

## RSPB Scotland Objection Letter, Annex 1, Contents

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### **Appendices:**

1. Peatland Impacts: Comments on the Addendum to the Environmental Statement LWP 2006, Richard Lindsay, January 2007.
2. Alternative Solutions to the Lewis Wind Power Wind Farm Proposal, IPA Energy + Water Consulting, January 2007.
3. Lewis Wind Power Economic Assessment, DTZ Consulting and Research, January 2007.
4. Comments on the Lewis Wind Farm Proposal reports by DTZ And Regeneris Consulting, Emeritus Professor Iain H McNicoll BA PHD FRSA, January 2007.
5. Scottish and Southern Power Distribution – Interconnector clarification, Paul Neilson, Transmission Development Manager, January 2007.

## **RSPB Scotland Objection Letter, Annex 1, January 2007**

### **Addendum to the proposed Lewis Wind Farm, Isle of Lewis, in relation to an application for a 652MW wind farm and associated infrastructure (including a transmission line)**

### **Electricity Act (1989); Town and Country Planning (Scotland) Act 1997; and The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000**

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#### **1. Introduction**

1.1. The RSPB is a registered charity incorporated by Royal Charter and is Europe's largest voluntary conservation organisation, with a membership of more than 75,000 in Scotland.

1.2. The principal objective of the RSPB is the conservation of wild birds and their habitats. RSPB Scotland manages over 64,000 hectares of land in Scotland and strongly supports the provisions of international and domestic agreements and legislation for the conservation of the natural environment.

1.3. RSPB Scotland has been involved in without prejudice discussions with AMEC and British Energy (operating as Lewis Wind Power – (LWP)) regarding the provision of ornithological data, survey methodologies and resulting data for several years. Our serious concerns regarding the scale and impact of the proposal on an internationally protected area have been set out from the beginning of the process.

1.4. RSPB Scotland wishes to lodge an objection to the amended application from LWP for consent under section 36 and section 37 of the Electricity Act 1989 to develop a 652MW wind farm and associated infrastructure (including transmission line) on the Isle of Lewis. The ecological and legal reasons for our objection are set out below.

1.5. RSPB Scotland originally submitted an objection to the 2004 Lewis Wind Power (LWP 2004) application to construct a wind farm of an installed capacity of 702 MW and associated infrastructure under s.36 of the Electricity Act 1989. We also submitted an objection to the application by Lewis Wind Power for consent under section 37 of the Electricity Act 1989 to construct 4 separate sections of 132kV overhead line on the Isle of Lewis, as detailed in the section 36 Transmission Line Addendum 2005 (LWP 2005b). Comments on the s.36 Addendum to the Environmental Statement (ES) (LWP 2005a) were submitted as supplementary to our original objection to LWP 2004.

1.6. This objection is based on the information currently available, it has been written with the intention of providing decision makers with a 'stand alone' response to the amended application in order to minimise the need for cross referencing between RSPB submissions. However, many elements of our previous submissions are still relevant and we wish these previous objections (February 2005, May 2005) to be considered as appendices to this objection.

1.7. The amended application was accompanied by a lengthy Environmental Statement (LWP 2006 ES), which we have considered in detail. However, requests to LWP for an extension to the consultation period did not receive a response and there are areas where we have commissioned external, expert advice on key issues, in particular peatland impacts. This information will be available shortly and will be submitted to Scottish Ministers and Comhairle nan Eilean Siar (CnES) as soon as it becomes available as an additional appendix to our objection. We apologise for the delay but this has been unavoidable given the tight timescales and holiday period. We reserve the right to revise our submissions in light of any new

information which may become available.

1.8. On the basis of this objection we recommend that Comhairle nan Eilean Siar (CnES – the Council) advise Scottish Ministers against granting consent and/or that Scottish Ministers refuse consent under s.36 and/or s.37 of the Electricity Act 1989.

## 2. The proposal

According to the LWP 2006 ES, the developer is applying to the Scottish Executive for consent to construct a wind farm with an installed capacity of 651.6 MW and associated infrastructure. This consists of, inter alia:

- 181 wind turbines (each with a foundation and crane hard standing);
- 141km of access roads;
- 8 electrical substations;
- a control building/visitor centre;
- 11 wind monitoring masts;
- 30.6 km of overhead lines and 29.6km of underground cable;
- five rock source areas (plus 1 alternative);
- 8 temporary compounds (plus 10 alternatives); and
- four concrete batching plants (plus 10 alternatives).

## 3. Site importance to birds and biodiversity

3.1. North Lewis is an area rich in wildlife and as such plays host to a range of different nature conservation designations. The wind farm proposal lies primarily within the Lewis Peatlands **Special Protection Area (SPA)**, designated under EC Directive 79/409 on the Conservation of Wild Birds (the Birds Directive) as amended by EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the Habitats Directive).

3.2. The SPA citation document describes the site as follows: *“The Lewis Peatlands SPA site contains a large proportion of the blanket bog on the Isle of Lewis. Blanket bog is rare in world terms and Britain has a significant proportion of the total world resource. Within Britain, the Lewis Peatlands are second in extent only to the Caithness and Sutherland peatlands and represent the extreme north-west part of the range of variation. Associated with these peatlands and open water is a unique and diverse assemblage of breeding birds that is of international importance.”*

3.3. The SPA qualifies under Article 4.1 of the Birds Directive by supporting nationally important populations of five Annex I Bird species. Figures quoted are those at the time of designation, as per the citation, and provide the baseline figures for assessment, as follows:

Red-throated diver	(80 pairs, 9% of the British breeding population of this species)
Black-throated diver	(13 pairs, 8% of British breeding population of this species)
Golden eagle	(5 pairs, 1% of British breeding population of this species)
Merlin	(20 pairs, 2% of British breeding population of this species)
Golden plover	(1,800 pairs, 8% of British breeding population of this species)

The SPA also qualifies under Article 4.2 by supporting two important populations of breeding migratory species:

Dunlin (3,400 pairs, 37% of GB and 31% of the World population of the temperate *schinzii*<sup>1</sup> race)

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<sup>1</sup> This race of dunlin now added to Annex 1 of the Birds Directive

Greenshank (140 pairs, 10% of British breeding population of this species)

3.4. These figures differ slightly from those given in LWP 2006 ES 'Report to inform the Appropriate Assessment'. The figures above are taken from the Natura 2000 Standard Data Form as reproduced on the JNCC website. The Standard Data Form is a legal document, derived from the citation and is the standard way in which data are registered by government and transmitted to the European Commission. It is our understanding that this Data Form has not yet been revised in light of the Stroud review (2001) and as such remains the legal basis for the North Lewis Peatlands SPA designation.

3.5. As noted in the LWP 2006 ES, in order to determine whether conservation objectives will be met it will be important to take account of those attributes known to contribute to the status of the qualifying features of interest.

3.6. The overarching Conservation Objective of the Lewis Peatlands SPA is **'to avoid deterioration of the habitats of the qualifying species, or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained'**.

3.7. This overarching objective can only be met by ensuring that each of the component conservation objectives are met. For each of the qualifying species the following must all be maintained in the long term:

- Population of the species as a viable component of the site;
- Distribution of the species within the site;
- Distribution and extent of habitats supporting the species;
- Structure, function and supporting processes of habitats supporting the species; and
- No significant disturbance of the species.<sup>2</sup>

3.8. North Lewis also plays host to the **Ness and Barvas SPA** which is made up of two separate areas, one in the extreme north of Lewis and one lying on the north west coast. This SPA qualifies under Article 4.1 of the Birds Directive by supporting an important breeding population of corncrake (3% of breeding British population) and shares the same Conservation Objectives as outlined above for the Lewis Peatlands SPA.

3.9. The Lewis Peatlands SPA area is also designated as a **Ramsar site** under the Convention on Wetlands of International Importance (Ramsar, 1971), to which the UK is a signatory. The qualifying interests of the site are<sup>3</sup>: *one of the largest and most intact known areas of blanket bog in the world (Criterion 1); supporting a number of rare species of wetland birds including red-throated diver, black-throated diver, golden plover and greenshank (Criterion 2) and species occurring at levels of international importance (dunlin)(Criterion 6).*

3.10. The wind farm proposal is adjacent to the Lewis Peatlands **Special Area of Conservation (SAC)**, which is distributed in a number of separate blocks, each within the Lewis Peatlands SPA boundary. This is considered to be one of the best areas for blanket bog in the United Kingdom. Blanket bog is a habitat listed on Annex 1 of the Habitats Directive while active blanket bog is considered a priority habitat under the same Directive.

The overarching Conservation Objective for the Lewis Peatlands SAC (habitats) is:

- **To avoid deterioration of the qualifying habitats thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for each of the qualifying features.**  
The qualifying habitats of this SAC are: active blanket bog – a priority habitat, depressions on peat substrates, acid peat-stained lakes and ponds, clear-water lakes

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<sup>2</sup> Conservation Objectives taken from SNH Sitelink website January 2007.

<sup>3</sup> As set out in the Ramsar Information Sheet completed on 7 December 2000 (<http://www.jncc.gov.uk/pdf/RIS/7UK151.pdf>).

or lochs with aquatic vegetation and poor to moderate nutrient levels and wet heathland with cross-leaved heath.

This overarching objective can only be met by ensuring that each of the component conservation objectives are met. For each of the qualifying habitats the following must be maintained in the long term:

- Extent of the habitat on site;
- Distribution of the habitat within the site;
- Structure and function of the habitat;
- Processes supporting the habitat;
- Distribution of typical species of the habitat;
- Viability of typical species as components of the habitat; and
- No significant disturbance of typical species of the habitat<sup>4</sup>

3.11. Unlike most SPAs the Lewis Peatlands SPA is not underpinned by a Site of Special Scientific Interest (SSSI) designation, pursuant to the Wildlife and Countryside Act 1981/Nature Conservation (Scotland) Act 2004; however the Loch Scarrasdale Valley Bog SSSI lies within the Lewis Peatlands SPA/SAC area. This SSSI is notified for blanket bog and valley bog interests.

3.12. In addition to the qualifying interests of these designated areas, the original survey work undertaken for the LWP 2004 ES and survey work completed and included in LWP 2006 ES identify additional species of note. These include species listed on Annex 1 of the Birds Directive, in particular whooper swan, white-tailed eagle and hen-harrier (foraging on or flying over the site).

3.13. This is an internationally important location, recognised and protected by multiple nature conservation designations. As such, the appropriate tests, detailed below (Section 22), must be applied in accordance with EC and UK law.

## **4. The assessment of impacts**

4.1 The LWP 2006 ES notes that the assessment of impacts of developments in any Natura 2000 site is to be based on the 'precautionary principle'. We agree with this statement, which is based on European Guidance<sup>5</sup>. This conclusion is then qualified by reference to a statement by a planning inspector at the Little Cheyne Court Planning Inquiry. It must be noted that the Little Cheney Inspector's approach is being challenged. When considering the assessment of impacts we believe that the most relevant European Court of Justice (ECJ)<sup>6</sup> decision may be more helpful, particularly given that Scottish Ministers have clearly placed some level of weight on this decision when considering other matters relevant to Natura 2000 sites. A quote, taken from the letter issued by the Scottish Executive to SNH, in September 2005 (in this instance the case concerned the re-introduction of beavers) clearly sets out Scottish Ministers' views on the matter of 'assessing impacts on site integrity':

*"We have subsequently discussed with you the relevance of the recent judgment by the European Court of Justice (EC v Government of the Netherlands - the Waddenzee case) where the Court ruled that the test for considering the effects on the integrity of a European*

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<sup>4</sup> Conservation Objectives taken from SNH Sitelink website January 2007

<sup>5</sup> European Commission (2001) Assessment of plans and projects significantly affecting natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities.

<sup>6</sup> European Court of Justice Case C-127/02 *Waddenvereniging and Vogelbeschermingsvereniging (Waddenzee)*

*site requires there to be no reasonable scientific doubt as to the absence of adverse effects. Ministers fully accept that this ECJ judgement represents a new development. However, viewing the application in light of this judgement, and given that the appropriate assessment identifies the certainty of impact on the features for which the SAC was designated, it appears to us that there is a significant risk that a decision by Scottish Ministers to grant a licence for re-introduction of beavers to this site, could be held to be unlawful in terms of Article 6.”*

4.2 The LWP 2006 ES concludes that there are four main impacts that wind farms can have upon birds and we agree with this conclusion. We also welcome the indication that, where possible, peer-reviewed books and journals have been used within the assessment and recognise the problems presented by the absence of a substantive body of robust, peer-reviewed material concerning the ornithological impacts of wind farms. As a result, some of the conclusions of the ES regularly rely upon ‘grey literature’ which is generally based upon studies with very short periods of data collection, lack control sites, or pre-construction data and, by definition, have not been published and peer-reviewed. We are cautious about applying the conclusions of such literature without first examining the details of the individual reports.

4.3 A large number of publications are listed by the applicant in relation to the impacts of wind farms on birds. For the benefit of decision-makers we suggest that two publications in particular might prove useful. The Centre for Evidence-Based Conservation produced a systematic review of the effects of wind turbines on bird abundance in 2005. This review considered a broad range of sources but analysed, in detail, only those which met strict scientific criteria, this review does not appear to be listed in the ES. The study concluded that:

*“available evidence suggests that wind farms reduce the abundance of many bird species at the wind farm site.....there is also some evidence that the impact of wind farms on bird abundance becomes more pronounced with time, **suggesting that short term bird abundance studies do not provide robust indicators of the potentially deleterious impacts of wind farms on bird abundance.**”<sup>7</sup>* (emphasis added)

The second report is listed in the ES and was commissioned by the Council of Europe for the Convention on the Conservation of European Wildlife and Natural Habitats 1979 (the Bern Convention). The remit for the report was given as: analysing the impact of wind farms on birds, establishing criteria for their environmental impact assessment and developing guidelines on precautions to be taken when selecting sites for wind farms<sup>8</sup>. The report concludes:

*“There is a strong consensus that location is critically important to avoid deleterious impacts of wind farms on birds. **There should be precautionary avoidance of locating wind farms in statutorily designated or qualifying international (e.g. Natura 2000 – SPAs & SACs, ‘Ramsar sites’, Emerald Network and Important Bird Areas (IBAs)) or national sites for nature conservation or other areas with large concentrations of birds such as migration crossing points or species identified as being of conservation concern. The favourable conservation status of habitats and species in these areas is a central tenet to their designation, requiring demonstration of compatibility with this aim by any proposed development. The weight of evidence to date indicates that locations with high bird use, especially protected species, are not suitable for wind farm development.**’* (emphasis added)

## 5. Interpreting Conservation Objectives

5.1 The ES identifies a wide range of ornithological impacts together with associated uncertainties and information gaps. The application of the necessary legal tests and

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<sup>7</sup> Stewart, G.B., Pullin, A.S. & Coles, C.F. ‘Effects of wind turbines on bird abundance: Review Report’ Centre for Evidence-Based Conservation, Systematic review No. 4, The University of Birmingham, School of Biosciences.

<sup>8</sup> BirdLife International report to the Bern Convention: Langston, R.H.W. & Pullan, J.D. (2003). Windfarms and birds: an analysis of the effects of wind farms on birds, and guidance on environmental assessment criteria and site selection issues. Report T-PVS/Inf (2003) 12, by BirdLife International to the Council of Europe, Bern Convention on the Conservation of European Wildlife and Natural Habitats. RSPB/BirdLife in the UK.

obligations depends upon an understanding of the extent to which impacts can be evaluated and understood. In order to facilitate this we have considered all of the SPA qualifying species listed above, together with additional species which are vulnerable to impacts arising from the proposal.

5.2 One of the most notable modifications to the LWP ES documentation between 2004 and 2006 is the revised conclusion in relation to ornithological impacts. In part this arises from the revised layout, in part from revised impact criteria and, critically, from a detailed 'interpretation' of the Conservation Objectives. **We consider that LWP 2006 ES has seriously misinterpreted the Conservation Objectives for the SPAs.** We outline some of the areas which have been misinterpreted in Tables 1-5, for ease LWP 2006 ES has been summarised and an explanation of what we consider a more appropriate interpretation of each objective is highlighted in bold.

