

**Scottish Enterprise  
Fife Energy Park  
Offshore Demonstration Wind Turbine  
Methil, Fife**

**Scoping Opinion**

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**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT)  
(SCOTLAND) REGULATIONS 2000 (AS AMENDED).**

**SCOPING OPINION FOR THE PROPOSED  
SECTION 36 APPLICATION FOR SCOTTISH ENTERPRISE,  
FIFE ENERGY PARK OFFSHORE DEMONSTRATION WIND TURBINE  
METHIL, FIFE**

**1. Introduction**

I refer to your email of 28<sup>th</sup> February 2012 which enclosed your revised scoping report requesting a scoping opinion for the Fife Energy Park Offshore Demonstration Wind Turbine. The application for a Section 36 consent under the Electricity Act 1989, is scoped for under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000 (as amended). The Marine Licence application for the proposed works is scoped for separately under the Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended), not under Section 36 of the Electricity Act 1989.

Any proposal to construct or operate an offshore power generation scheme with a capacity in **excess of 1 megawatt** requires Scottish Ministers' consent under section 36 of the Electricity Act 1989.

Schedule 9 of the Act places on the developer a duty to "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiological features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest". In addition, the developer is required to give consideration to the Scottish Planning Policy on Renewable Energy other relevant Policy and National Policy Planning Guidance, Planning Advice Notes, the relevant planning authority's Development Plans and any relevant supplementary guidance.

Under the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000, Scottish Ministers are required to consider whether any proposal for an offshore device is likely to have a significant effect on the environment. Scottish Ministers have considered your request for an opinion on the proposed content of the Environmental Statement (ES) in accordance with regulations and in formulating this opinion Scottish Ministers have consulted with the relevant organisations.

Please note that the Environmental Impact Assessment (EIA) process is vital in generating an understanding of the biological and physical processes that operate in the area and that may be impacted by the proposed offshore wind turbine. We would however state that references made within the scoping document with regard to the significance of impacts should not prejudice the outcome of the EIA process.

It is important that any devices to exploit renewable energy sources should be accompanied by a robust assessment of its environmental impacts. The assessment should also consider how any negative environmental impacts could be avoided or minimised, through the use of mitigating technologies or regulatory safeguards, so that the quality and diversity of Scotland's wildlife and natural features are maintained or enhanced. Scottish Ministers welcome the commitment given in the report that the EIA process will identify mitigation measures in order to avoid, minimise or reduce any adverse impacts. Marine Scotland Licensing Operations Team (MS-LOT) would suggest that the range of options considered

should be informed by the EIA process in order that these objectives can be achieved. Consultation with the relevant nature conservation agencies is essential and it is advised that this is undertaken as appropriate.

## **2. Aim of this Scoping Opinion**

Scottish Ministers are obliged under the EIA regulations to respond to requests from developers for a scoping opinion on outline design proposals.

The purpose of this document is to provide advice and guidance to developers collated from expert consultees selected by the Scottish Government (SG). It provides clear advice enabling developers to address issues identified with the proposed project. The advice steers the developer as to the content required in the EIA and the ES associated with the application for section 36 consent.

## **3. Description of development**

Scottish Enterprise proposes to build and test a new prototype wind turbine at the Fife Energy Park in Methil, Fife. One turbine with a generating capacity of up to 7MW will be constructed just below Mean High Water Springs (MHWS). The turbine is designed for use in the far offshore wind farm locations within the Round 3 offshore sites.

A temporary met mast (for a period of 3 months, under a separate marine licence application) will first be constructed at the same location as the proposed wind turbine to allow for calibration of the permanent onshore met mast. All onshore aspects of the project should be applied for through Town and Country Planning via the relevant Local Authority.

## **4. Land Use Planning**

The Scottish Government's planning policies are set out in the National Planning Framework, Scottish Planning Policy, Designing Places and Circulars.

The National Planning Framework is the Scottish Government's Strategy for Scotland's long term spatial development.

Scottish Planning Policy (SPP) is a statement of Scottish Government policy on land use planning and contains:

- The Scottish Government's view of the purpose of planning,
- the core principles for the operation of the system and the objectives for key parts of the system,
- statutory guidance on sustainable development and planning under Section 3E of the Planning etc. (Scotland) Act 2006,
- concise subject planning policies, including the implications for development planning and development management, and
- The Scottish Government's expectations of the intended outcomes of the planning system.

