA should result in a more environmentally-sustainable plan.
- Review progress towards this goal at each stage. Consult with interested parties during the scoping stage of SEA. This helps build consensus on relevant environmental problems.
- Involve professionals with relevant expertise to help ensure issues are properly assessed.
- Establish an SEA steering group, consisting of a range of interest groups including the RSPB. Steering groups provide valuable, and cost-effective advice, on all aspects of the SEA, including its scope, assessment methods and the need for additional studies, such as the potential collision risk to birds.
- Evaluate the proposed alternatives. If no alternatives are presented by the plan makers, several should be developed and evaluated as part of SEA. These should include the ‘most environmentally beneficial’ alternatives. Ensure the level of detail and the assessment methodologies are appropriate to the nature and scale of the plan.
- Robustly assess potential cumulative effects.
- Use the ‘Positive Planning’ approach to safeguard biodiversity and other environmental assets. This means proposing methods to reduce likely adverse impacts at source, then mitigating impacts that cannot be reduced further, and finally compensating for residual impacts.
- Use the results of higher-tier SEA, such as the UK Offshore Energy Plan SEA, to inform the assessment, and make clear links with lower-tier SEA and/or EIA for resulting projects, as appropriate.

#### **5.5.4, 5.5.4.2 & 5.14 Cumulative impact considerations**

##### *i) The ER’s assessment of cumulative effects*

The SEA identification and evaluation of the potential cumulative effects of multiple offshore licenses is unsatisfactory, particularly with respect to birds. The claim made in section 5.5.4 that there are unlikely to be cumulative effects on biogeographical populations is not supported by a robust assessment. This effect cannot be ruled out for specific species depending on the scale of multiple wind farms and other developments affecting species across occupied sea areas, including transboundary effects.

This section highlights the use of PVA in assessing cumulative impacts without adequate emphasis on the logistical problems of obtaining the necessary information for some of the key species. Although PVA is the ideal tool to assess cumulative effects, without the basic



modelling requirements, specific to each species, the outputs of such models will be of doubtful veracity.

*ii) The need for a strategic-level Cumulative Impact Assessment (CIA)*

We recommend that a strategic level Cumulative Impact Assessment (CIA) is undertaken, ideally led by DECC, as project level CIA is unable to adequately predict cumulative effects. This CIA could underpin the assessment of cumulative and in-combination effects for the Appropriate Assessment of the Draft Plan.

A strategic CIA does not need to be entirely quantitative and can be based on a straightforward evaluation of whether additive effects are likely or not. For example, the SEA could have predicted, without the use of PVA, that cumulative effects on certain species near Dogger Bank may be significant depending on levels of activity. Causal chain analysis can be used to quantitatively assess the risks of significant cumulative effects on a series of receptors, e.g. the list of priority bird species in Table 5.5 (please see the RSPB note on causal chain analysis in Annex 3 and 'Guidelines for Cumulative Effects Assessment in SEA of Plans' by L.Cooper<sup>13</sup> for an overview of CEA methodologies).

We believe that it would be possible to carry out a strategic CIA now, e.g. of the Crown Estate potential development zones for R3, together with Scottish Territorial Water proposals, using a combination of quantitative and qualitative methods. The spatial scale for the CIA should be a set of functional units within the Round 3 strategic zone. These functional units could be based on the division of Regional Seas. However, it is important that the potential for cumulative impacts between zones is also evaluated.

We would be happy to discuss this point in more detail.

*ii) Potential cumulative effects of the Draft Plan on birds of particular concern in UK waters*

- The sandbanks off the **greater Wash** face a substantial share of the 25GW target put forward in the Draft Plan. In the greater Wash area, cumulative collision and barrier impacts on migrating waterbirds, in particular may be important. Although migration is over a broad front for some species, the concentration of windfarms in the greater Wash is likely to become an increasing issue that needs to be dealt with effectively.
- The **Liverpool Bay and Thames Estuary** proposed SPAs are key considerations, particularly when in combination/ cumulative effects are taken into account. In the Thames, in combination/ cumulative impact risk is likely to preclude any further development within the proposed SPA, at least until further post-construction monitoring data from Round 2 is available, and this is reflected in the absence of any proposed zone in this area.
- Cumulative effects may be important in the **North West**, particularly with respect to migrating whooper swans and pink-footed geese, although the potentially most concerning proposed development zones have been withdrawn, at least for R3.
- **Cumulative effects of concern** are tern (Firth of Forth, including STW proposals), gannet (especially North Sea) collision with rotors, potential displacement of red-throated diver (Norfolk & Suffolk) and shearwaters (in particular in Bristol Channel & Irish Sea, and collision and barrier effects on migratory waterbirds. It is possible that in the future wind farms will be found along a sizeable portion of the migration route of the red-throated diver and cause transboundary cumulative effects.