5.3 It is clear from EC guidance quoted in relation to "disturbance" that conservation objectives are intended to be met together in order to be certain that the Natura site delivers the conservation requirements of the species (and habitats) for which it is classified. This reflects the biological reality of complex interactions of species and habitats. Therefore, a failure to meet any of the detailed conservation objectives for any of the qualifying features is a failure to meet the conservation objectives of the site in general. **The criteria as defined by LWP 2006 ES will not enable impacts on the SPA to be properly assessed.**

**Table 1**

<p><b>Conservation Objective</b> The population of each qualifying species present is capable of maintaining itself as a viable component of the site.</p>	<p><b>LWP 2006 ES 'Interpretation' – Criterion 1</b> Viability will be demonstrated if any predicted population losses are within the bounds of normal inter-annual fluctuations in numbers.</p>
<p><b>Comments on the 'Interpretation'</b></p> <ol style="list-style-type: none"> <li><b>Loss of birds or disruption to demography through displacement and disturbance, adverse effects on breeding success and mortality through collision can all potentially impact on the maintenance of a species as a viable component of the site.</b></li> <li>Changes to SPA populations are normally considered in light of the species populations detailed on the Natura 2000 Standard Data Form submitted to the European Commission at the time of classification, by treating these as baseline figures.</li> <li>All impacts arising as a result of this or other plans or projects will be <u>in addition to</u> normal fluctuations.</li> <li>LWP's estimate of population fluctuation is based on Breeding Bird Survey (BBS) data - but BBS is well-known to give poor coverage for upland breeding species. The BTO website which holds this data clearly states that particular care should be taken when interpreting results where only a few squares have been surveyed (30-50 squares)<sup>9</sup>. Sample sizes for all Lewis Peatlands SPA qualifying species except golden plover fall below this safe threshold.</li> </ol>	

<sup>9</sup> Clearly stated on all BBS results pages, including the one given in Appendix 1 of the 'Report to inform the Appropriate Assessment' of the LWP 2006 ES: [http://blx1.bto.org/bbs-results/results/county\\_lists/bbscountydens-GBHR.html](http://blx1.bto.org/bbs-results/results/county_lists/bbscountydens-GBHR.html)

**Table 2**

<p><b>Conservation Objective</b> Distribution of each qualifying species is maintained.</p>	<p><b>LWP 2006 ES ‘Interpretation’ – Criterion 2</b> Distribution considered to be maintained if all 1km squares currently occupied by breeding individuals of a species are predicted to remain occupied following construction of the wind farm.</p>
<p><b>Comments on the ‘Interpretation’</b></p> <ol style="list-style-type: none"> <li>1. <b>The distribution of species may be affected by displacement: known areas of use for foraging or other activities may be restricted by direct habitat loss or displacement and direct disturbance of birds at the nest may cause abandonment of nest sites. Displacement from foraging range may additionally affect the suitability of a nest site if it results in insufficient food to allow birds to occupy the nest site and reproduce successfully. Birds may abandon areas if features are introduced which lead to greater predation pressure or are incompatible with habitat requirements. Mortality through collision may potentially compromise occupation of areas if it is sufficiently high that it cannot be balanced by recruitment.</b></li> <li>2. The selection of occupation at a 1km square level as a measure of distribution in LWP 2006 ES is arbitrary and particularly inappropriate for species which occur at high densities such as golden plover and dunlin so that many pairs may occupy a single 1km square (contrary to the conclusions of ES 6 pairs of dunlin per km<sup>2</sup> constitutes a high breeding density<sup>10</sup>). In this case, the LWP approach would treat as acceptable the widespread reduction of dunlin from those areas where they occur in very high densities, for example 12 pairs per km<sup>2</sup> to 1 pair per km<sup>2</sup> (a reduction of 91 %). Such an approach is clearly nonsense.</li> </ol>	

**Table 3**

<p><b>Conservation Objective</b> Distribution and extent of habitats supporting the qualifying species are maintained.</p>	<p><b>LWP 2006 ES ‘Interpretation’ – Criterion 3</b> The distribution and extent of habitat will be considered to be maintained if the predicted loss is not great enough to result in a loss of population viability of any of the qualifying species (i.e. Criterion 1) or result in a change of distribution of those species (i.e. Criterion 2).</p>
<p><b>Comments on the ‘Interpretation’</b></p> <ol style="list-style-type: none"> <li>1. <b>Any direct effects of wind farm construction or subsequent operation on the physical distribution and extent of habitats would be considered under this objective.</b> Indirect habitat loss through displacement and any ‘knock-on’ effects on habitat structure/functions through ‘land-take’, and any consequent effects on the distribution of species may be more appropriately considered under other conservation objectives. “Habitat” here should be taken to include areas such as greenshank foraging and chick-rearing areas, which may be some distance from “Brown &amp; Shepherd” survey territory dots associated with particular pairs, as in the case of greenshank (see detailed comments in section 11).</li> <li>2. This Criterion avoids assessing impacts on habitat by evaluating it solely in terms of Criteria 1 and 2. This appears to exclude the complexities, for example, of factoring in potential delayed impacts due to, e.g. reduced productivity.</li> </ol>	

<sup>10</sup> Whitfield DP. 1997. Waders (Charadrii) on Scotland’s blanket bogs: recent changes in numbers of breeding birds. Pp 103-111 in Parkyn L, Stoneman RE & Ingram HAP (eds) *Conserving Peatlands*. CAB International, Wallingford.

**Table 4**

<b>Conservation Objective</b> Structure, function and supporting processes of habitats supporting the qualifying species are maintained.	<b>LWP 2006 ES ‘Interpretation’ – Criterion 4</b> Structure, function and supporting processes will be considered to be maintained if the proposed infra-structure is predicted to cause little disruption to the habitats the qualifying species rely on. Changes to habitat structure and function will be considered negligible if they are not great enough to result in the loss of population viability of any of the qualifying species (i.e. Criterion 1) or result in a change of distribution of those species (i.e. Criterion 2).
<b>Comments on the ‘Interpretation’</b> <ol style="list-style-type: none"> <li>1. <b>Any reduction in the ability of the habitat to support the species will interfere with the structure, function and supporting processes of habitats. Indirect habitat impacts, including displacement, arising from construction and or operation would be considered under this objective.</b></li> <li>2. A “barrier effect”, for example interfering with the regular movement of birds between different parts of the SPA, or from the SPA to other places (for example foraging sites) would conflict with this conservation objective.</li> <li>3. As with Criterion 3 above this Criterion is defined only by reference to the definitions provided for Criteria 1 and 2. As stated before Criteria 1 and 2 are inappropriate and crude mechanisms by which to measure distribution and population and will not enable impacts on the SPA to be properly assessed.</li> </ol>	

**Table 5**

<b>Conservation Objective</b> No significant disturbance of the qualifying species will occur.	<b>LWP 2006 ES ‘Interpretation’ – Criterion 5</b> Disturbance will be considered to be significant during construction or operation if it is predicted to lead to losses in the breeding population or reduce breeding performance to such an extent that integrity would be lost within the operational life time of the wind farm on the grounds laid out in Criterion 1.
<b>Comments on the ‘Interpretation’</b> <ol style="list-style-type: none"> <li>1. <b>Any direct effects of construction or operation on behaviour or demography of qualifying species constitutes disturbance and would be considered under this objective. This encompasses a range of effects including disturbance by human activity, displacement from the vicinity of built infrastructure for feeding or nesting and additional mortality through collision.</b> Direct habitat loss may be more appropriately considered under other conservation objectives (see above).</li> <li>2. European Commission guidance<sup>11</sup> on ‘disturbance’ concludes that:           <ul style="list-style-type: none"> <li>• ‘any event which contributes to the long-term decline of the population of the species on the site can be regarded as significant disturbance’;</li> <li>• ‘any event contributing to the reduction or to the risk of reduction of the range of the species within the site can be regarded as a significant disturbance’; and</li> <li>• ‘any event which contributes to the reduction of the size of the habitat of the species within the site can be regarded as disturbance’.</li> </ul> </li> </ol>	

<sup>11</sup> European Commission (2000) Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities.

## 6. Impacts on species for which the Lewis Peatlands SPA is designated

### Generic comments

6.1. The presentation of the ornithological data has been modified significantly since the submission of LWP 2004 ES. The cross referencing required between the various ES documents presents some difficulties and the division between SPA and non-SPA populations is questionable for some species. The four main ornithological impacts described in the ES are considered in detail for individual species below. However, we query whether the stated predicted loss of habitat due to infrastructure from within the SPA is only 0.29% as used throughout this chapter. Table 11.10 'Realistic Scenario: Impact estimates and magnitude' indicates that this is only the percentage of active blanket bog. The total given in the table shows that just over 1% of the SPA habitat will be lost according to LWP 2006 ES. A detailed peatland impact assessment undertaken by Richard Lindsay for the RSPB, based on field work undertaken in 2006 on the Isle of Lewis will be provided as soon as possible to the Scottish Executive. A critique of the peatland impacts considered in LWP 2006 ES is provided below which concludes that the potential habitat impacts, while significant in terms of the figures presented in LWP 2006 ES, are likely to have been significantly underestimated.

6.2. A considerable amount of data has been gathered in order to inform this application. This is appropriate and necessary for a development of this nature and scale in a location which is so environmentally sensitive, not just in a UK context but throughout the European Union.

6.3. We note that disturbance impacts due to increased public access to the Lewis Peatlands SPA (taking advantage of new road infrastructure) have not been evaluated. The ability of access to be controlled across the LWP development site during operation will be subject to the obligations imposed by the Land Reform (Scotland) Act 2003 which will limit the extent to which public access can be restricted.

6.4. In terms of collision risk we note that it applies only to wind turbines and does not consider any possible collisions between birds and overhead lines. The use of bird diverters has some measure of utility but this is likely to be reduced in periods of poor visibility (acknowledged in the ES). The practicalities of bird diverters being fitted and remaining in place in areas of high wind speeds has not been considered.

6.5. Unfortunately, the Vantage Point (VP) coverage does not appear to meet the SNH recommendation to "cover all of the survey area such that no point is greater than 2km from a VP"<sup>12</sup>. A proportion of turbines (29 out of 181) were only visible at a range of 5km which is inadequate for species for which detectability shows a marked decline with distance from the observer. In many cases flight activity appears to have been underestimated by (i) assuming a shorter day length than is the case in summer on Lewis (12 hrs instead of nearly 18hrs) (ii) not accounting for nocturnal flight activity and (iii) considering a shorter time period (by months) than the birds are present for. There are also some errors in the calculations presented in Appendix 12H which are highlighted below when relevant.

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<sup>12</sup> SNH (2005) Survey methods for use in assessing the impacts of onshore wind farms on bird communities.

## 7. Red-throated diver (*Gavia stellata*)

### Data collection

7.1. We agree with the conclusion of the ES that all 42 pairs detected during survey work should be considered part of the SPA population. In 2003, the surveys of red-throated divers appear to be some of the most comprehensive and systematic ever attempted on the North Lewis Peatlands. Nonetheless, they suffer from several shortcomings, particularly in the interpretation, aspects of which have profound implications for the conclusions of LWP 2006 ES.

7.2. No assessment is made of the likelihood that some breeding lochs/pairs were overlooked i.e. the efficiency of the surveys and there was no qualification given about likely breeding status. The survey work also failed to identify any of the sites used by non-breeding birds and failed to attempt to predict which of the unoccupied lochs were most likely to be occupied over the likely lifespan of a wind farm (20 years). Experience of undertaking the same type of survey work suggests that approximately 10% of the occupied sites are overlooked. We also note that the ES indicates that 41% of the individuals present in the UK in summer are non-breeding birds but no evaluation of the impacts of this proposal on non-breeding birds has been undertaken. Some limitations of fieldwork are to be expected but should have been discussed and where possible corrected for in this revised application.

7.3. A key aim of the survey work should have been to quantify and better understand breeding site fidelity as this is fundamental to the assessment of risk and the assumptions made in LWP 2006 ES. This was not done. The ES concludes that between 2002 and 2003 red-throated diver site fidelity was 73% and claims that this is high. This is actually a low site fidelity rate when compared to other locations, for example, Shetland where mean annual breeding loch reoccupation rates are 88%. **For 27% (on average) of the breeding lochs to change every year has profound implications for the wind farm proposal and creates considerable difficulties in estimating the long-term impacts.** During 2002 and 2003 occupied red-throated diver breeding lochans were found in 46 different 1km squares within the LWP diver survey area. However, the number of 1km squares used over the past 25 years has been much greater: sporadic survey work has identified 109 different 1km squares in this time and the actual number can be shown to be approximately 150. A similar number can be expected to be used over the proposed life of the wind farm.

7.4. For most breeding pairs observed, the hours of flight observations appear to fall below SNH recommendations so it is unclear how representative the flight observations were of a pair's foraging behaviour, however this is difficult to verify given the data presented. It is likely that the low number of flights seen at most lochs was inadequate to give a representative picture of the flight routes of that pair. This is particularly so at those sites where data were collected from just one or two observation sessions.

**7.5. The proposed avoidance of locating turbines, cables and roads close to breeding sites and along flight corridors, identified in 2002-2005, to minimise disturbance, barrier effects and collision risks to divers (of both species) is seriously flawed. During the 20 year lifespan of the proposed wind farm, these measures will be inadequate to minimise disturbance and collision risk to divers as a consequence of year to year changes in breeding lochs and associated flight corridors due to low site fidelity by breeding red-throated divers.**

### Red-throated diver and habitat loss

7.6. We agree that the layout should result in no direct habitat loss at known breeding sites of red-throated divers.

### **Red-throated diver and displacement/disturbance**

7.7. We agree with the LWP 2006 ES that a disturbance free zone of 900m around all nest sites during construction is likely to be adequate. However, given the high probability that breeding birds will relocate, field surveys would be required each season before construction could commence.

7.8. The 500m development free zone assumes a high level of site fidelity. Actually red-throated divers on the Lewis Peatlands show low site fidelity and given the large numbers of candidate lochs breeding birds are likely to relocate closer to constructed turbines with a consequent impact on productivity, breeding success or collision risk.

7.9. We agree with the conclusions of the ES that little information regarding disturbance effects of wind farms on red-throated diver is available. From the experience of Burgar Hill, a wind turbine test site on Orkney it is difficult to draw sound conclusions that can be applied readily to Lewis given that the Orkney development has generally had a maximum of 3 turbines although we understand that 2 more were recently been constructed in Autumn 2006. Differences in site fidelity between study areas (see 7.3) are grounds for caution in extrapolating the results from a single, small-scale study to Lewis.

7.10. The LWP 2006 ES has not evaluated additional disturbance which is likely to arise from increased public access to the peatlands.

### **Red-throated diver and collision risk/barrier effect**

7.11. We understand that the design of the wind farm has been modified to try to accommodate known or predicted diver flight lines and to reduce the barrier effect. Despite this the ES identifies that 20% of the pairs surveyed still had a regular flight path which potentially takes them through the turbine array, indicating the barrier effect has not been removed.

7.12. Basing the collision risk model and barrier effects on a predictive description of flight paths and nest sites assumes that the data collected are representative, which is doubtful given the high rate of large year to year changes in breeding lochs (see comments above).

7.13. No evaluation is made of collision with overhead transmission cables. This is a known risk with at least one recorded death recorded as a result<sup>13</sup> (contrary to the conclusions of the ES).

7.14. The ES has not considered the risk posed to non-breeding red-throated divers that spend the summer on the site (these makeup about 40% of the summering population) these are potential future breeding birds once they attain maturity.

7.15. The ES has calculated the collision risk for divers twice. Once using the same approach applied to other species and once using the novel method developed by CSL. Applying the novel method the Collision Risk Assessment (CRA) indicated that 24 red-throated divers will be lost over the 20 year lifetime of the wind farm. Caution is necessary when applying the simple predictive modelling (i.e. the identification of flight corridors within an arc of 10 or 30 degrees either side of a line between the nesting loch and the nearest coast) to lochs where no flight data were collected. However, from the information supplied it is not possible to verify the predicted collision risk from the novel approach. Furthermore, the modelling work assumes that the distribution of the lochs that divers choose for breeding remains constant year on year, but, as has been demonstrated above, this is not the case.

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<sup>13</sup> Okill, J.D. (1994) Ringing recoveries of red-throated divers *Gavia stellata* in Britain and Ireland. Ringing & Migration 13: 57-58

7.16. **The ES concludes that this level of collision risk will result in a 20% decline in the SPA population. Given the limitations of this calculation, outlined above, this may represent an underestimate.**

#### **'Mitigation' measures for red-throated diver**

7.17. The proposed mitigation comprises alleviation of disturbance through revised wind farm layout and scheduling of construction work, reduction of collision risk by the provision of flight corridors through the wind farm and bird diverters on overhead transmission lines, and provision of nesting rafts. These measures are wholly inadequate to offset the predicted impacts on red-throated divers. While operational and design modifications can clearly be considered mitigation we question the extent to which measures designed to address productivity rates can be considered as part of a 'mitigation' package, for reasons outlined below.