Other land use planning documents which may be relevant to this proposal include:

- Planning Advice Note (PAN) 42: Archaeology–Planning Process and Scheduled Monument Procedures
- PAN 45: 2002 Renewable Energy Technologies
- PAN 50: Controlling the Environmental Effects of Surface Mineral Workings
- PAN 51: Planning, Environmental Protection and Regulation
- PAN 56: Planning and Noise
- PAN 58: Environmental Impact Assessment
- PAN 60: Planning for Natural Heritage
- PAN 62: Radio Telecommunications
- PAN 68: Design Statements
- PAN 69: Planning and Building Standards Advice on Flooding
- PAN 75: Planning for Transport
- PAN 79: Water and Drainage
- Marine Guidance Note 371 (M)

## **5. Natural Heritage**

Scottish Natural Heritage (SNH) has produced a service level statement (SLS) for renewable energy consultation. This statement provides information regarding the level of input that can be expected from SNH at various stages of the EIA process. Annex A of the SLS details a list of references, which should be fully considered as part of the EIA process. A copy of the SLS and other vital information can be found on the renewable energy section of their website – [www.snh.gov.uk](http://www.snh.gov.uk)

## **6. General Issues**

### Economic Benefit

The concept of economic benefit as a material consideration is explicitly confirmed in the consolidated SPP. This fits with the priority of the Scottish Government to grow the Scottish economy and, more particularly, with our published policy statement “Securing a Renewable Future: Scotland’s Renewable Energy”, and the subsequent reports from the Forum for Renewables Development Scotland (FREDS), all of which highlight the manufacturing potential of the renewables sector. The application should include relevant economic information connected with the project, including the potential number of jobs, and economic activity associated with the procurement, construction operation and decommissioning of the development.

## **7. Contents of the Environmental Statement**

Guidance can be found in The Marine Works (Environmental Impact Assessment) Regulations 2007, Schedule 3

### Format

Developers should be aware that the ES should also be submitted in a user-friendly PDF format which can be placed on the Scottish Government website. A description of the methodology used in assessing all impacts should be included.

It is considered good practice to set out within the ES the qualifications and experience of all those involved in collating, assessing or presenting technical information.

## Non Technical Summary.

This should be written in simple non-technical terms to describe the various options for the proposed development and the mitigation measures against the potential adverse impacts which could result. Within an ES it is important that all mitigating measures should be:

- clearly stated;
- fully described with accuracy;
- assessed for their environmental effects;
- assessed for their effectiveness;
- their implementation should be fully described;
- how commitments will be monitored; and
- if necessary, how they relate to any consents or conditions.

Given that the layout and design are still developing and evolving, the exact nature of the work that is needed to inform the EIA may vary depending on the design choices. The EIA must address this uncertainty so that there is a clear explanation of the potential impact of each of the different scenarios. It should be noted that any changes produced after the ES is submitted may result in the requirement of further environmental assessment and public consultation if deemed to be significant by the licensing authority.

## Baseline Assessment and Mitigation

Refer to Annex 1 for consultee comments on specific baseline assessment and mitigation.

## **8. Archaeology and Cultural Heritage**

### General Principles

The ES should address the predicted impacts on the historic environment and describe the mitigation proposed to avoid or reduce impacts to a level where they are not significant. Historic environment issues should be taken into consideration from the start of the site selection process and as part of the alternatives considered.

National policy for the historic environment is set out in:

- Scottish Planning Policy *Planning and the Historic Environment* at: <http://www.scotland.gov.uk/topics/built-environment/planning/National-planning-policy/themes/historic>
- The Scottish Historic Environment Policy (SHEP) sets out Scottish Ministers strategic policies for the historic environment and can be found at: <http://www.historic-scotland.gov.uk/index/heritage/policy/shep.htm>

Amongst other things, SPP paragraph 110–112, Historic Environment, stresses that scheduled monuments should be preserved *in situ* and within an appropriate setting and states that developments must be managed carefully to preserve listed buildings and their settings to retain and enhance any special architectural or historic features of interest. Consequently, both direct impacts on the resource itself and indirect impact on its setting must be addressed in any EIA undertaken for this proposed development. Further information on setting can be found in the following document: Managing Change in the Historic Environment <http://www.historic-scotland.gov.uk/managing-change-consultation-setting.pdf>.