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<sup>13</sup> <http://www.environment-agency.gov.uk/aboutus/512398/1504325/1504417/831980>.

- Also of concern are the **combined cumulative effects of wind leasing, oil and gas exploration and gas storage** on the marine environment.

*iii) Cumulative effects on other receptors*

This section concludes that cumulative acoustic effects on other receptors, i.e. not marine mammals, are unlikely. This contradicts other sources of information (e.g. Environmental Statements for Race Bank & Docking Shoal proposals) which suggest there is inadequate information to determine the extent and magnitude of cumulative acoustic effects on spawning and nursery areas for clupeids.

Pile driving effects on fish also include effects on spawning and nursery areas, and effects on piscivorous birds (Section 5.5.4.2).

### **5.5.5 Summary of findings and recommendations**

This section notes that:

*“Although there has recently been significant survey in coastal waters, the lack of modern data on waterbirds in offshore areas is noted. Developers need to be aware that access to adequate data on waterbird distribution and abundance is a prerequisite to effective environmental management of activities for example in timing of operations, and oil spill contingency planning. An important gap in understanding of relevance to wind farm siting is the marine areas routinely used by breeding birds for foraging, in particular those adjacent to SPAs. To give a specific example, the East Caithness cliffs SPA holds a seabird assemblage of international importance which during the breeding season regularly supports 300,000 individual seabirds including guillemot, razorbill, kittiwake, herring gull, shag (all at numbers of European importance) as well as puffin, great black-backed gull, cormorant and fulmar. The Smith Bank, some 20km from the cliffs, is generally sandy and recorded as having high densities of sandeels and seabirds; ecological energetics would suggest that the area would be an important feeding ground for auks and several other species from the Caithness cliffs with but definitive evidence of this is not available.” (p.127)*

We fully agree with this paragraph. It highlights the need to obtain up to date data and to plug data gaps, notably with respect to identifying foraging areas by breeding (sea)birds and, furthermore, to determine links with onshore SPAs (as well as identifying the marine SPA suite).

### **5.13 Accidental events**

We agree that existing oil spill controls are adequate and additional controls are not necessary at the strategic level (p.188).

### **5.15 Potential for transboundary impacts**

There is a legal requirement to consider transboundary effects through both the SEA and Habitats Directives, e.g. to consider effects on bird populations across multiple SPAs in several MSs.

Our view is that transboundary effects cannot be ruled out given that;

- a) biogeographical populations are transboundary; and
- b) the R3 zone extends to the edge of UKCS, e.g. Dogger Bank, therefore potentially abutting other MS OWF and oil and gas proposals and existing infrastructure.

### **5.16 Alternatives**

The ER recommends that DECC adopt Alternative 3, i.e. spatially restricting the zones offered for licensing through the exclusion of certain areas, rather than Alternatives 1 and 2 (p.123). We welcome this recommendation as Alternative 1 would result in failing to meet renewables targets, and Alternative 2 would have significant negative effects on the environment in the long term

However, so far the SEA process seems to be missing out the second step of the 'Hierarchy of Options' box on p.11; the consideration of alternative modes or processes. We are seriously concerned that the alternatives considered in the ER are minimalist at best and fail to address each activity separately (i.e. offshore wind, oil and gas, and gas storage). We are also concerned that the SEA does not consider spatial alternatives to licensing and leasing using the Round 3 Crown Estate map of proposed development zones as one alternative amongst many.

Table 2.2 (p.12) summarises how the assessment has applied the 'Hierarchy of Options'. In our view, the second and third steps of the hierarchy are not adequately addressed. In particular, the conclusion of step 3 only describes the distribution of wind, oil and gas resources rather than assessing where development should go.