7.18. The revised layout, including provision of flight corridors, assumes a distribution of divers that will not change, whereas they will use different nesting lochs over the projected lifetime of the wind farm. There is no reason to expect the provision of rafts on the Lewis Peatlands to result in any increase in breeding success for red-throated divers as the problems rafts are intended to address (unstable water levels and terrestrial mammalian predators) are not a problem on Lewis. Furthermore, divers are long-lived, slow to mature and so collision losses of breeding adults will not be offset by raising productivity, certainly not in the short-term.

7.19. Bird diverters may prove effective if they can be fitted and remain in place (a problem at other island sites with high wind speeds) but are of limited effectiveness in conditions of poor visibility, as noted in the ES. Notwithstanding this concern, scheduling construction work to alleviate disturbance effects would be an appropriate and welcome measure were consent to be granted.

#### **Conservation Objectives**

7.20. The LWP 2006 ES predicts a 20% reduction in the breeding population of red-throated diver due to collision risk. For the reasons detailed above we believe this may be a significant underestimate. The provision of diver rafts will not provide the predicted mitigation.

7.21. The ES appears to assume that a reduction in any qualifying species to the absolute minimum necessary to justify designation would be acceptable. This assumption fundamentally misinterprets the purpose of the Natura 2000 network as it would logically lead to progressive lowering of the qualifying threshold, ultimately resulting in population extinction. This significant reduction represents a level of mortality which is in addition to any natural fluctuations.

7.22. The high level of turnover in use of breeding lochs and associated flight corridors mean that it is not feasible to avoid all the lochs and flight paths during the lifespan of the development. This leads to the conclusion that the Conservation Objectives for red-throated diver will not be met particularly, but not exclusively, in relation to those objectives highlighted in Tables 1, 2 and 5.

## 8. Black-throated diver (*Gavia arctica*)

### Data collection

8.1 When considering the potential impacts for black-throated divers many of the same issues arise as were identified for red-throated divers.

8.2 The ES identifies 6 pairs of breeding black-throated diver within the SPA (ca. 4% of the British breeding population) which we consider to represent the minimum likely population. No assessment was made of the likelihood that some breeding lochs/pairs were overlooked, i.e. survey efficiency. This may be a particular problem on Lewis where breeding lochs are often small, and black-throated divers spend a high proportion of their time away from the breeding loch. The ES recognises the possibility of disturbance not simply at breeding lochs but also at feeding lochs but, unfortunately, no information is presented on the whereabouts of known feeding lochs. The size of the non-breeding population and the risks posed to it should also have been evaluated, but have not been.

8.3 The ES assumes that black-throated divers will use the same lochs for breeding over the life of the wind farm as they did in 2002/03, i.e. they will have high site fidelity. However, from the 2002/3 survey data this is difficult to evaluate as few sites were monitored in both years. Site occupancy rates from a study quoted in the ES<sup>14</sup> found a mean annual occupancy rate of breeding lochs in Lewis of 63%. This is substantially lower than the figure of 84% for the Scottish mainland Lochs.

8.4 Over the last 25 years at least 31 lochs have been identified within the LWP survey area where breeding has been confirmed or suspected. Given the level of survey effort within this period had been extremely low this figure is likely to be considerable higher. This together with re-occupancy rates means that **a fixed distribution of highly site-faithful breeding pairs throughout the lifetime of the wind farm is unlikely.**

### Black-throated diver and habitat loss

8.5 We agree that the layout should result in no direct habitat loss at known breeding sites of black-throated divers.

### Black-throated diver and displacement/disturbance

8.6 We agree with the ES that divers are considered to be sensitive to disturbance at breeding lochs and that there is little information regarding black-throated diver and disturbance from wind turbines.

8.7 We agree that a 2km construction free zone is likely to avoid disturbance or displacement at known breeding sites of black-throated divers.

8.8 The ES recognises the importance of feeding as well as breeding lochs to black-throated divers and assumes a fixed distribution of breeding birds over the lifetime of the development. As the paragraphs above indicated this is inaccurate and makes assumptions about potential future displacement/disturbance unsound.

8.9 The ES notes that one of the greatest threats to this species within the UK is likely to be human disturbance due to increased access. No evaluation of this impact has been included in the ES.

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<sup>14</sup> Jackson, D.B. (2003) Between-lake differences in the diet and provisioning behaviour of Black-Throated Divers *Gavia arctica* breeding in Scotland. *Ibis* 145:30-44

### **Black-throated diver and collision risk/barrier effect**

8.10 Few flights by black-throated divers were recorded during generic VPs and this was taken as evidence that flight activity by this species is low. No focal watches of flights associated with breeding lochs were undertaken. There was relatively little VP effort during August and early September the period when flight activity by the species is expected to peak, and no VP effort in early morning or evening (LWP 2004, Diagram 12.1) when flight activity by divers is highest. On Lewis, most pairs breed on smaller lochs (often only a few hectares in size) which obliges them to undertake much of their feeding away from the breeding site. **In conclusion, inadequate flight data were collected to permit an assessment of flight behaviour of black-throated divers.** The absence of data is surprising compared with the additional flight data gathered for red-throated diver to inform collision risk.

8.11 The CRA is based on an inadequate sample of flight activity from generic VPs to allow for satisfactory prediction, a lack of consideration of the whole period when black-throated divers occur in the area or the full range of flight behaviour.

### **'Mitigation' measures for black-throated diver**

8.12 The proposed 'mitigation' comprises alleviation of disturbance through revised wind farm layout and scheduling of construction work, reduction of collision risk by the use of bird diverters on overhead lines and the provision of nesting rafts. These measures are inadequate to offset the potential impacts on black-throated divers.

8.13 While operational and design modifications can clearly be considered mitigation we question the extent to which measures designed to address productivity rates can be considered as part of a 'mitigation' package. Divers are long-lived, slow to mature and so notably collision losses of breeding adults will not be offset by raising productivity, certainly not in the short-term.

8.14 There is no reason to expect the provision of rafts on the Lewis Peatlands to result in any increase in breeding success for black-throated divers as the problems rafts are intended to address (unstable water levels and terrestrial mammalian predators) are not a problem on Lewis. Furthermore, there are significant problems anchoring and maintaining rafts in a safe condition in lochs like those on the Lewis Peatlands due to their shallowness and extreme wind exposure.

8.15 Bird diverters may prove effective if they can be fitted and remain in place (a problem at other Island sites with high wind speeds) but are of limited effectiveness in conditions of poor visibility, as noted in the ES. Scheduling construction work to alleviate disturbance effects would be an appropriate and welcome measure were consent to be granted.

### **Conservation Objectives**

8.16 The ES concludes that the component conservation objectives for black-throated diver will be met should the construction of the wind farm be consented. Due to the limitations and omissions highlighted above we conclude that the conservation objectives may not be met, particularly, but not exclusively, those highlighted in Tables 1, 2 & 5.

## **9. Golden eagle (*Aquila chrysaetos*)**

### **Data collection**

9.1 We agree that the 7 pairs identified in the ES documents should all be considered as part of the SPA population.

9.2 The LWP 2006 ES presents some challenges due to the inconsistent allocation of letter codes (A, B, C etc) to eagle territories, with different codes applying to the Figures from that outlined in Table 4.1 (e.g. Fig 12.06a&b, Fig 12.24a&b, Fig 12.26b). For clarity the text below follows the coding applied in Tables 4.1 of the report to inform the Appropriate Assessment.

### **Golden eagle and habitat loss**

9.3 Direct habitat loss through land take would appear to be negligible at the scale of all breeding territories combined but the ES should have considered losses territory-by-territory and also considered the combined effect of direct and indirect habitat losses.

### **Golden eagle and displacement**

9.4 In the absence of detailed and extensive range-use observations, the ES uses both the RIN ('fixed radius') and PAT predictive models to estimate range use by the seven resident pairs of golden eagles which are part of the Lewis Peatlands SPA site interest. The ES assumes that if displacement occurs then a buffer of 750 m during construction and 250 m during operation will be avoided by eagles. These buffers are liable to be too conservative and in reality both may need to be larger, possibly up to 750 m during operation, and larger than this during construction. In addition, the 2km buffer around nest sites during construction needs to be applied to the pre-breeding period as well as the breeding period. The ES largely ignores the results of the RIN model, and the comments below consider only the more realistic predictions of the PAT model.

9.5 According to the PAT model four of the seven pairs will suffer some range loss due to the wind farm. The ES mistakenly assumes that relevant Conservation Objectives will only be compromised for golden eagle pairs if displacement results in range abandonment and/or reduced breeding success. The ES claims that none of these four pairs will experience range abandonment or reduction in breeding success occur, using several largely fallacious arguments and has not been able to consider the latest research on habitat loss in golden eagles (Whitfield et al. 2007)<sup>15</sup>. A more reasonable evidential conclusion would be that the distribution of four pairs will be affected through interference with the supporting function of habitat, and at best one territory will be abandoned, and breeding success reduced in two or three other pairs. An absence of breeding productivity data makes it difficult to reach definitive conclusions for territories other than territory D, which will be abandoned according to criteria documented in a recent study (Whitfield et al. 2007).

9.6 Survey data strongly suggest that the area southeast of Barvas is an important settlement area for subadult eagles and would be largely lost due to displacement. ES incorrectly dismisses the importance of this area by failing to recognise the features inherent in subadult settlement areas.

### **Golden eagles and disturbance**

9.7 Disturbance of birds at the nest site during operation and construction should be largely or wholly avoided by the proposal, but breeding success may still be compromised

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<sup>15</sup> Whitfield D.P. (2007) Complex effects of habitat loss on Golden Eagles *Aquila chrysaetos* (in press)

during construction by prevention of full range use. This would not constitute a long-term impact, however. No evaluation has been made of any additional disturbance arising from increased access which is likely to arise should the proposal be consented.

### **Golden eagle and the barrier effect**

9.8 A barrier effect is likely to compound loss of range in pair D through displacement and adversely affect use of habitat by non-breeding eagles.

### **Golden eagle and collision risk**

9.9 The collision risk appears to be based on just those flights between 20 –100m. There is no stage presented in the calculation that attempts to correct for the true risk height of 140m (as was done in LWP 2004 ES). A 98% avoidance rate is an appropriate value to use in the CRA indicating **a combined collision rate of 46 golden eagles over the lifetime of the development** (for both breeding and non-breeding). Lengthy demographic calculations and a PVA undertaken by the ES are largely irrelevant to an Appropriate Assessment for the Lewis Peatlands SPA, as the conservation objectives concern primarily influences on the site (SPA), not the wider population. The PVA conclusions should therefore be ignored by an Appropriate Assessment. However, the additional impacts arising from the Pentland Road development should be factored into any consideration, given that it is located within the SPA.

9.10 There is a disparity between two Tables in the ES in estimated collision fatalities, suggesting that the ES may have ignored some predicted deaths. Taking figures in Table 4.12 on trust, **life expectancy of the SPA's breeding adults will be reduced from about 20 years to about 12 years through collision fatalities**. It is more difficult to estimate the effect of subadult collision fatalities on subadult survival rates because of uncertainty in the number of subadults which the SPA supports. Reasonably assuming that 10 subadults per year are supported by the SPA suggests that collision fatalities would reduce survival over the subadult period from about 40% to about 16%. Increased mortality would also reduce breeding success by increasing recruitment into breeding territories of young birds with poorer breeding performance. **Collision fatalities would thus have a devastating effect on the demography of the SPA's golden eagle interest, unambiguously compromising conservation objectives for the site.**

### **'Mitigation' measures for golden eagle**

9.11 The proposed mitigation measures include: alteration to the wind farm design, forestry removal, possible alterations to landfill operations, the use of bird diverters on overhead lines and the consideration of supplementary feeding.

9.12 Disturbance impacts during construction and operation should largely be avoided due to design mitigation. Mitigation for disturbance due to increased public access has not been detailed in the ES.

9.13 Any ecological benefits arising from the proposed tree felling will depend on, amongst other factors, the age of the trees, availability of prey and quality of restored habitat. Even if the proposed tree removal were to be shown to be effective and delivered in advance of any impacts arising, which does not appear to be the case, the majority of the proposed felling area is outwith the SPA. The intention of this measure would appear to be aimed at replacing the loss of functioning habitat for SPA qualifying bird species from within the SPA and so can only be regarded as a 'compensatory measure'. See sections 17 and 22 for a more detailed consideration of mitigation/compensation.

9.14 The proposals relating to the landfill site are predicated on the assumption that poor productivity may be a direct consequence of the proximity of the Beinn Barvas pair to a waste

disposal facility which attracts ravens, which, in turn (it is assumed), compete with the eagles. The impacts arising from the presence of ravens is unproven and ignores the fact that ravens are known to form a significant part of this pair's diet. We query whether this measure would qualify as 'mitigation'.

## **Conservation Objectives**

9.15 The ES's conclusions on the proposal's impact on the five conservation objectives for the SPA are largely incorrect. A more reasonable interpretation of the likely impacts of the proposal indicates, at best, that the proposal fails to meet two conservation objectives and conspicuously fails to demonstrate that an additional two conservation objectives will be met; at worst, at least four conservation objectives will not be met.

9.16 The proposal will not avoid significant disturbance of the Lewis Peatlands SPA's golden eagle interest. The proposal substantially fails to meet the requirement to maintain the golden eagle as a viable component of the SPA (Table 1). If displacement occurs, the proposal will not ensure that the distribution of the golden eagle within the site is maintained in the long term (Table 2). If displacement occurs, the proposal will not ensure that the structure, function and supporting processes of habitats supporting golden eagle are maintained in the long term (Table 4). The extent of habitat loss due to the proposal cannot be ascertained (Table 3). **A strict interpretation of this conservation objective is that the proposal will not ensure that the distribution and extent of habitats supporting the golden eagle are maintained in the long term.** Any possible additional disturbance (Table 5) due to increased public access has not been assessed; its impact cannot therefore be ruled out.

## **10. Merlin (*Falco columbarius*)**

### **Data collection**

10.1 We agree with the conclusion in the ES that the 29 territories identified within the core survey area should be considered to be part of the SPA population.

10.2 Standard VP watches for merlin present particular challenges and the location of VPs close to nest sites for the 2005 survey work makes logical sense given that this is where most flights are likely to take place. However, limits on the distance over which merlins in flight can be detected means that longer distance flights are likely to have been underestimated in the observations. Despite this constraint flights at 4.5km away from VPs were recorded bringing many turbines within the range of most nest sites.

### **Merlin and habitat loss**

10.3 From the information currently available we agree with the ES that habitat loss would not appear to present a significant impact on merlin.

### **Merlin and disturbance/displacement**

10.4 We agree with the ES that a 1km disturbance free zone during construction should minimise disturbance. We also agree that relatively little information is available relating to the behaviour of merlins at operational wind farms.

10.5 From the information currently available the 600m buffer between known nest sites and the proposed development would appear to be reasonable. Any increased disturbance due to increased access has not been quantified.

## **Merlin and collision risk**

10.6 The ES states that merlin is 'a fast, low-flying, manoeuvrable species that is not considered to be at great risk from collision'. While this is generally true, the majority of reported ringing recoveries of merlin are of birds colliding with inanimate objects usually when chasing prey. Thus the presence of turbines and overhead cables are likely to increase the collision risk. The collision risk model is poorly suited to this species.

## **Mitigation measures for merlin**

10.7 The proposed mitigation measures include a 600m development free zone around known nest sites, the use of bird diverters and a 1km disturbance free zone around active nest sites during construction. Our concerns in relation to bird diverters have been discussed previously.

## **Conservation Objectives**

**10.8 Uncertainty relating to impacts due to recreational disturbance and mortality rates make it difficult to conclude that the conservation objectives of the SPA for merlin will be met should this proposal be consented (Tables 1, 2, 4 and 5). Uncertainties about the size of population at the time of, and since designation, and how the population has changed in the intervening period, lead to the conclusion that collision mortality may prevent the population at least maintaining itself.**

## **11. Golden Plover (*Pluvialis apricaria*)**

### **Data collection**

11.1 For clarity, the population of golden plover at the point of designation was an estimated 1,800 pairs (see section 3 above), rather than the 1,978 pairs stated. However, we agree with the ES that this SPA holds more breeding pairs than any other where golden plover is a designated feature. Average breeding density over the whole site is almost three times higher than for any other UK SPA. It is worth noting that the Lewis population is one of the few golden plover populations which appears to be increasing<sup>16</sup> making the maintenance of this population in terms of the Natura 2000 network particularly important.