Historic Scotland recommend that you engage a suitably qualified archaeological/historic environment consultants to advise on, and undertake, the detailed assessment of impacts on the historic environment and advise on appropriate mitigation strategies.

### Baseline Information

Information on the location of all archaeological/historic sites held in the National Monuments Record of Scotland, including the locations and, where appropriate, the extent of scheduled monuments, listed buildings and gardens and designed landscapes can be obtained from [www.PASTMAP.org.uk](http://www.PASTMAP.org.uk)

Data on scheduled monuments, listed buildings and properties in the care of Scottish Ministers can also be downloaded from Historic Scotland's Spatial Data Warehouse at <http://hsewsf.sedsh.gov.uk/pls/html/db/f?p=500:1:8448412299472048421::NO>

For any further information on those data sets and for spatial information on gardens and designed landscapes and World Heritage Sites which are not currently included in Historic Scotland's Spatial Data Warehouse please contact [hsgimanager@scotland.gsi.gov.uk](mailto:hsgimanager@scotland.gsi.gov.uk). Historic Scotland is also available to provide any further information on all such sites.

## **9. Navigation**

The ES should include the following details on the possible impact on navigation for both commercial and recreational craft.

- Collision Risk
- Navigational Safety
- Visual intrusion and noise
- Risk Management and Emergency response
- Marking and lighting of Tidal Site and information to mariners
- Effect on small craft navigational and communication equipment
- Weather and risk to recreational craft which lose power and are drifting in adverse conditions
- Evaluation of likely squeeze of small craft into routes of larger commercial vessels.

## **10. Ecology, Biodiversity and Nature Conservation**

Refer to Annex 1 for comments from advisors on ecology, biodiversity and nature conservation.

### Species

The ES should show that the applicants have taken account of the relevant wildlife legislation and guidance, namely

- Marine (Scotland) Act 2010
- Council Directives on The Conservation of Natural Habitats and of Wild Flora and Fauna
- Conservation of Wild Birds (commonly known as the Habitats and Birds Directives)
- Wildlife & Countryside Act 1981
- Nature Conservation (Scotland ) Act 2004
- Wildlife and Natural Environment (Scotland) Act 2011

- Protection of Badgers Act 1992
- Conservation (Natural Habitats, &c) Regulations 1994
- Conservation of Habitats and Species Regulations 2010
- Scottish Executive Interim Guidance on European Protected Species
- Development Sites and the Planning System and the Scottish Biodiversity Strategy and associated Implementation Plans

In terms of the Scottish Executive Interim Guidance, applicants must give serious consideration to/recognition of meeting the three fundamental tests set out in this Guidance. **It may be worthwhile for applicants to give consideration to this immediately after the completion of the scoping exercise.**

It needs to be categorically established which species are present on and near the site, and where, before the application is considered for consent. The presence of protected species such as Schedule 1 Birds or European Protected Species must be included and considered as part of the application process, not as an issue which can be considered at a later stage. Any consent given without due consideration to these species may breach European Directives with the possibility of consequential delays or the project being halted by the European Commission (EC). Likewise the presence of species on Schedules 5 (animals) and 8 (plants) of the Wildlife & Countryside Act 1981 should be considered where there is a potential need for a licence under Section 16 of that Act.

## **11. Water Environment**

Developers are strongly advised to consult with the Scottish Environment Protection Agency (SEPA), at an early stage. SEPA are the regulatory body responsible for the implementation of the Controlled Activities Regulations (CAR), to identify if a CAR licence is necessary and clarify the extent of the information required by SEPA to fully assess any licence application.

All applications (including those made prior to 1 April 2006) made to Scottish Ministers for consent under section 36 of the Electricity Act 1989 to construct and operate a electricity generating station are required to comply with new legislation. In this regard MS-LOT will be advised by SEPA and will have regard to this advice in considering any consent under section 36 of the Electricity Act 1989.