The assessment of Alternative 3, the preferred alternative, concludes that there are potential negative effects due to barrier effects and changes in food availability, and potential minor negative impacts upon birds due to collision and behavioural changes (p.109). However, the overall conclusion is that these effects are not significant at a strategic level. As mentioned above, our view is that the criteria for determining significance are unclear and the data to make such an assessment are not robust. We therefore believe that some of these potential negative/minor negative effects are as likely to be significant at the biogeographical scale as they are likely to be insignificant and as such, we cannot make a definitive determination either way. Therefore, the most we can say is that there is no evidence that there is a significant effect, but equally, there is no evidence to show that there is not a significant effect

### **6.1 Recommendations**

As mentioned above, while the ER has successfully collated vast amounts of environmental baseline information, it has fallen short of adopting a rationale for judging the significance of effects, of assessing spatial alternatives for each activity and of assessing potential cumulative effects. Because of the flawed assessment, the recommended avoidance and mitigation recommendations are inadequate. In Table 1 below, we propose modifications to relevant the recommendations in Section 6.1.

### **6.2 Monitoring**

The ER finds that existing monitoring arrangements are sufficient to understand the evolution of baseline conditions in respect of biodiversity effects across the SEA area. However, this is not our view because effects monitoring is currently limited for OWFs in UK waters. Most FEPA monitoring requirements are compliance monitoring and not necessarily helpful in advancing our knowledge of effects/impacts on birds.

In RSPB responses to individual proposals, we try to influence and improve monitoring provisions in EIA Environmental Statement. However, with exception of monitoring at Kentish Flats, we are unsure as to whether such monitoring has been implemented. We conclude that monitoring arrangements are insufficient and should be addressed through detailed monitoring requirements being incorporated into leases and licenses.

## **ANNEXES**

**Annex 1: RSPB Round 3 offshore wind farm report**

**Annex 2: RSPB note on cumulative effects**

**Annex 3: RSPB note on causal chain analysis**

**Table 1: RSPB comments on relevant UK Offshore Energy Plan SEA recommendations (section 6.1)**

UK Offshore Energy Plan SEA Recommendation	RSPB comments
<p>3. Until there is a firmer base of information available to inform adaptive management, in respect of ecological receptors a precautionary approach to siting is recommended since the offshore wind industry is relatively young, with appreciable technological development expected in for example, turbine size, rotation speed, spacing and potentially rotational axis. <b>This precautionary approach dictates that unless suitable evidence indicates otherwise, avoidance (for the present) of areas known to be of key importance to waterbird and marine mammal populations, including breeding colonies, foraging areas and other areas essential to the survival of populations.</b>[emphasis added]</p>	<p>We particularly welcome this recommendation.</p>
<p>4. Reflecting the relative sensitivity of multiple receptors in coastal waters, this report recommends that the bulk of this new generation capacity should be sited well away from the coast, generally outside 12 nautical miles (some 22km).</p>	<p>This is a useful recommendation which does not preclude development, but highlights a means to reduce the bird species of concern by limiting development within inshore waters. We welcome the flexibility of this non-exclusionary buffer zone which reflects the great sensitivities of inshore waters, not only for ecological receptors but for all interests including fisheries, navigation and other users.</p>
<p>6. For areas (zones and blocks) which contain good examples of habitats/species on the Habitats Directive Annexes, developers should be made aware that a precautionary approach will be taken and some areas with relevant interests may either not be leased/licensed until adequate information is available, or be subject to strict controls on potential activities in the field. Similarly, developers should note that DECC will continue to conduct Appropriate Assessments/screenings to consider the potential of proposed leasing/licensing and subsequent activities to affect site integrity</p>	<p>This recommendation should also note that other potential marine protected areas may not be leased/licensed until adequate information is available or may not be leased at all (also relevant for other MPAs)</p>
<p>8. [partial] Although there has recently been significant survey effort in coastal waters, the lack of modern data on waterbirds in offshore areas is noted. Developers need to be aware that access to adequate data on waterbird distribution and abundance is a prerequisite to effective environmental management of activities for example in timing of operations and oil spill contingency planning</p>	<p>We particularly welcome this recommendation.</p>
<p>9. There remain a number of subject areas for which the information base is limited and will need to be enhanced to support future marine spatial planning as well as project specific consenting. These information gaps include aspects of the natural world and human uses, with regional context and long-term trend data notably lacking. These gaps include:</p> <p>(c) Detail of bird migration patterns, and variability in space and time including flight heights in different weather conditions An understanding of the marine areas routinely used by breeding birds for foraging, in particular those adjacent to SPAs</p>	<p>We agree that these are important information gaps, although point (c) may be difficult to address for some species groups.</p>
<p>11. For the area to the west of the Hebrides (covered in SEA 7) it is recommended that blocks west of 14 degrees west should continue to be withheld from oil and gas licensing for the present. This recommendation also applies to the deepest parts of the Southwest Approaches. This is in view of the paucity of information on many potentially vulnerable components of the marine environment, and other considerations. Once</p>	<p>We welcome this recommendation.</p>