11.2 According to LWP 2006 ES the predicted losses to this population, within the SPA, are 12 pairs (direct habitat loss), 69 pairs (displacement) and 2.1 collisions per year, totalling c.82-83 pairs (4% of SPA population). Surveys in 2002/3 estimated 261 pairs outwith the SPA. Predicted losses on this population are 3-4 pairs (direct habitat loss), 11 pairs (displacement) and 2.1 collisions per year. Thus totalling c.15-17 pairs (6% of the non-SPA population).

11.3 The ES makes a clear distinction between SPA (1,033) and non SPA (271) pairs of golden plover and evaluates impacts for each separately. This division is artificial and not based on the known requirements or behaviour of specific birds. It would be surprising, given known golden plover ecology if there were not some overlap between the two.

11.4 The figures arrived at in the ES in terms of predicted losses fail to take into account that many turbines are to be sited on the edge of the site and so their 300m buffer zone will

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<sup>16</sup> Sim, I.M.W., Gregory, R.D., Hancock, M.H. & Brown, A.F. (2005) Recent changes in the abundance of British upland breeding birds. *Bird Study* 52: 261-275

extend beyond the survey area and into the SAC which was not surveyed for golden plover.

### **Breeding wader survey methodology limitations**

11.5 The figures in the ES are largely based upon the Brown and Shepherd survey method. This is a widely recognised method for surveying upland sites in order to establish population levels over large areas and trends in upland breeding birds. Surveyors undertake at least 2 field visits and register where birds (single/pairs) were seen and their behaviour. This gives an indication of the presence/absence of species and can confirm the likelihood of breeding. Unfortunately, this method cannot provide detailed information on territorial areas or use of specific areas during particular aspects of the breeding cycle. The counts are likely to be an underestimate of the true population size<sup>17</sup>. Combined with uncertainties over the magnitude and distance of any displacement effects, this means that the displacement figures in the ES are likely to be conservative.

### **Golden plover and disturbance/displacement/habitat impacts**

11.6 The displacement distance for golden plover for the operating wind farm has been reduced from 300m (LWP 2004 ES) to 150m. It remains at 300m during construction. The authors state that the 150m buffer zone was based on the observed behaviour of golden plovers at wind farms in Europe. Published studies showed that wintering golden plovers were displaced 50 to 350m in all but one study (850m) where displacement was observed and that significantly more studies indicated displacement than did not (Hötker *et al.*, 2006). The golden plover present on Lewis are breeding rather than wintering birds and so will behave differently.

11.7 We are concerned that the reduced buffer is not a sound basis for evaluating impacts given that the information on breeding golden plovers used to make this reduction (which appears to be largely experience from Farr and Ovenden) has neither been published nor peer-reviewed. Having considered the Ovenden report it is not possible to evaluate the extent to which measurement of the displacement effect of turbines is confounded by habitat management or how transferable the results might be.

11.8 As the ES explains, golden plover depend upon a mosaic of habitat types. We consider the loss, change and disturbance caused by this proposal to have been underestimated. The ES has applied a uniform impact zone, irrespective of ground conditions. The comments detailed in Section 19 and Appendix 1 from Richard Lindsay consider the peatland impacts in more detail. A further report, based on 2006 field work will be submitted to the Executive shortly.

11.9 For golden plover, indeed for most species, this means that modifications to habitat are likely to occur between 10 and 250m around all roads and turbines and in certain locations may occur over distances of 300m or even 1km depending on particular circumstances (e.g. some peat pipes are known to run for more than 1km).

**11.10 In the absence of evidence to support a reduction of the 300m buffer we have reapplied it to the new layout, although this entails working with figures that we consider to be probable underestimates of breeding pairs (see 11.5). The 300m buffer combined with a 50m buffer for roads (representing the Potential Zone of Influence identified for habitat changes in the ES) and a modest 10m buffer for overhead cables shows that approximately 325 pairs of golden plover (c. 285 pairs in the SPA) could be lost as a result of the proposal. These figures are indicative and will be influenced by habitat alterations, amongst other factors. However, they serve to indicate the range of impacts which could arise and which cannot confidently be dismissed.**

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<sup>17</sup> Pearce-Higgins, J.W. and Yalden, D.W. 2005 Difficulties of counting breeding Golden Plovers *Pluvialis apricaria*. Bird Study 52: 339-342

## Golden plover and collision risk

11.11 Flight activity has been underestimated in many cases, by assuming day length of shorter duration than is the case on Lewis (12hrs instead of 18hrs) or not accounting for birds which fly at night, such as golden plover. As a result collision risk is likely to be underestimated.

11.12 The predicted collision rate of 2 birds per year appears to be very low given the flight activity presented in the confidential Appendix. One reason for this appears to be a simple error in the collision risk calculation presented in the Collision Risk Appendix (the use of 18 rather than 181 turbines in the calculations). Correcting this yields a predicted collision rate of 4.27 breeding birds per year or 6.45 birds per year summing non-breeding and breeding collisions. If the collision risk is re-calculated, based on the flight activity data presented in Appendix 12d to take account of variation in the frequency of at risk flights through the day and flight activity in March and April (key months of the breeding season, incorporated in the winter collision risk analysis in the ES) the **collision risk figure is 13 breeding birds per year, a total of 260 golden plover over the lifetime of the development.** This is still potentially an underestimate as it does not take into account the underestimation of diurnal flight activity (see paragraph 6.5).

## Population viability

11.13 The PVA is based on unrepresentative demographic data, and therefore is virtually guaranteed to predict a population increase. There is no appraisal of the sensitivity of the PVA output to the assumptions made. Although this reflects the past population trend on Lewis, such a continued, long-term increase is likely to be checked by density dependence at some point, and therefore may be unrealistic. As a result of taking an increasing population as a baseline, any negative impacts of the wind farm must be large to cause a population reduction.

11.14 Demographic calculations based on published productivity and mortality rates for UK golden plover populations (Parr 1980, Pearce-Higgins & Yalden 2003)<sup>1819</sup> which model a close to stable population in the absence of a wind farm were used by us to predict likely population losses from the construction and operation of the wind farm. Using the figures presented in the LWP 2006 ES, (but correcting the collision risk estimate for the arithmetic error), the population is predicted to decline to 1172 - 944 pairs 20 years after construction is completed (reductions of 9 - 27% from the 1,294 territories counted in the wind farm). **If a 300m displacement buffer is used, in conjunction with 13 birds per year collision rate, then the predicted population declines are estimated to range from 963 – 717 pairs (reductions of 26 - 45%).** The wide spread of results indicates how dependent PVA outputs are likely to be, depending upon the assumptions made, and suggest that significant losses to the SPA population could occur as a result of the construction

## Mitigation measures and golden plover

11.15 No Primary Bird Areas have been identified for golden plover, this is unsurprising given the widespread and high density distribution of golden plover across the entire SAC and SPA.

11.16 Proposed 'mitigation' comprises: alleviation of disturbance through ground surface preparation in advance of construction work (to dissuade golden plovers from nesting); habitat

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<sup>18</sup> Parr, R. (1980) Population study of Golden Plover *Pluvialis apricaria* using marked birds. *Ornis Scand.* 11: 179-189.

<sup>19</sup> Pearce-Higgins, J.W. & Yalden, D.W. (2003) Golden Plover *Pluvialis apricaria* breeding success on a moor managed for shooting Red Grouse *Lagopus lagopus*. *Bird Study* 50: 170-177.

creation through the restoration of approximately 88ha of abandoned peat cuttings (predicted to provide habitat for 3 pairs golden plover) and habitat enhancement by felling 680ha of forestry (630ha outwith the SPA boundary). This is predicted to provide habitat for 30 pairs of golden plover (28 outwith and 2 within the SPA); reduction in predation by removal of forestry and predator control; and reduction of collision risk by putting bird diverters on overhead transmission lines.

11.17 The peat cutting areas within the SPA may already have breeding golden plover meaning that there is no certainty additional pairs will be accommodated at least in the short term and the restoration work may disrupt the breeding behaviour of existing pairs. Conversely the location of many of these peat cuttings close to main roads may limit their current or long-term use for breeding golden plover due to disturbance. The extent to which these areas are already regenerating has not been presented.

11.18 As discussed in relation to golden eagle the tree felling proposals outwith the SPA cannot be considered mitigation and any benefits arising from felling will depend on the age and structure of the woodland and the gradient of the ground. Much of the proposed forestry removal is on sloping ground that would not be easily restorable to blanket bog. The benefits and limitations of bird diverters have been identified above.

11.19 The mitigation proposal would clearly be inadequate to address even the highly conservative impact estimates identified by the ES.

#### **Conservation Objectives**

11.20 The Conservation Objectives for golden plover on the Lewis Peatland SPA will not be met if this proposal is consented, particularly, but not exclusively, in relation to those objectives outline in Tables 1, 2, 4 and 5.

## **12 Dunlin (*Calidris alpina*)**

### **Data collection**

12.1 At designation, the site supported an estimated 3,400pairs of dunlin. Surveys in 2002/03 suggest the wind farm site supports 1140 breeding territories, of which 946 are within the SPA. The SPA had an estimated population of 3,650 pairs in the mid-1990s. LWP's predicted losses to this population are 10 pairs (direct habitat loss), 231 pairs (displacement) and 2 collisions per year, thus totalling c. 243 pairs (26 % of dunlin within wind farm and SPA, 6.7 % of the SPA population). Surveys in 2002/03 estimate 197 pairs outwith the SPA. LWP's predicted losses to this population are 2-3 pairs (direct habitat loss), 23 pairs (displacement) and 2 collisions per year, thus totalling c. 26-28 pairs (14 % of non SPA population).

12.2 The LWP 2006 ES fails to accurately convey the conservation status of dunlin, the relative rarity of the *schinzii* race, or the importance of the Lewis Peatlands SPA. Dunlin are inherently difficult to census and so figures are estimates with quite large albeit unspecified confidence intervals. **The SPA hosts around a third of the GB population of *schinzii* dunlin and just over half of all breeding dunlin protected by the SPA network in the UK.**

### **Dunlin and disturbance/displacement/habitat impacts**

12.3 The predicted losses of dunlin, from direct and indirect habitat loss, and disturbance displacement are underestimated, possibly considerably. The figures arrived at in the ES in terms of predicted losses fail to take into account that many turbines are to be sited on the edge of the site and so their 300m buffer zone will extend beyond the survey area and into the SAC which was not surveyed for dunlin. When this is taken into account the actual numbers likely to be displaced are higher (268 pairs).

12.4 We consider the loss, change and disturbance caused by this proposal to dunlin have been underestimated. The ES has applied a uniform impact zone, irrespective of ground conditions. The comments detailed in Section 19 and Appendix 1 from Richard Lindsay consider the peatland impacts in more detail. A further report, based on 2006 field work will be submitted to the Executive shortly.

12.5 For dunlin, indeed for most species, this means that modifications to habitat are likely to occur between 10 and 250m around all roads and turbines and in certain locations may occur over distances of 300m or even 1km depending on particular circumstances (e.g. some peat pipes are known to run for more than 1km).

12.6 Using the 300m buffer identified in the ES combined with a 50m buffer for roads (representing the Potential Zone of Influence identified for habitat changes in the ES) and a modest 10m buffer for overhead cables shows that approximately **295 pairs of dunlin (c.260 pairs in the SPA) could be lost as a result of the proposal**, although this entails working with figures that we consider to be probable underestimates of breeding pairs (our comments in 11.5 for golden plover apply also to dunlin). These figures are indicative and will be influenced by habitat alterations, amongst other factors. However, they serve to indicate the range of impacts which could arise and which cannot confidently be dismissed.

#### **Dunlin and collision risk/barrier effect**

12.7 No collision risk assessment was done for dunlin. An assumption was made that approximately 2 dunlin per annum will collide with turbines. The assumption that because no dunlin collisions have been found at Smola wind farm in Norway, collisions by dunlin would be unlikely on Lewis is surprising. The habitat of the Smola wind farm is such that corpse searches are unlikely to be successful without the use of a dog. A dog is now in use to detect corpses but has only been used since August 2006 by which time many of the adult breeding waders had left the site. No pre-construction data were available relating to dunlin. Collision risk would appear to be a potential risk to dunlin which has not been adequately evaluated.

#### **'Mitigation' measures and dunlin**

12.8 No Primary Bird Areas have been identified for dunlin, this is unsurprising given the widespread and high density distribution of dunlin across the entire SAC and SPA.

12.9 The proposed mitigation comprises: alleviation of disturbance through ground surface preparation in advance of construction works, ostensibly to dissuade dunlin from nesting; habitat creation through the restoration of approximately 88ha of abandoned peat cuttings, predicted to provide habitat for 2 pairs of dunlin and habitat 'enhancement' by felling 680ha of forestry (630ha outwith the SPA). This is predicted to provide habitat for 17 pairs of dunlin (16 outwith and 1 within the SPA). A reduction in predation by removal of forestry and predator control and the reduction of collision risk by putting bird diverters on overhead transmission lines.

12.10 The peat cutting areas within the SPA may already have breeding dunlin meaning that there is no certainty additional pairs will be accommodated at least in the short term and the restoration work may disrupt the breeding behaviour of existing pairs. Conversely, the location of many of these peat cuttings close to main roads may limit their likely long-term use for breeding dunlin due to disturbance. The extent to which these areas are already regenerating has not been presented.

12.11 As discussed in relation to golden eagle and golden plover the tree felling proposals outwith the SPA cannot be considered mitigation and any benefits arising from felling will depend on the age and structure of the woodland and the gradient of the ground. Much of the proposed forestry removal is on sloping ground that would not be easily restorable to blanket bog. The benefits and limitations of bird diverters have been identified above.

12.12 Setting aside questions of delivery and admissibility the mitigation proposal would clearly be inadequate to address even the highly conservative impact estimates identified by the ES.

### **Conservation Objectives**

12.13 The conservation objectives for dunlin will not be met if this proposal is consented, particularly, but not exclusively, in relation to those objectives outlined in Tables 1, 2, 4 and 5.

## **13. Greenshank (*Tringa nebularia*)**

### **Data collection**

13.1 The SPA includes 152 breeding pairs of greenshank. The UK population was recently estimated at 1,440 breeding pairs. The Lewis Peatlands SPA therefore supports approximately 10% of UK breeding population. LWP 2006 ES states that 60 pairs are within the SPA. LWP 2004 ES states that 87 territories were counted within the survey area, however, LWP 2006 ES states there are 75.

13.2 The ES indicates that the 'Primary Bird Areas' for greenshank are based upon a 250m buffer around each 'registration dot' rather than actual nest sites. The Brown and Shepherd surveys where registrations of territorial birds are identified according to a standard methodology, is considered to under-record Greenshank nest locations/incubating birds.

### **Greenshank and direct/indirect habitat loss**

13.3 As the ES indicates greenshank have specific habitat needs. These include nesting, adult feeding and brood rearing. The loss of and/or damage to any of these specific habitat components will impact on their likelihood of breeding successfully. A greenshank territory will contain a mosaic of habitats that may be used regularly (e.g. feeding adults may feed on the same pools day after day) or occasionally (e.g. if regular feeding habitat is flooded). Habitat patches may be widely separated and the total area of habitat lost may not be as important as the actual functional parts of the home range lost.

13.4 The construction of roads, wind turbines and transmission lines may, therefore, result in the loss of significant functional parts of affected home ranges, through direct and indirect (changes to hydrology) loss of habitat. LWP 2006 ES assumes that all areas of the home range or habitat are of equal importance, which they are not. The loss of key parts of the home range (e.g. a nest site, adult feeding area, brood rearing area) may be disproportionately important.

### **Greenshank and disturbance/displacement**

13.5 **The ES concludes that 2% of the SPA population may be subject to displacement or disturbance during operation and up to 20 pairs (10% of SPA population) during construction.** Given the lack of information regarding range use within these areas it is difficult to determine the extent to which these figures present a realistic scenario.

### **Greenshank and collision risk**

13.6 Very few flight data were recorded for greenshank and no collision risk was evaluated. The ES fails to account for the considerable movement of adult birds throughout

the breeding season (late March to late July), the site-fidelity of breeding birds and the importance of traditional brood rearing areas, which may be considerable distances away from nest sites. The ES also fails to recognise the area over which displaying birds undertake song flights and underestimates the height to which singing birds fly. No attempt is made to determine the impacts of the proposed turbines and overhead lines on greenshank active at dawn, dusk and at times of poor visibility (mist, rain). No justification is given for assuming that greenshank will have a similar collision risk to golden plover.