SEPA produces a series of Pollution Prevention Guidelines (PPG), several of which should be fully utilised in preparation of an ES and during project development. These include SEPA's guidance note PPG6: Working at Construction and Demolition Sites, PPG5: Works in, near or liable to affect Watercourses, PPG2 Above ground storage tanks, and others, all of which are available on SEPA's website at <http://www.sepa.org.uk/guidance/ppg/index.htm>. SEPA would look to see specific principles contained within PPG notes to be incorporated within mitigation measures identified within the ES rather than general reference to adherence to the notes.

Prevention and clean-up measures should also be considered for each of the following stages of the development;

- Construction.
- Operation.
- Decommissioning

Construction contractors may be unaware of the potential for impacts such as those listed below but, when proper consultation with the local fishery board is encouraged at an early stage, many of these issues can be averted or overcome.



- increases in silt and sediment loads resulting from construction works.
- point source pollution incidents during construction.
- obstruction to upstream and downstream migration both during and after construction.
- disturbance of spawning beds during construction - timing of works is critical.
- drainage issues.
- sea bed and land contamination

The ES should identify location of, and protective/mitigation measures in relation to, all private water supplies within the catchments impacted by the scheme, including modifications to site design and layout.

Developers should also be aware of available Construction Industry Research and Information Association (CIRIA) guidance on the control of water pollution from construction sites and environmental good practice ([www.ciria.org](http://www.ciria.org)). Design guidance is also available on river crossings and migratory fish (SE consultation paper, 2000) at <http://www.scotland.gov.uk/consultations/transport/rcmf-00.asp>.

## **12. Other Material Issues**

### Traffic Management

The ES should provide information relating to the preferred route options for delivering equipment etc. via the trunk road network. The EIA should also address access issues, particularly those impacting upon the trunk road network; in particular, potential stress points at junctions, approach roads, borrow pits, bridges, site compound and batching areas etc.

Where potential environmental impacts have been fully investigated but found to be of little or no significance, it is sufficient to validate that part of the assessment by stating in the report:

- the work has been undertaken, e.g. transport assessment;
- what this has shown i.e. what impact if any has been identified, and
- why it is not significant?

## **13. General ES Issues**

In the application for consent the applicant should confirm whether any proposals made within the ES, e.g. for construction methods, mitigation, or decommissioning, form part of the application for consent.

### Consultation

Developers should be aware that the ES should also be submitted in a user-friendly PDF format which can be placed on the SG website. Developers are asked to issue ES directly to consultees. Consultee address lists can be obtained from MS-LOT. MS-LOT also requires 8 hardcopies to be submitted for onward distribution.

Where the developer has provided Scottish Ministers with an ES, the developer must publish their proposals in accordance with part 4 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000. Licensing information and guidance, including the specific details of the adverts to be placed in the press, can be obtained from MS-LOT.

### Gaelic Language

Where Section 36 applications are located in areas where Gaelic is spoken, developers are encouraged to adopt best practice by publicising the project details in both English and Gaelic.

### Ordnance Survey (OS) Mapping Records

Developers are requested at application stage to submit a detailed OS plan showing the site boundary and all turbines, access tracks and onshore supporting infrastructure in a format compatible with the SG's Spatial Data Management Environment (SDME), along with appropriate metadata. The SDME is based around Oracle RDBMS and ESRI ArcSDE and all incoming data should be supplied in ESRI shape file format. The SDME also contains a metadata recording system based on the ISO template within ESRI ArcCatalog (agreed standard used by the SG); all metadata should be provided in this format.

### Difficulties in Compiling Additional Information

Developers are encouraged to outline their experiences or practical difficulties encountered when collating/recording additional information supporting the application. An explanation of any necessary information not included in the ES should be provided, complete with an indication of when an addendum will be submitted.

### Application and ES

A developer checklist is enclosed with this opinion to assist developers in consideration and collation of the relevant ES information to support their application. In advance of publicising the application, developers should be aware this checklist will be used by the licensing authority in consideration of formal applications.

### Consent Timescale and Application Quality

In December 2007, Scottish Ministers announced an aspirational target to process new section 36 applications within a 9 month period, provided a Public Local Inquiry (PLI) is not held. This scoping opinion is specifically designed to improve the quality of advice provided to developers and thus reduce the risk of additional information being requested and subject to further publicity and consultation cycles.

Developers are advised to consider all aspects of this scoping opinion when preparing a formal application to reduce the need to submit further information in support of your application. The consultee comments presented in this opinion are designed to offer an opportunity to consider all material issues relating to the development proposals.