<p>further information becomes available, the possible licensing/leasing in these areas can be revisited.</p>	
<p>14. Efforts are (or will be) underway to identify offshore Marine Conservation Zones/Marine Protected Areas e.g. under the Marine Strategy Framework Directive, OSPAR and the <i>Marine and Coastal Access Bill</i>. Where the objectives of the conservation sites and renewable energy development are coincident, preference should be given to locating wind farms in such areas to reduce the potential spatial conflict with other users.</p>	<p>This recommendation runs counter to some other recommendations and is inconsistent with the precautionary approach. The recommendation should be rephrased to state:</p> <p><i>'Where offshore wind developments do not impact on the conservation objectives of MCZs, wind farms may be located in such areas...'</i></p> <p>While OWF and MCZz objectives can be compatible, they cannot be defined as 'coincident'.</p>
<p>15. Similarly, as part of the Natura 2000 initiative, further offshore SACs and extensions to SPAs are being identified. Such sites are not intended to be strict no-go areas for other activities and a number have been mooted in areas with significant potential for offshore wind farm development. Wind farm developers should be aware that SAC/SPA designation may necessitate, subject to the conclusions of any appropriate assessment, suitable mitigation measures so as to avoid adverse effects on a designated site or species.</p>	<p>The second part of this recommendation should be precise and list the tests of the Habitats Directive.</p>
<p>17. The Offshore Vulnerability Index (OVI) to surface pollutants developed by the JNCC should be reviewed in the light of results from recent aerial and boat based bird survey data, and updated if necessary. Consideration should also be given to whether the development of UK specific individual waterbird species sensitivity indices and mapping of a Wind Farm Sensitivity Index (WSI) in UK waters would be useful in support of <b>appropriate</b> [suggested insertion] site selection and consenting.</p>	<p>The existing initiatives to develop waterbird Population Viability Analysis for sensitive species should be progressed, including, if necessary, research to improve the accuracy of inputs to the models.</p> <p>While there are some issues with these indices, they are a good starting point. In our view, expert judgment will be key in supporting appropriate site selection and consenting. A workshop to discuss and resolve the above issues would be useful.</p>
<p>19. The potential for capacity extensions to existing Round 2 wind farm leases requires careful site specific evaluation since significant new information on sensitivities and uses of these areas is now available (see also recommendation 2 above). As a general rule, it is recommended that any such site extensions are to the seaward rather than the landward side. Round 1 sites are closer to the coast and it is anticipated that the majority would not be extended; any application for this would also require detailed site-specific evaluation.</p>	<p>We agree that R1 sites should not be expanded and note that expansion of R2 sites, while preferable to landward expansion, may cause adverse cumulative effects on some bird populations. R2 expansions should be considered on a case-by-case basis.</p>
<p>21. The information collected by offshore renewables and oil industry site surveys and studies is valuable in increasing the understanding of UK waters. The initiatives such as the UKDEAL, COWRIE and UKBenthos databases to ensure that such information is archived for potential future use should be continued and actively promoted during the consenting processes. Similarly, there should be encouragement for the analysis of this information to a credible standard and its wider dissemination.</p>	<p>We strongly support this recommendation and urge CE to tie in data deposition requirements within OWF consents. There needs to be a long term resolution of how this database is used and managed (currently there is a backlog of data and the database is not used effectively). Updating the database could be carried out alongside a strategic level Cumulative Impact Assessment.</p>
<p>23. To assist developers and the achievement of conservation objectives, DECC and others in Government should encourage the adoption of consistent guidance across the UK on the implementation Habitats Directive requirements, for example disturbance of European Protected Species (Annex IV species).</p>	<p>JNCC have written guidance clarifying a uniform approach for projects.</p>