### **'Mitigation' measures and greenshank**

13.7 Proposed mitigation comprises alleviation of disturbance through ground surface preparation in advance of construction works, in an attempt to dissuade greenshank from nesting; habitat creation through the restoration of approximately 88ha of abandoned peat cuttings within the SPA and habitat enhancement by felling 680ha (630ha outwith the SPA boundary). Predator control and bird diverters for overhead lines are also proposed.

13.8 Our concerns about many of these measures have been discussed above (in particular for golden plover and dunlin) and also apply in this instance.

### **Conservation Objectives**

13.9 From the comments above we have concerns that the Conservation Objectives highlighted in Tables 1, 2, 4 & 5 may not be met

## **14 Lewis Peatlands SPA – Conclusion**

14.1 **Having considered the potential impacts arising from the proposed development, as far as current information constraints allow, for each of the qualifying species, we conclude that it cannot be ascertained that the development would not have an adverse effect on the site integrity of the Lewis Peatlands SPA and Ramsar site, given that a significant number of Conservation Objectives will not be met.**

## **15. Ness and Barvas (Corncrake – *Crex crex*) SPA**

15.1 The ES states that **no monitoring information was collected on corncrake migratory movement as this was 'not technically feasible'. Consequently the ES has not undertaken an adequate evaluation of the impact of the proposal on the qualifying interest of the Ness and Barvas SPA.**

15.2 Corncrakes migrating between trans-Saharan Africa and the Ness and Barvas SPA are highly likely to cross through the proposed turbines and grid connections. This is likely to include the entire cohort of young birds produced each year. Populations of this internationally rare species are very sensitive to small increases in mortality rates, especially of young. Therefore, even relatively small increases in mortality could have significant adverse impacts on the corncrake population levels of the Ness and Barvas SPA. Radio-tracking studies show that a fairly high proportion of corncrakes move a considerable distance (kilometres) between sites occupied at different times during the breeding season (Rhys Green pers com). It is not known at what times of day or height such flights occur. This suggests that collision risk may not simply be concentrated at migration times.

15.3 While conventional assessment of collision mortality using flight line data may be difficult for corncrakes (given the difficulty of actually recording flights) a PVA based approach to identify levels of additional mortality likely to have an adverse impact would present some assessment of the significance of this risk. A PVA has not been done, yet there are good

demographic data available to do this.

15.4 The ES has undertaken no assessment of corncrakes in the wider countryside but birds are likely to experience similar risks to those within the SPA.

## **Non- SPA qualifying species**

### **16. Migratory waterbirds**

Lewis is a potentially significant landfall for waterbirds migrating south from Iceland and Greenland. Whooper swans (see below) and geese, notably pink-footed (*Anser brachyrhynchus*), white-fronted (*A. albifrons*), and barnacle (*Branta leucopsis*) are known to fly across the Lewis Peatlands SPA or make landfall. Their flight height across the moors is partly dependent on the birds' condition upon arrival. Individually colour-marked whooper swans and pink-footed geese seen on Lewis have been seen elsewhere in the SPA network (not only in the UK, but also in the republic of Ireland). Therefore, the question arises of significant effect (and hence a possible requirement for appropriate assessment) of the LWP proposal on whooper swan SPAs considerable distances from Lewis.

### **17. Whooper Swan (*Cygnus cygnus*)**

#### **Data collection**

17.1 Studies of satellite-tracked birds (Pennycuick et al 1999)<sup>20</sup> and local knowledge indicate that North Lewis is a major arrival and departure point for whooper swans migrating to and from their Icelandic breeding grounds. Failure to collect data at the main times when whooper swans were likely to be present/passing through Lewis has led to the ES providing a misleading assessment with erroneous conclusions. The bulk of the swans move rapidly through the Hebrides on just a handful of days each autumn and spring (the precise dates of which vary a little between years, according to prevailing weather conditions), and comparison of known dates of mass migration with dates of the VP studies show that most of the key days were simply missed. The problem was also compounded by a failure to conduct VP work in the first 2-3 hours after dawn (at least in autumn 2005), when many swans migrate having rested overnight, or to take into account the fact that many swans migrate at night.

#### **Collision risk**

17.1 The collision risk determined in the study appears overly optimistic. This is largely due to the inadequate field data collected (see above). Whooper Swans are known to have poor manoeuvrability in flight, they readily fly at night, are prone to collision with wires and other objects and tend to fly low, all flights recorded in the study were within turbine height (<140m above ground) and many/most were within overhead pylon/cable height (<40m above ground). Migrants that have made the sea-crossing from Iceland are likely to arrive in a weak condition and so be more susceptible to collision risk and mortality.

#### **Mitigation measures**

17.2 The use of bird diverters may help reduce collisions for whooper swan but concerns raised above regarding poor weather and the practicality of bird diverters remaining in place in areas of extremely high winds also apply.

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<sup>20</sup> Pennycuick CJ, Bradbury TAM, Einarsson Ó & 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.

## **18. 'Non-SPA' golden plover, dunlin and greenshank**

18.1 We are not aware, from the information presented, that the separation between SPA and non-SPA populations can be confidently established. No evidence has been presented in the LWP 2006 ES to show the extent of interaction between different areas. Assuming a degree of overlap between these populations would appear to be the most appropriate and ecologically probable precautionary approach. Notwithstanding this assumption, the impacts arising outwith the SPA, and identified in detail above, will be comparable with those impacts arising within the SPA.

### **Mitigation**

18.2 The limitations in relation to the mitigation/enhancement proposals with regard to particular species have been outlined above.

### **Conclusion**

18.3 The impacts for 'non-SPA' dunlin, golden plover and greenshank are likely to be an underestimate, particularly in relation to indirect habitat loss and the extent to which a distinction can be made between SPA and non-SPA birds is not presented. The LWP 2006 ES predicted impacts for 'non-SPA' golden plover amount to the displacement of up to 15 pairs as a result of construction and operation, and the loss of 42 individuals due to collision risk. Even using these figures the proposed non-SPA mitigation is predicted to create habitat for only 28 breeding pairs. It is acknowledged that the habitat quality of these mitigation areas may not be as high as the habitat lost, especially in the short term. For non-SPA dunlin LWP 2006 ES predicts that 28 pairs will be lost due to construction and operation while approximately 40 individuals will be lost due to collision risk. The proposed non-SPA mitigation is predicted to provide habitat for 16 breeding pairs.

18.4 For non-SPA ground nesting waders, particularly dunlin and golden plover the proposal would appear present a significant impact which the mitigation proposals do not address adequately.

18.5 Article 4 of the Birds Directive requires member states to take 'special conservation measures' for Annex 1 species, including those outside protected areas where member states must strive to avoid 'pollution or deterioration of habitats'. The potential impacts on whooper swans, golden plover, dunlin and possibly greenshank would appear to be contrary to these obligations.

## **19. Mitigation/enhancement/compensation**

19.1 The LWP 2006 ES identifies a range of 'mitigation measures' which it suggests will reduce the impacts upon the qualifying species to such a degree that there will be no adverse affect on site integrity, it also includes a range of 'enhancement' measures. Some of these relate to the timing and method of construction, which will be the subject of detailed discussion and conditions. However, it is worth noting that, notwithstanding other objections scheduling of construction work to minimise disturbance is an appropriate and welcome measure of some utility.

19.2 The use of Primary Bird Constraint Areas in order to avoid those areas of greatest sensitivity is a measure that relies heavily upon the data currently available; cannot anticipate future population trends or movement; and has not been applied at all to golden plover or dunlin. The removal of turbines has been predicated on a static situation with respect to *e.g.* locations of nesting lochs and associated flight corridors for divers and so assumes that their

flights will avoid the areas that would be occupied by the proposed wind farm and infrastructure. However, use of lochs and flight corridors by divers will change between years, during the lifetime of a wind farm.

19.3 The use of bird diverters may reduce collision risk but will not remove it and may not reduce it to acceptable level. LWP 2006 ES acknowledge that diverters are of limited use in poor visibility. This is a key plank in the mitigation proposals in relation to overhead cables and as collision risk tends to be increased in poor flying conditions, including poor visibility, this undermines the potential effectiveness of proposed mitigation measures. The practicality of bird diverters remaining in place in areas of high wind speeds has not been considered.

19.4 Beyond these operational matters, the ES also identifies a number of habitat management proposals which it suggests will mitigate impacts on qualifying species, namely forestry removal, peatland restoration and diver raft construction.

19.5 Habitat creation in the form of restoration of abandoned peat cuttings and forestry clearance raises a number of questions with regard to the likely effectiveness of such proposals. These have been discussed in sections above, but for clarity are repeated here. We are concerned about the extent to which qualifying species may already be breeding on these peat cuttings and the extent to which these 'restoration' sites may be naturally regenerating. Both have a bearing on any assessment of net benefit of the measures proposed. If these sites are not already occupied it is debatable whether they would become so as a result of habitat management given their proximity to the road network. It is acknowledged in the ES that these areas may not deliver habitat of comparable quality, particularly in the short term. We remain concerned that the 'habitat creation/restoration' proposals are a disposal mechanism for the unwanted quantities of peat which will be removed during the construction process.

19.6 Tree removal can be a means of restoring peatland habitats. However, within the working life of the wind farm it is unlikely that the peatland restoration would be sufficient to replace that which is being lost. Such habitat management would require agreement to continue restoration beyond the lifetime of the wind farm. Significant areas of the proposed forestry removal are on sloping ground and so will not be easily restored to blanket bog.

19.7 Diver rafts are not considered to have any useful function as the problems for which they can offer a solution are not an issue on Lewis, namely breeding productivity, predation from foxes (absent on Lewis) and flooding (low relief catchments on Lewis are not susceptible to marked fluctuations in water level). In particular, given the acknowledged high collision risk, the loss of breeding adults from the SPA is unlikely to be rectified by measures intended to increase breeding productivity.

19.8 The 'mitigation' and 'enhancement' proposal outlined in LWP 2006 ES include measures both within and outwith the SPA. The comments above outline the extent to which we believe these measures will fail to deliver the predicted outcomes. A number of the proposals within the SPA could be considered actions which should be undertaken as part of the appropriate management of the SPA and so therefore may not constitute mitigation. Those habitat creation proposals applying to areas outwith the SPA boundary (to counter the loss of functioning habitat of SPA qualifying species from within the SPA), cannot be considered as 'mitigation', but only as 'compensatory measures' and then only following a decision to grant consent on the grounds both of 'no alternative solutions' and of 'imperative reason of overriding public interest' (see Section 22 for further explanation of tests).

19.9 The degree of wildlife management intervention envisaged by LWP in order to offset adverse impact on the integrity Lewis Peatlands SPA is unlikely to be able to do so, partly because LWP underestimate the impact and partly because the offsetting measures (both mitigation and compensatory measures) identified either (i) address issues that are not a problem, (ii) are of uncertain efficacy, or (iii) are inadequate in extent. The level of intervention likely to be required to have any chance of offsetting adverse impacts on site integrity would mark a complete change from a largely self-supporting, fairly natural wetland system, to one entirely dependent on high levels of interventionary management in order for

there to be any chance of favourable conservation status of the site being maintained<sup>21</sup>. It is difficult to see how this could be viewed as maintaining the integrity of the SPA as a “most suitable territory” for all of the species for which it is classified (nor, indeed, how it might in any way constitute “wise use” of a Wetland of International Importance listed under the Ramsar Convention).

## **20. Conclusions on ornithological impacts**

**20.1 Chapter 12 of LWP 2006 ES and the ‘Report to Inform the Appropriate Assessment’ conclude that, when mitigation is taken into account, there will be no adverse effect on any of the Conservation Objectives for the Lewis Peatlands SPA. In relation to the Ness and Barvas Corncrake SPA the ES acknowledges that it has not been possible to assess quantitatively the impacts of the Lewis wind farm on corncrake but also concludes that there would be no adverse effect on the integrity of the Ness and Barvas SPA.**

**20.2 From our comments above we conclude that there is likely to be adverse effects upon every species for which both these SPAs (and Ramsar) sites are designated. With reference to the Conservation Objectives of these sites and from information currently available it is our opinion that the LWP 2006 ES has not been able to establish that the site integrity of the Lewis Peatlands (and Ramsar site) and of the Ness and Barvas SPA will not be adversely affected by this proposal.**

## **21. Habitat impacts**

21.1 In order to evaluate accurately the information provided on habitats and hydrology RSPB Scotland commissioned specialist advice from Richard Lindsay, Head of Conservation at the University of East London and former National Peatland Specialist to the Nature Conservancy Council’s Chief Scientist Team (and subsequently SNH) and Chair of the International Mire Conservation Group for 16 years. A report considering the findings of LWP 2004 ES was submitted to Scottish Ministers in 2005. The comments in this section are based upon his review of the relevant sections of the ES and are attached in full as Appendix 1. A full report based on field work undertaken in 2006 will be submitted shortly.

### **Methodology**

21.2 The ES Addendum continues to be at variance with the officially recognised system for defining and classifying units of peatland within a blanket mire landscape. The hydromorphological system recommended by the JNCC provides a functional framework for peatland systems – and far from being suitable only for the Flow Country of Caithness and Sutherland, it has been recommended by the Ramsar Convention for use in relation to mires and peatlands internationally.

21.3 The classification system based on erosion types used in the Addendum is useful for some aspects, but ignores the fundamental underlying hydromorphological processes. In this respect it can be likened to describing a showroom full of cars but only using their colour to distinguish them – useful for certain purposes, but incapable of providing any insight into the cars as vehicles.

21.4 Of the 823ha identified as potentially affected by LWP’s “realistic scenario”, 800ha is blanket bog and 614ha is within the SPA. LWP classify 202ha and 171ha respectively of this as “active blanket bog”, based on simple % cover of *Sphagnum*. This definition conforms with neither JNCC nor EU guidance, so may well result in a significant under-estimate of the

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<sup>21</sup> As required by Article 6(2) of the Habitats Directive

extent of (and therefore the impact on) this priority habitat.

21.5 However, since the SPA is classified for its breeding bird interest, whether blanket bog is classed as active or not is less important than the fact that it is blanket bog and therefore suitable habitat for peatland breeding birds. **The loss of a minimum of 614ha of peatland bird habitat from within the SPA must therefore be classed as a significant impact on the Lewis Peatlands SPA/Ramsar site.**

### **Classification**

21.6 Nothing in the Addendum persuades us to revise our previously stated view that significant proportions of the drier vegetation types should, in fact, have been classified as more typical bog habitat.

21.7 Fieldwork carried out on Lewis in autumn 2006 by UEL revealed widespread, vigorous regeneration of peatland habitat, with gullies in erosion complexes well-vegetated and only rarely showing no signs of recovery. This appears not to have been detected by the sampling procedure adopted by LWP.

21.8 The general picture of the Lewis peatlands as being in a relatively vigorous state of recovery does not fit with that promoted by LWP of the peatlands being in terminal decline because they are riddled with peat-pipes. In fact, it would appear that “sink holes” assumed by LWP to be associated with (destructive) peat-pipes are in many cases the visible remnants of stream-courses overwhelmed by vigorously growing, peat-forming vegetation.

### **Existing impacts on the Lewis Peatlands**

21.9 The LWP 2004 ES and LWP 2006 ES both conclude that “drying as a result of natural hydrological de-watering is by far the most significant factor affecting habitat condition” and that there is little evidence of high burning impact. This is at odds with both UEL fieldwork carried out in 2006 and with surveys of the contiguous peatland habitat of the Lewis Peatlands SAC<sup>22</sup> which concluded that “the main threat to the majority of the mire appears to be burning”, based on the extent of evident fire impacts.

### **Direct habitat loss**

21.10 LWP identify 266ha of habitat lost directly and permanently to windfarm infrastructure, 260ha of which is blanket bog. 162ha of SPA habitat is permanently lost, of which 158ha is blanket bog.

### **Indirect habitat loss**

21.11 The decision not to use a hydro-morphological approach when describing this blanket mire system continues to create particular problems when seeking to evaluate indirect habitat impacts.

21.12 Reducing the generic buffer for indirect effects on habitat from 50m (as recommended by SNH) to 10m (based on short-term studies at a different site) can hardly be regarded as precautionary. When issues of vegetation quality, drainage and erosion are considered together a 250m buffer (for the entire layout) is more reasonable than the 10m buffer used in the ES. **Using this larger buffer, the figure for potentially affected active blanket bog is 4,390ha, compared with the 344ha stated in the Addendum.** The true size of the impact zone probably lies somewhere between these extremes and could be more accurately

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<sup>22</sup> Dayton N (2003) NVC Survey and Habitat Condition Assessment of Lewis Peatlands candidate Special Area for Conservation. Report to SNH (contract no: BAT/LC06/01/02/99)

estimated using a hydromorphological approach.