In assessing the quality and suitability of applications, the licensing authority will use the enclosed checklist and scoping opinion in assessment of the application. Developers are encouraged to seek advice on the contents of ES prior to applications being submitted, although this process does not involve a full analysis of the proposals. In the event of an application being void of essential information, the licensing authority reserves the right not to accept the application. Developers are advised not to publicise applications in the local or national press, until their application has been accepted by the licensing authority.

### Judicial review

All cases may be subject to judicial review. A judicial review statement should be made available to the public.

Signed

Authorised by the Scottish Ministers to sign in that behalf

Enclosed - Developer Application Checklist

## **Annex 1**

### **Consultee Comments Relating to the - Scottish Enterprise Fife Energy Park Offshore Demonstration Wind Turbine Methil, Fife**

The following organisations provided a scoping opinion in relation to the Scottish Enterprise, Fife Energy Park Offshore Demonstration Wind Turbine, Methil, Fife.

Marine Scotland (MS)

#### **Statutory Consultees**

Local Authority (LA)  
Scottish Environmental Protection Agency (SEPA)  
Scottish Natural Heritage (SNH)

#### **Non Statutory Consultees**

British Telecom (Radio Network Protection Team)  
Civil Aviation Authority (CAA)  
Chamber of Shipping (COS)  
Crown Estate (CE)  
Health and Safety Executive (HSE)  
Historic Scotland (HS)  
Inshore Fisheries Group (IFG)  
Joint Radio Company (JRC)  
Maritime & Coastguard Agency (MCA)  
Ministry of Defence (MOD)  
NERL Safeguarding (NATS)  
Northern Lighthouse Board (NLB)  
Ports and Harbours (PH)  
Royal Society for the Protection of Birds (RSPB)  
Royal Yachting Association (RYA) Scotland  
Scottish Canoe Association (SCA)  
Scottish Fishermans Federation (SFF)  
Scottish Government Planning (SGP)  
Scottish Wildlife Trust (SWT)  
Transport Scotland (TS)

## **Marine Scotland**

### Seascape, Landscape and Visual Impact Assessment (SLVIA)

Marine Scotland Licensing Operations Team (MS-LOT) recognise it is important to design and site turbines so that adverse landscape and visual impacts can be minimised. As the design and dimensions of the proposed turbine vary considerably to that of the 2B proposal, the visual impact of this new turbine on the local community of Methil is of most concern.

MS-LOT advise the change from a; lattice to a solid tower, two to three blades and the increase in height will result in an increase to the zone of theoretical visibility (ZTV) proposed. The ZTV needs to be extended from the proposed 15km to a wider radius that encompasses the south side of the Firth of Forth. SNH had advised the previous developer, 2B, that the ZTV “assessment will need to be extended to at least 30km” taking in views from Edinburgh City to Aberlady Bay, Gullane and North Berwick. MS-LOT requires the ZTV be extended from 15km to 40km. This is in line with projects that are proposing to use similar sized turbines in Scottish waters.

The larger ZTV will address comments raised by our Statutory Consultees. The SLVIA should therefore include viewpoints (a minimum of) from the Edinburgh World Heritage Site at Calton Hill, North Berwick Law and Gullane. All photo montages should show the turbine superimposed on the landscape.

An addition to the Scottish Enterprise turbine visuals, SLVIA will need to show the cumulative visual impact in respect to current and other proposed turbines in the area including the further two 2B offshore turbines.

### Noise

Construction and turbine operational noise will need to be considered.

Construction noise will need to be restricted. MS-LOT advises work to be carried out between 8am-7pm (daylight hours). Noise and vibration generated by construction work should be minimised as much as practically possible due to the close proximity of the turbine to Methil.

Operational noise levels from the demonstration turbine must be shown to have no significant detrimental impact to local residents.

### Construction

The precise nature of the foundation to the turbine is not discussed in any detail in the scoping report. If there is uncertainty about the foundation design then each option should be discussed in the ES so that the potential for the foundation design to impact on the environment can be properly assessed.

MS-LOT recommends an assessment of the extent and degree of damage likely to be expected on the intertidal mudflats during the construction of the turbine and the laying of the cable. The developer should provide evidence of the presence or absence of listed habitats or species in the vicinity of the turbine and cables. Existing surveys or data may be acceptable if they can provide sufficient detail of the species and habitats present.