## Roads

21.13 Apart from the reduction in proposed length, we see little in the Addendum to alter our views on the impact of roads and road construction on peatland habitat within and outside the SPA. Road construction will still cut across the natural surface flow of the bog, thus causing problems for both the bog and the road. Experience has shown that floating roads do not continue to float but gradually sink into the peat. They will therefore become saturated and require drainage and repair to continue to be useable. Rock-fill roads, intended for use in the least stable areas of peat have the potential to initiate large-scale instability of the peat mass. These issues are not addressed adequately in the Addendum.

## Implications for SPA qualifying species

21.14 Under LWP's "worst case scenario" (using a 50m buffer): *"The area of potential permanent loss (or gross alteration) ([1270ha] 2.15% of SPA/Ramsar extent) is large enough to represent a threat to the ecological integrity of the remaining SPA/Ramsar area, therefore there could be long-term harm to SPA/Ramsar habitats, even allowing for the very large area remaining"* (Addendum Section 11.6.4.1). Given the conclusion of Table 10.3 that there is significant risk of peat de-watering across all four types of hydrological zone identified in Section 10 (hydrology) from the combined processes of construction, LWP's "worst case" estimate of loss of more than 2% of SPA/Ramsar habitat may well be an underestimate.

21.15 Mitigation for loss of functioning habitat of SPA qualifying bird species must meet the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994, as amended (the Habitats Regulations) and associated guidance, rather than the EIA Regulations (see Sections 17 and 22 for further consideration of this issue).

21.16 **Conclusion: The continued failure of LWP to adopt JNCC guidelines as the basis for the hydrological assessment of the survey area misrepresents the area and extent of habitat potentially affected. The identification of a potential impact zone should be based on the specific conditions across each part of the development – "one size fits all" is not an appropriate approach. This is compounded by adopting an interpretation of the condition of habitats, the thrust of which is to underplay significantly the value of habitats lost to the development. Consequently, LWP continue to significantly underestimate the potential impacts on the Lewis Peatlands SPA, SAC and Ramsar site. The precise nature and extent of these impacts are uncertain but it cannot be ascertained that the proposal will not have an adverse effect on the qualifying interest of these designations.**

## 22. Alternative solutions to the Lewis Wind Power wind farm proposal

22.1 In order to evaluate the possible alternative solutions to the LWP wind farm proposal and so inform the competent authority when considering the obligations arising from the Habitats Regulations, RSPB Scotland commissioned IPA Energy + Water Consulting (IPA) to provide a report assessing potential alternatives to developing the Lewis wind farm proposal. This section of our response provides a summary of this report which is provided in full in Appendix 2.

22.2 The implications of these findings with regard to the decision-making framework are considered in Section 22.

## **Critique of alternatives considered in the LWP Environmental Statements**

22.3 In considering alternatives the developer confines itself to looking only at projects within the Western Isles that could deliver (either combined or separately) over 600MW of renewable energy generation.

22.4 The developer examines 11 areas in the Western Isles and reasons that only 6 sites (all on Lewis) would be capable of supporting a large scheme. They conclude that at best a total of 609MW is potentially available and as a result no combination of projects could meet the project objectives of the LWP proposal.

22.5 In addition to the LWP there are currently two other wind farm proposals of significant size. The Pairc windfarm (250MW) and the Muaitheabhal/Eisken windfarm (159MW) both of which are situated on Lewis. Neither of these proposals are located within a SPA, SAC or Ramsar site. In addition, there are also a number of other smaller proposed wind sites, varying in size from 2.5MW to 12MW.

22.6 RSPB Scotland has been consulted about at least 12 proposed wind farm sites across the Western Isles, excluding LWP, Pairc and Eisken. Some of this information is commercially confidential and can be provided to Scottish Ministers on that basis.

**22.7 Using the developers own criteria for screening sites there is significant other potential to develop wind farms of a similar or greater capacity than the LWP on Lewis alone. Including the Pairc and Eisken wind farms around 600MW, of this potential capacity would be outside SPA areas. However, it is relevant to note that LWP reasoned that only 154MW of capacity is available from Pairc and Eisken when 409MW is currently being considered.**

22.8 This does not take into account other areas on the Western Isles, such as South Uist which is considered to have significant potential for onshore windpower and would not encroach on SPA areas. However, other issues such as radar and air defence issues may limit its development for wind farms.

22.9 Therefore, based on the developer's project objectives the criteria for a single site producing 652MW may not be met if SPA areas are excluded. However, the sum of just two existing alternative proposal sites could provide around 400MW and more capacity could be built in the same timeframe and scale as the LWP outside SPA areas if additional sites were also developed.

## **Extent to which renewable energy generated from LWP is required to meet existing policy objectives**

22.10 The LWP is a large scheme and, if developed, would provide a significant contribution to both the GB and Scottish renewable energy targets. However, on the basis of current progress towards Scottish renewable energy targets, our analysis suggests that there appears to be no clear need for a contribution from LWP in order to meet them. While the 2015 GB target appears more challenging (based on the current knowledge of planned and proposed renewable capacity) it is likely that further schemes will come forward over the coming years, increasing the probability that the target will be met without a contribution from LWP. The need for meeting energy policy targets therefore, appears not to provide an overriding and imperative justification to build LWP.

22.11 While national energy policy promotes onshore wind power (and other renewables), it does not provide justification for building within an SPA to meet renewable energy targets. There is considerable policy guidance requiring developers and planners to take account of nature conservation issues, indicating that developments should only be permitted where they are not adversely impacting the nation's natural heritage.

## Technical and commercial viability of alternative technologies to onshore wind

22.12 Onshore wind technology is currently the most mature and widespread form of renewable generation. The main technical obstacles to its development appear to be planning and land use constraints and limits to the capacity of power grids to support it. The latter is an issue that will need to be addressed for the widespread development of all renewable generation.

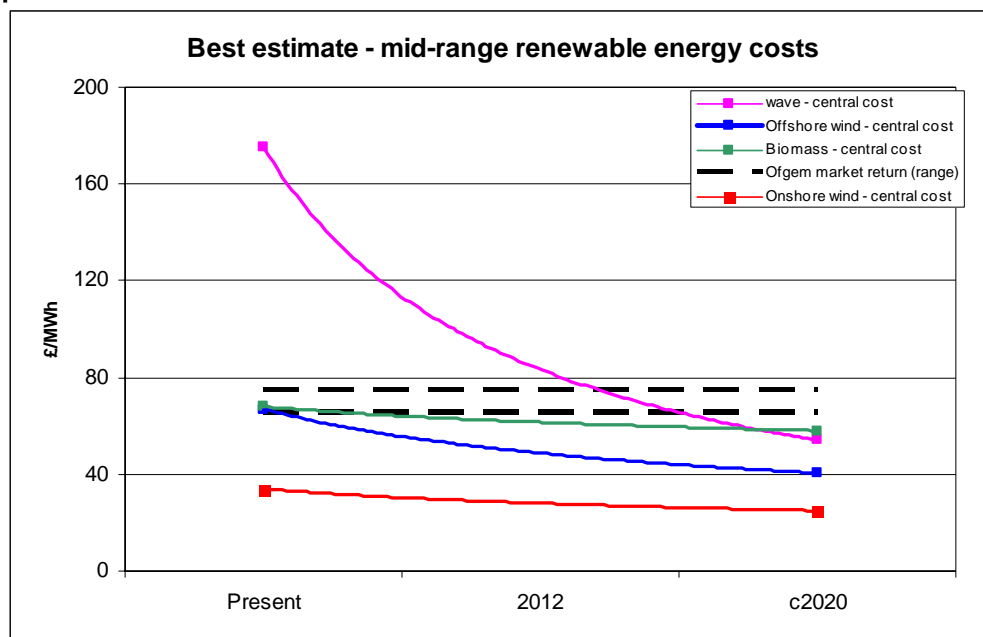
22.13 The development of offshore wind technology is likely to increase significantly over the period to 2020. Although there is currently limited experience of installing and maintaining such structures offshore, with more potential to gain economies of scale than onshore wind technology and less planning restrictions, it is widely predicted to experience very rapid development in the next few years.

22.14 The technological development of wave power has not progressed to the point where it is capable of being commercially applied, but it rivals offshore windpower, in its potential to deliver large amounts of power to the UK grid.

22.15 Biomass is currently limited to smaller commercial applications and co-firing in conventional power stations. Dedicated biomass plants are likely to remain relatively small in scale because of the costs of transporting the fuel.

22.16 The following figure compares the mid-range of the 'Best Estimate' cost for these renewable technologies.

**Figure 1: Current and expected mid-range of renewable costs set against market entry prices**



22.17 Onshore wind is likely to remain the most economic renewable in the short to medium term, although offshore wind and then later wave are likely to become more commercially attractive over the period.

22.18 It is also important to note that as these are 'generic' central estimates of the cost of these technologies they do not reflect likely costs at the best sites for these resources. Lewis and Uist, for example, have some of the best offshore resources in Europe.

## **Credible and feasible alternative solutions for generating 652MW of renewable energy**

22.19 The Western Isles has significant renewable energy potential (both wind and wave). Based on a review of the state of the renewable technologies most able to utilise these resources, it was assessed that a mix of technologies, including onshore wind and offshore wind and wave could easily match the capacity of the LWP in the medium term.

22.20 Over 600MW of alternative onshore capacity on the Western Isles has been identified in LWP 2006 ES and could be viable in the same timescales as the LWP. While this would not match the size of LWP, additional onshore wind developments could potentially also be developed in other areas of the Western Isles, which would not impact upon environmentally sensitive areas.

22.21 Looking to the mainland of Scotland, a significant area of land has been earmarked for onshore wind farm development by several Scottish Planning Authorities. Scottish Natural Heritage has also identified a significant area of land that would be suitable for onshore wind developments. As LWP covers some 225km<sup>2</sup>, there would appear to be opportunities for alternative sites, however, given the size of this proposal, a development of this magnitude would be expected to generate significant planning problems. Whilst the number of locations for similar large-scale single developments might be limited the total number of developments in the pipeline suggests that there are many locations where smaller developments could be located and collectively generate the same output (and significantly greater) as LWP.

22.22 The size of alternative renewable resources available for development in Scotland is very large. Garrad Hassan identified over 10GW of offshore wind resources alone that they predicted could be economically developed. Similarly, it indicated that Scotland has over 5GW of offshore wave potential that could be commercially viable. The bulk of the identified wave resources and a significant portion of the offshore wind potential lies off the coast of the Western Isles. It is therefore highly likely that this area will become a prime site for the development of these resources. Lacking the planning and land use constraints found onshore, construction of very large 652MW arrays of generators is also much more feasible offshore.

22.23 In the context of the UK, where over 10GW of onshore and around 9GW of offshore wind farms are currently planned, LWP at 0.652GW, while significant as a single project, is not overly significant when considered against other proposed renewable developments. There are clearly other locations around the UK that can accommodate a significant amount of renewables capacity, some of which (particularly offshore) could support schemes in excess of the size of the LWP proposal. **The LWP proposal is clearly not 'vital' in a national context given other proposed renewable developments.**

## **Options for the construction and funding of an electrical grid-interconnector from the Western Isles to the mainland**

22.24 The LWP proposal would provide justification for the construction of an upgraded link to the mainland, but there are other developments that would also require the upgrade. Although there are no offshore wind or wave projects of any size currently proposed for Lewis, there are two smaller proposed onshore wind farms which would also require a new connection to the mainland.

22.25 Using current Ofgem guidelines, a renewable project of around 216MW could economically justify building a new connection of 600MW. The Pairc windfarm proposal alone, at 250MW would therefore justify a new link.

22.26 A representative of SSE's Transmission Division (SHETL) said that they were now beginning preparatory works (detailed planning of the interconnection) to lay a transmission link to the Western Isles of some 900MW capacity (3 300MW cables) on the back of commitments made to them by the developers on the Western Isles. Nearly 600MW of

renewable generation developments have now signed contracts for the design and connection to the transmission system. This does not include the LWP. The decision to lay 3 cables would allow for additional capacity on the line as a whole and for the failure of one of the cables.

**22.27 Thus the actuality of developments 'on the ground' on Lewis, confirms the view that LWP is not required to prompt investment in a new transmission link to the Western Isles.**

### **Review of alternative means to meet climate change targets**

22.28 The emissions savings from the Lewis wind farm arise from the fact that it would displace electricity generated by other sources, elsewhere. However, the magnitude of these savings depends on a number of factors such as transmission losses associated with the Lewis wind farm which could range from 3-16% depending on the route and technology used for the interconnector, the profile of the wind output over time compared with the marginal electricity generators producing electricity at those times and emissions associated with generation required to be maintained on standby in case of unexpected reduction in the output from the Lewis wind farm.

22.29 In addition, the manufacture of wind turbine components, as well as construction and decommissioning of the wind farm, are activities that produce greenhouse gas emissions. The most important factor affecting the life cycle emissions of the Lewis Wind Farm is, however, associated with the fact that the wind farm will be built almost entirely on peat soils.

**Disturbance to the natural environment attributes around 70% of the life cycle emissions from the Lewis wind farm.**

22.30 In the near term the main alternatives to providing 600+ MW of new renewable energy supply are likely to be other onshore wind sites and offshore wind. Other onshore wind sites on the mainland would have lower transmission losses, and might also have lower life cycle emissions (if not located on peat). This would improve their overall contribution to emission reduction targets. Whether a specific alternative would make a greater or lesser contribution would depend on site-specific factors.

22.31 Offshore wind farms are likely to have greater life cycle emissions than the equivalent onshore turbines, mainly due to their increased concrete and steel consumption. However, this would be offset by higher capacity factors and lower requirements for standby generation, due to the more consistent wind profile offshore. There would also be no issues with peat or forest clearance. Therefore the overall contribution to emission reduction targets from offshore wind farms would generally be higher.

### **Conclusion**

**22.32 From this information and that contained in Appendix 2 it is clear that there are alternative solutions to the Lewis wind power proposal. Section 22 considers the implications of these findings in the context of the statutory framework.**

## **23. Lewis Wind Power Economic Assessment**

23.1 In order to evaluate the potential economic impact of the Lewis Wind Power proposal, and so inform the tests arising from the Habitats Regulations, RSPB Scotland commissioned DTZ Consulting & Research (DTZ) to independently review the economic analysis included in LWP 2006 ES and LWP 2004 ES. Their findings also draw upon other relevant analysis commissioned by Comhairle nan Eilean Siar and others. The full report is provided in Appendix 3.

23.2 An evaluation of both the DTZ and LWP 2006 ES economic work was sought by DTZ from Iain McNicoll, Emeritus Professor at Strathclyde University and former technical adviser to the Western Isles Council on the Western Isles Economy Input-Output Project 1998 –1999. A CV and copy of his comments are included in Appendix 4.

23.3 The assessment (contained in the DTZ report) relies on the specification of the LWP project found in the environmental statement. Essentially this is for 181 wind turbines with a total 651.6 MW generation capacity. Development costs are anticipated to be £512 million.

23.4 Regeneris Consulting have undertaken an economic assessment of the LWP project for the developer. They estimate that 86 full time equivalent jobs will be created in the Western Isles as a result of the development phase of the scheme. A key assumption is that the fabrication of the towers and possibly the turbines will take place in the Western Isles at the Arnish point facility. DTZ has assessed the attributes of this facility and likely competitors, and concludes that on balance it is probable that the fabrication will take place at Arnish point. However, we consider that there are some flaws in the Regeneris Consulting analysis, in that:

**a)** Much of the development costs have been misattributed as construction activity instead of manufacturing.

**b)** Their method of converting the temporary jobs associated with the development phase into FTE jobs is not, as claimed, endorsed by HM Treasury.

**c)** The method of calculating indirect and multiplier impacts from the development phase is not transparent and cannot be replicated.

23.5 In the Environmental Statement, Regeneris Consulting state that around 39 full time equivalent (FTE) jobs will be required for the on-going operation of the LWP windfarm, with an associated annual salary cost of £1.31 million. The number of local workers required to operate and maintain the wind farm is stated to be 37, including 5 posts at a wind farm visitor centre. (The other two posts are apparently ecologists involved in the monitoring of environmental impacts who are assumed to be based elsewhere in Scotland). However, a justification for the number of operational jobs is not provided, nor is there a breakdown of this number by occupation, grade or skill. It difficult, therefore, to assess the potential capacity of the Western Isles labour market to fill the operational posts that Regeneris Consulting expect to be created during the operational phase of the project.

23.6 Three sources of indirect economic impact are considered in the Environmental Statement. The first two of these are:

**a)** Economic activity stimulated by the purchase of goods and services as inputs into the windfarm operation by the operator. These are primarily the procurement (supply chain) impacts, and depend on the type and geographical source of purchases by the operator. Regeneris Consulting estimate 14 FTEs from this source. However, because of a lack of transparency in the methodology used, it is difficult to assess whether this estimate is realistic.

**b)** Economic activity stimulated by the recycling of land lease payments made by the operator to the estates and to the crofters whose land is required to host the windfarm. Regeneris Consulting estimate 14 FTEs from this source. Again, a lack of transparency in methodology makes it impossible to replicate these results. A particular area of concern is the apparent assumption that the payments would not be subject to taxation, which leads DTZ to conclude that the economic benefit estimates (in terms of jobs) is probably overstated by at least 20%.

23.7 The most significant source of economic benefits from the LWP that are estimated by Regeneris Consulting derive from a third source of indirect benefit, namely economic activity

stimulated by the spending of payments from the windfarm operator to the community to be spent on schemes “benefiting the communities of the Western Isles”. These comprise payments to four Trust funds – the three estates and the Western Isles Development Trust. Collectively, Regeneris Consulting estimate 142 FTEs from these funds.

23.8 DTZ has concerns about the method used by Regeneris Consulting to calculate these estimated impacts. The concerns are as follows:

a) Regeneris Consulting estimate that the community and economic development activities supported by the community fund payments would support a total of 142 jobs over the same 20 year period.

b) However, **Regeneris Consulting then make a fundamental major error by claiming the 142 jobs (over 20 years) as FTEs, and add these to the annual FTE estimates for direct and other indirect effects.**

c) DTZ suggests that the Regeneris Consulting approach to assessing deadweight and displacement is inappropriate and appear to have been underestimated by around 15%.

23.9 **If, as appropriate, the 142 jobs were divided by 20 to obtain an average annual estimate of employment generated from the community and development trust payments, then the total would be something like 7 FTEs per annum.** Adjusting for a more appropriate assessment of deadweight and displacement would reduce this to a number closer to 6 FTEs per annum. **The net result of all these comments, therefore, is that DTZ considers that a more likely estimate of impact is 6 full time equivalent jobs per annum rather than the 142 claimed by Regeneris Consulting.**

23.10 In terms of the potential effects of LWP on the area’s tourism economy, Regeneris Consulting acknowledge that there may well be an overall net negative impact but they do not attempt to quantify this. The evidence from various surveys of residents and visitors is mixed, but on balance DTZ considers that a reduction of around 10% in the area’s tourism economy would be a reasonable working assumption. A reduction of this magnitude would result in the direct loss of about 120 jobs, with a further loss of 20 jobs assumed through indirect and multiplier impacts.

23.11 **The employment impact estimates predicted by DTZ for the LWP (before tourism displacement effects are factored in) is 73 FTEs, which is almost 70% less than the 233 FTEs claimed by Regeneris Consulting.** Almost all of this difference derives from the alternative approaches made in assessing the effects of Community Fund expenditure. There is also some difference in the approach to the effects of the land lease payments, but this only accounts for a difference of 4 jobs. There is also a knock-on impact on the predicted number of induced jobs (DTZ: 6; Regeneris Consulting: 26) that flows from these two sources. This difference is mainly due to the different assumptions regarding the Community Fund rather than the land lease payments.

23.12 It is worth pointing out that given that LWP is likely to generate, at most, 73 new permanent FTE jobs, any subsequent reduction in the size of the islands’ tourism economy greater than 5% will result in a net negative overall impact for LWP, at least in employment terms. (i.e. the 73 jobs are approximately equivalent to 5% of the employment base associated with tourism). Table 6 summarises these results.

**Table 6**

	<b>Regeneris Consulting Employment Estimates (FTEs)</b>	<b>DTZ Employment Estimates (FTEs)</b>
Direct	37	37
Indirect, of which	170	30
<i>Supply chain</i>	14	14
<i>Land lease payments</i>	14	10
<i>Community Fund effects</i>	142	6
Induced	26	6
<b>Sub-total</b>	<b>233</b>	<b>73</b>
Less tourism displacement effects	0	-140
<i>Direct</i>	0	-120
<i>Indirect &amp; induced</i>	0	-20
<b>Total</b>	<b>233</b>	<b>-67</b>

## Conclusion

23.13 The DTZ report, assessed and confirmed by Iain McNicoll indicates that the economic analysis presented in LWP 2006 ES is extremely optimistic and not supported by the information available. In his concluding remarks Professor McNicoll states:

*“In an applied policy sense, Regeneris’s errors would be less important if they were offsetting, but unfortunately they are not: in every instance where a “mistake” can be identified it imparts an upward bias to the estimates of positive gross impact. In fact, the entire Regeneris report reveals severe optimism bias as described and warned against in the Treasury Green Book (Green Book 5.61-5.65). An idealised best-possible-world scenario is postulated and presented as an actual forecast by Regeneris. As explained in the Green Book, this type of “rose tinted” appraisal is no longer acceptable to the Treasury; rather, what is required is a proper evaluation of alternative plausible scenarios, at a minimum recognising the existence and importance of downside risk. DTZ’s analysis makes some positive moves in this direction.”*

## 24. Statutory Framework

24.1 As this proposal is likely to have a number of impacts on designated sites or protected species the provisions of the Habitats Regulations and the Habitats and Birds Directives apply. The Habitats Regulations require, as a matter of law, a structured approach to the impact on European sites. This structured approach is not optional but is required as a matter of both EC and Scots law.

24.2 This approach requires every competent authority (Scottish Executive Circular 6/1995, as amended 2000), in this instance Scottish Ministers, to undertake the following steps:

- a. **Step 1<sup>23</sup>**: Undertake an assessment as to whether the project is likely to have a ‘significant effect’ on a European site (Reg. 48(1) and Art. 6(3)) whether in combination with other plans or projects or alone. Reg. 10 defines a European site to include SPAs, SACs and as a matter of government policy,

<sup>23</sup> Omitting Reg. 48(1) (b) relating to whether the plan or project is directly connected with or necessary to the management of the site. LWP 2006 ES acknowledges this proposal does not meet this test.

Ramsar sites.

- b. **Step 2:** If there is likely to be such a significant effect the competent authority must carry out an appropriate assessment (Reg. 48(1) and Art. 6(3)).
- c. **Step 3:** The appropriate assessment must consider the implication for the European site 'in view of' that site's conservation objectives (Reg. 48(1) and Art. 6(3)).
- d. **Step 4:** In light of the conclusions of the assessment the competent authority shall agree to the project only after having ascertained that it will not adversely affect the integrity of the European Site (Reg. 48(5) and Art 6(3)).
- e. **Step 5:** If it cannot be ascertained that the project will not adversely affect the integrity of the European site, the authority must then consider whether there are any alternative solutions (Reg. 49(1) and Art. 6(4)).
- f. **Step 6:** If there are no alternative solutions (Art. 6(4) uses the language of "in the absence of alternative solutions") and "notwithstanding a negative assessment of the implications for the site" consent or authorisation may be granted for the project but only "for imperative reasons of overriding public interest" (IROPI) (Reg. 49(1) and Art. 6(4)).
- g. **Step 7:** Such "imperative reasons" may be of a social or economic nature (unless the site hosts a priority natural habitat type of a priority species in which case the permissible considerations are significantly restricted) (Reg. 49(1) and Art. 6(4)).
- h. **Step 8:** If the authority is satisfied that there are imperative reasons etc. notwithstanding a negative assessment of the implications for a European site, Scottish Ministers are under a duty to secure that all necessary compensatory measures are taken to ensure the overall coherence of Natura 2000 is protected (Reg. 53 and Art 6(4)).

## Applying this Approach

### 24.3 **Step 1: Is this proposal (either alone or in combination with other plans and projects likely to have a significant effect on a European site?**

- 24.3.1 LWP 2006 ES agrees that the proposal will have a significant effect on the Lewis Peatlands SPA and the Ness and Barvas SPA but not the Lewis Peatland SAC and Ramsar site. We agree. From the impacts outlined in section 19 and Appendix 1 we also conclude that the proposal may have a significant effect on the SAC.

### 24.4 **Steps 2, 3 & 4: Having ascertained that there is likely to be a significant effect, the competent authority must carry out an Appropriate Assessment in view of the site's conservation objectives. Having undertaken an Appropriate Assessment the competent authority shall agree to the project only after ascertaining it will not adversely affect the integrity of the European site.**

- 24.4.1 In a written answer to a parliamentary question on 19 November 2004 the Deputy Minister for Environment and Rural Affairs stated: "The Scottish Executive issued Guidance on the EC Habitats and Birds Directive in June 2000. This Guidance states that it is Scottish Executive policy to apply the same level of protection for Ramsar sites as that afforded to designated Natura sites. This is in line with the statement of the Government's policies for the protection and management of Ramsar sites in England..." Consequently the structured tests applicable to

European sites should also, as a matter of policy, be applied to Ramsar sites.

- 24.4.2 Having considered the information available (see above) it is our submission that the Scottish Ministers cannot conclude that the project proposed will not adversely affect the integrity of the Lewis Peatlands SAC, the Lewis Peatlands SPA, the Ness and Barvas SPA or the Lewis Peatlands Ramsar site
- 24.4.3 The test contained within regulation 48(5) includes a precautionary element and therefore permission must be refused at this stage unless the Scottish Ministers can be certain, having availed themselves of the best scientific information in the field and adopted a precautionary approach to any evidence where there remains doubt as to the impacts, the proposed development will not have an adverse impact on the integrity of any European sites. This is in line with the precautionary principle as set out in paragraphs 80-81 of the NPPG note 14 on Natural Heritage and European Commission Guidance, paragraph 2.2<sup>24</sup>.
- 24.4.4 In addition, when considering adverse effects, the competent authority can take into account the applicant's suggested mitigation measures which will be implemented to minimise any such effects (Reg 48(6)). However, as stated above (paragraph 17.8) habitat creation proposals applying to areas outwith the SPA boundary to counter the loss of functioning habitat of SPA qualifying species from within the SPA cannot be considered as 'mitigation', but only as 'compensatory measures' and cannot be taken into consideration when ascertaining whether the project will adversely effect the integrity of an European site.
- 24.4.5 This interpretation is endorsed by Ministerial decisions in the UK. In 1998, the Secretary of State for Environment, Transport and the Regions determined, in relation to the Harwich Deep Water Channel Dredging on the Stour and Orwell SPA, that the proposal to create new intertidal habitat outwith the site could not be considered as mitigation and was compensation. In this case the Secretary of State took the view that: *'...because the redressing of the immediate damaging effects of the project relies so firmly on the provision of replacement habitat outside the existing site, it is not possible to conclude that the habitat creation element of the package can be considered a mitigatory measure to remove the adverse effects of the project on the integrity of the Stour and Orwell SPA.'*<sup>25 26</sup> Compensation measures cannot be considered as part of the proposal in order to circumvent the tests of the Directive. Before compensatory measures are considered under regulation 53 of the Habitats Regulations the competent authority is first required to consider alternatives solutions, and whether the proposal is deemed to be necessary for imperative reasons of overriding public interest.

**24.5 Step 5: If it cannot be ascertained that the project will not adversely affect the integrity of the European site, the authority must then consider whether there are any alternative solutions.**

- 24.5.1 The alternatives step requires a two stage approach: (1) identification of possible alternatives; and (2) assessment of those possible alternatives against ecological considerations.
- 24.5.2** The LWP 2006 ES adopts the wrong approach to the identification of possible alternatives. Two issues arise:

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<sup>24</sup> European Commission (2001) Assessment of plans and projects significantly affecting natura 2000 sites: Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive.

<sup>25</sup> Letter from DETR of 27<sup>th</sup> October 1998 re Consent to Deposit Dredgings Required under s.34 (1) of the Coast Protection Act 1949 and s.13 (2) of the Harwich Harbour Act 1974.

<sup>26</sup> Reiterated in Secretary of State for Transport Decision Letter on Dibden Terminal proposal and associated works, April 2004, paragraphs 17 & 54.

(1) the scope of the objectives guiding the search for the alternatives – in other words: what are the legitimate scheme objectives which any alternative would have to meet?

(2) once the scope for the search is set, what is the test for whether a theoretical alternative is, in fact, an alternative which needs to be considered?

### Scope of objectives guiding the search for alternatives

24.5.3 The correct approach is set out in the Secretary of State's decision in *Dibden*<sup>27</sup> at paragraph 51. In that case, the promoters argued that the "project" for which alternatives were to be considered was the need for a new container port for Southampton and therefore they limited the ambit of the search for alternatives to Southampton. The Secretary of State concluded that this was the wrong approach.

*"The Secretary of State notes, however, that **the consideration of alternatives for projects which would have a significant impact upon a site designated in accordance with the Habitats Regulations must necessarily range more widely.** The Secretary of State agrees with the Inspector's conclusion that the Applicant's proposal would have a significant effect upon the integrity of designated sites. It follows that consideration of alternatives must concern alternative ways of avoiding impacts on the designated sites. **The Secretary of State considers that such alternatives would not be confined to alternative local sites for the project.** He draws attention to the European Commission's methodological guidance on the Assessment of Plans and Projects significantly affecting Natura 2000 sites, which interprets article 6(4) of the Habitats Directive. **The guidance states that a competent authority should not limit consideration of alternative solutions to those suggested by a project's proponents and that alternative solutions could be located even in different regions or countries.** On this point, the Secretary of State refers to the reasons set out in paragraphs 43 - 49 above." (Emphasis added)*

24.5.4 It followed that the promoter's case that the only alternatives to be considered were those which met the objectives the promoters had defined for it was not correct.

24.5.5 On this point, the Bathside Bay<sup>28</sup> ("BSB") decision is wrong. The RSPB did not challenge this aspect of the BSB decision because such a challenge would have made no difference on the facts. In that case, the RSPB's concern had always been to ensure that BSB only got consent if it was established that there was a pressing national need for 2 ports in the south east. If there was only a need for one, the RSPB said that the London Gateway Port Proposal ("LGW") should be preferred because it had lesser impacts on SPAs. The Inspector and Secretary of State concluded that there was a pressing need for 2 ports. The alternatives issue would therefore have made no difference – because the RSPB had not argued that in such circumstances, BSB should not get consent. However, the approach to alternatives in that case, is tantamount to saying that the developer can define the objectives of a project in such a way as to limit the scope of alternatives. So, a developer could say: the scheme objectives are a new container port to link with Felixstowe and to allow high transshipment and to create a hub in this area; such that there were no alternatives to the BSB site. Neither the Inspector nor the Secretary of State in that case appeared to grapple with the logic of the conclusion in *Dibden*. The approach in BSB is wrong and if adopted here will be

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<sup>27</sup> *Dibden Bay* (2004) Secretary of State for Transport's Decision letter, dated 20 April 2004

<sup>28</sup> *Bathside Bay* (2006) Inspectors Report to the Secretary of State for Transport, March 2005; Secretary of State for Transport Minded View Letter, December 2005 and Secretary of State for Transport's Decision Letter, March 2006.

challenged.

24.5.6 The Hull<sup>29</sup> decision is not inconsistent with Dibden. There the scheme objectives were accepted by the Secretary of State as being for a port in the Hull area (see e.g. paras 57-60 and paras 115-118; and 134 - 140). That justified the limitation of the search for alternatives to the Hull area. As we demonstrate below the logic of that conclusion does not apply here (moreover, the scope of the objections there and the level of debate was far less extensive than at either Dibden or BSB. No major nature conservation body appeared before the Inspector.)

24.5.7 There is nothing in any of the European Court of Justice cases or European Commission advice to Member States referred to in the LWP 2006 ES which suggests that the approach in Managing Natura 2000<sup>30</sup> (referred to in *Dibden*) or in *Dibden* itself is wrong. Those cases go rather to the second question identified above – namely whether an alternative is really an alternative – not the scope of the search for alternatives.

24.5.8 It follows that:

(1) The first stage is to examine the scheme objectives and for the appropriate authority to decide which of the objectives put forward by the promoter (or such further objectives as the appropriate authority may identify) are to be taken into account in judging the scope of the search for alternatives;

(2) In defining those objectives, the appropriate authority should only consider objectives which could contribute to satisfying the IROPI test (because it is only such objectives that can count once the integrity test is failed (as here);

(3) Then the search for alternatives should be guided by those objectives;

(4) Always having in mind the need to look further afield if the harm to the SPA requires it – Managing Natura 2000 and Dibden paragraph 51.

24.5.9 In this case LWP, have identified 4 objectives.

(1) The first (to deliver a commercially viable windfarm) is not location specific - it could be met in any appropriate location in the UK; and the fourth (to make a major contribution to the Scottish and UK renewable energy targets) - is not location specific. It could be met in any appropriate location in Scotland (or the UK). Consistent with these two objectives the area of search for alternatives should be anywhere in Scotland (or the UK );

(2) The third (to make a major contribution to the economy of the Western Isles) is predicated on: (a) this being necessary (which is, for present purposes, accepted); and (b) this scheme delivering on that objective (which is not). The DTZ report attached (Appendix 3) demonstrates that the assumptions underlying the economic benefit case are misleading and major downsides are ignored. Scottish Ministers cannot proceed on the basis that this is a relevant “scheme objective” because this scheme does not deliver it. Further, taken alone, the need for economic benefit to the Western Isles does not dictate acceptance of damage to the integrity of the SPA. There is no assessment of alternative solutions to the need to bring economic benefits to the Western Isles which have lesser or no impacts on the SPA. In any event, this “objective” runs into paragraph 51 of the *Dibden* decision. There, the needs for economic regeneration of Southampton were identified. This did not stop the SoS spreading the search for alternatives

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<sup>29</sup> Hull Harbour Revision Order (2005): Secretary of State for Transport’s Decision letter, December 2005.

<sup>30</sup> European Commission (2000) Managing Natura 2000 sites: The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC. Luxembourg: Office for Official Publications of the European Communities

much wider than the Southampton area;

(3) The second, to provide the justification for a large efficient electrical grid inter-connector) is misconceived in principle. The improved inter-connector will occur in any event without this scheme. The objective may have been relevant at the time when the original plans were conceived but has now been overtaken by other developments and work on the inter-connector in association with those other (unrelated) developments. National Grid's Seven Year Statement shows Beinn Mhor Power Limited and SSE Generation Limited each having contracted with National Grid for access to the Great Britain transmission system for their proposed wind farm developments. National Grid in turn has contracted with Scottish Hydro-Electric Transmission Ltd to provide the necessary extension and reinforcement of the transmission system to accommodate those developments. The connection work will therefore continue to completion on the back of these two unrelated projects. The application proposals will not secure the second objective which is being delivered anyway. A copy of a statement from Scottish and Southern Power Distribution from which the above points derive is given in Appendix 5.

24.5.10 It is relevant to test the applicant's case on this in any event:

(1) The Alternatives Report contained within LWP 2006 ES seeks to demonstrate that there are no offshore sites in the vicinity of the Western Isles for a windfarm – if that conclusion is accepted then it follows that there is no conceivable need or justification for an interconnector in association with offshore wind farms.

(2) That report also concludes that there are no alternative sites on the Western Isles capable of justifying the construction of an interconnector – if that conclusion is accepted then it follows that there is no conceivable need for an interconnector in association with landbased wind farms.

(3) The Report also discounts the ability of other “renewable” sources coming forward on the Western Isles in the near future to any significant extent. It follows, that if the lack of scope for other renewables on the Western Isles as asserted by LWP is correct, there is no conceivable need for an improved interconnector in association with those other renewables. It follows that, without the LWP proposal, and given the findings of the alternatives report contained within LWP 2006 ES there is no justification for an interconnector. This is clearly not the case.

24.5.11 If the alternatives' test is approached by reference to the objectives defined by the developer, it will always be the case that the objectives are drafted such that the only possible site is that proposed. That is incompatible with the purposes of the legislation.

24.5.12 In the light of the above, the search for alternatives must be far wider than that set out in the Alternatives Report submitted in LWP 2006 ES. The Competent Authority cannot lawfully on the information available to it conclude that there are no alternative solutions to this project.

24.5.13 The IPA alternatives report prepared for RSPB Scotland demonstrates that even if this is wrong there are alternative solutions which comply with the objectives as defined in LWP 2006 ES. The impediments to these coming forward are, in a great many instances, capable of being overcome. There is scope for consideration of offshore sites in far greater detail than that subject to the assessment to date.

#### **Practicability of alternatives**

24.5.14 As identified above, the second question is what is the test for whether a theoretically available alternative is, in fact, an alternative which needs to be

considered?

24.5.15 This is the issue which the cases in LWP 2006 ES concentrate on.

24.5.16 The LWP Alternatives Report has misinterpreted and read too much into the cases on which it relies. LWP is correct to claim that alternative sites must be suitable, available and reasonable: a certain level of economic viability must be satisfied before a site can be considered 'alternative' in the first place. However, these cases do not rewrite the basic approach which is that "*the conservation objectives and status of the Natura 2000 site will outweigh any consideration of costs, delays or other aspects of an alternative solution*" (The Methodological Guidance, paragraph 3.3.1).

24.5.17 Thus, once (in the present context) a proposed alternative is economically viable, it falls for consideration. It is a real as opposed to a theoretical alternative. An economic alternative which does not have the consequences for the SPA of the application proposals will necessarily result in the "alternatives test" being failed.

24.5.18 The *Spanish*<sup>31</sup> case was one where there were no economically viable alternative sites for the port. It is not authority for the proposition apparently advanced that comparative economic advantage/cost is relevant at the alternatives stage.

24.5.19 The same is true of the operating problems which would have been faced by the railway company in the *Swedish*<sup>32</sup> case. There was a theoretical alternative route but the reality was that the company would simply not have pursued that alternative given that such a route would render the project unviable.

24.5.20 As regards the *Portugal*<sup>33</sup> case, paragraph 46 of the Opinion supports the RSPB position. Furthermore, when the whole of that section (i.e. paragraphs 39-57) is read together, it becomes apparent that this Opinion does not assist LWP and it centres on the basic economic viability issue.

24.5.21 The *Barksore Marshes*<sup>34</sup> decision does not establish the contrary. For instance, at paragraph 6.25 of his Decision Letter in that case, the Secretary of State said: "*The increased costs could clearly affect the competitiveness of the Port of Medway; and they could deter private owners from investing in improved deep water facilities*". Thus, references to the costs of potential 'alternatives' were made in relation to their economic viability and not their comparative attractiveness.

#### **Assessment of alternatives**

24.5.22 Whilst this does not arise on the facts (because the ambit of search and criteria for determining whether a theoretical alternative is a real alternative to be considered have been too narrowly applied), **RSPB Scotland contends that in considering the respective merits of real alternatives to the project under consideration the primary driver of that consideration are ecological considerations.**

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<sup>31</sup> Opinion of the Commission pursuant to Article 6(4) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of habitats and of wild fauna and flora, concerning the "Request by the Kingdom of Spain in relation to the construction project of the new port of Granadilla (Tenerife)".

<sup>32</sup> Opinion of the Commission pursuant to Article 6(4) of Council Directive 92/43/EEC of 21 May 1992 on the conservation of habitats and of wild fauna and flora, concerning the request by Sweden in relation to the botniabanan from Nordmaling to Umea Development Plan (April 2003).

<sup>33</sup> Opinion of Advocate General Kokott, April 2006, Commission of the European Communities v Portuguese Republic (C239/04).

<sup>34</sup> Barksore Marshes (1998) Secretary of State Decision Letter, November.

24.5.23 In conclusion, we believe that the Scottish Executive cannot conclude that there are no alternative solutions and the that application should be refused accordingly.

**24.6 Step 6 & 7: If there are no alternative solutions consent may be granted for a project but only “for imperative reasons of overriding public interest” (IROPI). Such “imperative reasons” may be of a social or economic nature (unless the site hosts a priority natural habitat type or a priority species in which case the considerations are significantly restricted) (Reg. 49(1) and Art. 6(4)).**

24.6.1 From the conclusions reached in Section 19 regarding potential impacts on peatland habitat it is clear that the areas of active blanket bog (a priority natural habitat) within the SAC may be affected by the proposal. Consequently, the Scottish Ministers may only grant consent if it is convinced that there are human health or safety considerations or benefits of primary importance to the environment. No information on these issues has been presented in the ES. Should the Scottish Executive conclude that this is not the case consent may only be granted for other imperative reasons of overriding public interest, following consultation with the European Commission.

24.6.2 In seeking to address the IROPI report of LWP 2006 ES it is necessary to start from basics. Managing Natura 2000 (paragraph 5.3.2) states (correctly and in a way which has not been disapproved or undermined by anything in any of the cases):

*(a) The public interest must be overriding: it is therefore clear that not every kind of public interest of a social or economic nature is sufficient, **in particular when seen against the particular weight of the interests protected by the directive.***

*(b) In this context, it also seems reasonable to assume that the public interest can only be overriding if it is a long-term interest; short-term economic interests or other interests which would only yield short-term benefits for society **would not appear to be sufficient to outweigh the long-term conservation interest protected by the directive.*** (emphasis added)

24.6.3 Furthermore, towards the end of 2.7, the Methodological Guidance states: “It should, of course, be noted that such considerations must be ‘overriding’ in the sense that they are **of superior interest to the general interest** of conserving the conservation status of a site” (emphasis added).

24.6.4 LWP 2006 ES IROPI report does not conduct any kind of balancing exercise: it simply states the alleged (but disputed) benefits of the wind farm, without any reference to the countervailing environmental disadvantages vis-à-vis habitats and birds. Indeed, it is important to note that the IROPI report cannot have been based on a proper balancing exercise of the environmental harm against the benefits because LWP has consistently significantly understated the impact of its proposals on birds and habitats, while overstating the benefits of the project.

24.6.5 Section 3.2 of the IROPI report contends that the project would make a vital contribution to economic development and regeneration. The DTZ report (Appendix 3) questions in detail those alleged benefits. But even if those alleged benefits accrue they have to be balanced against: (1) the harm caused; and (2) the availability of less harmful alternatives elsewhere.

24.6.6 Section 3.3 suggests that any failure to proceed with the project would have unacceptable social and economic consequences. This is not understood. There is no attempt to demonstrate that there are no other ways of bringing increased prosperity to the Western Isles and in any event the social and economic “benefits” of the project, as described in LWP 2006 ES, are not accepted. The

wider economic and social benefits of promoting renewable energy do not have to be secured by development on an SPA on Lewis. They cannot therefore “count” towards IROPI for this scheme here.

24.6.7 In section 3.6, LWP suggest that the project has significant public body support. The relevance of this at the IROPI stage is not understood and in any event the assertion is not correct, only 3 public bodies have expressed support for aspects of the project. In any event such public support as exists is predicated upon wrong economic benefit appraisals and a wrong approach to alternatives. If the correct information had been provided, the public response may have been different from that which is claimed to have occurred. In this context it is important to note that a number of statutory consultees opposed the original proposals, including Scottish Natural Heritage, Scottish Environment Protection Agency, Historic Scotland and the majority of Community Councils within the application area as well as thousands of objections from members of the public.

24.6.8 The case-law relied on does not demonstrate that which LWP seek to demonstrate. All of them can be distinguished on the basis that the full scale of the harm was weighed against proved economic benefits and compensatory measures were provided for.

**24.7 Step 8: If the authority is satisfied that there are imperative reasons etc. notwithstanding a negative assessment of the implications for a European site, Scottish Ministers are under a duty to secure that all necessary compensatory measures are taken to ensure the overall coherence of Natura 2000 is protected (Reg. 53 and Art 6(4)).**

24.7.1 No specific compensatory proposals are presented in LWP 2006 ES. There are a number of measures suggested in relation to that in our opinion are actually compensatory measures since they propose to replace functioning habitat of SPA qualifying species from within the SPA, outside the SPA. However the adequacy and effectiveness of these measures is in question and therefore we still conclude that the duty within regulation 53 has not fulfilled.

24.7.2 The Commission Opinions relied upon by LWP (referred to above) state clearly that compensatory measures must be provided for. In addition Managing Natura 2000 provides helpful guidance and states at paragraphs 5.4.1 and 5.4.2

*“...The compensatory measures constitute measures specific to a project or plan, additional to the normal practices of implementation of the ‘Nature’ [Birds and Habitats] directives. They aim to offset the negative impact of a project and to provide compensation corresponding **precisely** to the negative effects on the species or habitat concerned. The compensatory measures constitute the ‘last resort’. They are used only when the other safeguards provided for by the directive are ineffectual and the decision has been taken to consider, nevertheless, a project/plan having a negative effect on the Natura 2000 site...the re-creation of a habitat favourable to the bird species concerned is acceptable provided the created site is available at the time when the affected site loses its natural value...[Concluding that] The result has normally **to be operational at the time when the damage is effective** on the site concerned with the project unless it can be proved that this simultaneity is not necessary to ensure the contribution of this site to the Natura 2000 network.” (Emphasis added)*

**24.8 Conclusion of Habitats Regulations Steps: We believe it cannot be ascertained that the development will not adversely affect the integrity of the Lewis Peatlands SAC, the Lewis Peatlands SPA, the Ness and Barvas SPA or the Lewis Peatland Ramsar site. The LWP 2006 ES has adopted an incorrect approach to considering alternative solutions, notwithstanding this conclusion there are alternative solutions available and therefore we request that Scottish Ministers refuse the application on this basis.**

**Should Scottish Ministers be minded to conclude that there are no alternative solutions to this proposal we believe that the ES does not identify imperative reasons of overriding public interest which would enable consent to be granted as well as there being a complete lack of adequate compensatory measures for the remaining adverse impacts on the European and International sites. Therefore, the application fails the Habitat Regulations tests.**

## **25. Planning Policy Context**

### **Overview**

25.1 The policy context for this proposal covers a broad range of issues and topics as is clearly highlighted in the ES. For the purposes of determining this application, the legal obligations and tests established by the relevant European Directives must take precedence. However, the following comments are made in relation to two key policy documents.

### **National Planning Policy Guideline NPPG 6**

25.2 Paragraphs 39-45 of NPPG 6 reiterate the obligations arising to the UK under the Habitats and Birds Directives together with a clear statement that 'The Government has also decided as a matter of policy to accord to both potential SPAs and SACs and sites which qualify for designation only under the Ramsar Convention the same level of protection'. With reference to the sections above this proposal is contrary to the guidance contained in NPPG 6. The publication of a revised NPPG 6 (SPP6) is anticipated shortly.

### **Western Isles Structure Plan (2003)**

25.3 Policy RM11 on Habitats and Species states:

"The Comhairle will not normally grant consent for developments on land or water that would have significant adverse impacts upon habitats or species listed under the EC Habitats Directive, the EC Birds Directive or the Wildlife and Countryside Act 1981 (as amended). The Comhairle will encourage the appropriate management and enhancement of features of the landscape which are of major importance for wild flora and fauna.

In the event of a proposed development having an adverse impact on breeding or resting places used by these species, it should only proceed if:

- i) action must be to preserve public health or safety, or for other imperative reasons of overriding public interest including those of a social or economic nature; and
- ii) there is no satisfactory alternative; and
- iii) there will be no adverse impact on the species as a whole.

We query whether this policy accurately reflects the requirements of the Habitats Regulations but believe this development proposal is contrary to policy RM11.

**25.4 Conclusion: We believe this proposal to be contrary to both local and national planning policy. On these grounds alone the application can safely be refused.**

## **26. EU Water Framework Directive (2000/60/EC)**

26.1 The proposal is contrary to the principles of the Water Framework Directive, whose primary objective is to protect and enhance the status of the aquatic environment. Article 1 sets out the purpose of the Directive, which is:

- a) Prevent further deterioration and protect and enhance the status of aquatic ecosystems

and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;

- b) Promote sustainable water use
- c) Enhance the protection and improvements of the aquatic environment
- d) Ensure progressive reduction of pollution of groundwater and prevent its further pollution
- e) Contribute to mitigating effects of floods and droughts.

26.2 It specifically states in Article 4.1 that: “c) for protected areas Member States shall achieve compliance with any standards and objectives at the latest 15 years after the date of entry into force of this Directive.”

26.3 These include protected areas which have been identified as water bodies, or habitats and species which directly depend on water. Derogation to this objective can only be applied under the legislation under which sites are designated.

26.4 The conservation objectives must include, amongst other objectives:

- Avoiding the deterioration of natural habitats in SAC or SPA, for which the areas have been designated
- Avoiding deterioration of the habitats of species in a SAC or SPA, for which the areas have been designated
- Avoiding the disturbance of those species in a SAC or SPA for which the area has been designated
- Preventing any plan or project from adversely affecting the integrity of a SAC or SPA, taking into account of any conservation objectives, and subject to exemption permitted under para 4 of Article 6.

## **27. Conclusion**

27.1 **We believe this proposal should be refused on the basis of the information available, at present, we believe any decision to consent could be unlawful. Should Scottish Ministers not be minded to refuse the proposal immediately we request that a Public Local Inquiry be held to consider the application in detail.**