The ES will need to include habitat mapping of the intertidal area around the proposed turbine and the proposed bridging structure. The mapping should clearly show any natural habitats as well as ‘man-made’ and rock-armoured areas. The ES should also provide more information on the bridging structure, its route and design, and on the cabling in order to understand and assess, whether these will have any impacts on intertidal habitats.

If any turbine components are to arrive by sea, clarification on protocols to be followed must be provided to ensure that no marine non-native species are introduced into this area either during the development or during the operational phase of this project.

#### Design Envelope

MS-LOT would comment on the use of a Design Envelope or Rochdale Envelope for flexibility both in the EIA process and in the final ES. It is the developers responsibility to give due consideration to what changes might be necessary and to provide details as to what might be required. The developer must also be able to justify whether or not a change is material to the EIA process. Where flexibility is required the developer should define either the alternatives or ranges within which parameters might fall. In the EIA process the various effects should be quantified and consideration given to effects on potential receptors. The ES should clearly state the reasoning for requiring such flexibility, the criteria for selecting the "worst case scenario" and the impacts which would arise from such a scenario.

Failure to give such consideration or a major change to a parameter outside those considered may invalidate the ES provided at consent requiring the consent process to be repeated. It is expected that the EIA will reduce the degree of design flexibility required and that the ES provided for consent will be further refined in a construction statement at least 3 months before work commences. Information regarding the impacts from construction of the infrastructure and the types of vessels to be used will be required in the construction statement. The construction statement provided will freeze the design of the project and will be reassessed by MS-LOT to ensure that its parameters fall within the range granted at consent.

Deemed Planning is not available as no part of the generating station is on land. All onshore aspects should be applied for through Town and Country Planning via the relevant Local Authority. Only the "generating station" i.e. wind turbine, foundations and the cabling up to MHWS will be granted under S36 of The Electricity Act 1989. A single Marine Licence will be issued for all offshore components.

#### Decommissioning

The decommissioning operation will be regulated by Department of Energy and Climate Change (DECC) but no mention is made in the scoping report about their involvement. The decommissioning plan is to be presented to and agreed with DECC

#### Dredging

This project will require capital dredging. The dredged material will require to be chemically analysed (at your own expense) to ensure that it is suitable for sea disposal. Guidance on pre-dredge sampling, along with the Action Levels Marine Scotland use to determine suitability for sea disposal can be obtained upon request.

#### Physical Environment

There is no mention of coastal sediment processes including coastal erosion and accretion within the Firth or Forth. Marine Scotland Science (MSS) advise this would have best been mentioned in section 7 of the Scoping Report; Hydrology, Hydrogeology and Ground Conditions. The ES should detail the current levels of erosion within the area and comment on how the proposed development may impact on this. SNH have produced a series of reports on the coastal cells of Scotland, which would probably be a useful source of information.

In section 3 of the scoping report, there are a number of references to more than one turbine. This seems a little confusing, since the development is only for one turbine location. Clarification is required in the ES.

### Benthic Habitat

Overall MSS have no comments to make. MSS require a pre-installation and post-installation benthic survey (photography of presence/absence) to be carried out to document what species are present before and after construction.

### Fish and Shellfish Ecology, Commercial Fisheries and Migratory Fish

MSS feel the developer has covered all the main points. MSS agree with the developer that there should be little or no impact on marine and freshwater fish and fishing activities and as a result this can be scoped out.

### Marine Mammals and Birds

As the precise nature of the foundation to the turbine is not detailed in the scoping report, a note of caution should be taken if piles become the chosen method. Piling noise will need to be assessed for marine mammals; seals and cetaceans. The wide ranging bottlenose dolphins that are a qualifying feature of the Moray Firth SAC will need to be considered as there is a chance they may use the Firth of Forth.

The stretch of coastline at the location of the proposed development is part of the Firth of Forth Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI). Their designation covers the intertidal area between high and low spring tides for aggregations of breeding and non-breeding shorebirds. At the earliest opportunity, the overall impact of this demonstration project should be considered in respect of the intertidal habitats encompassed by these designated sites.

The proposed onshore and intertidal elements of infrastructure could have a significant effect on the wintering shorebirds that may use this stretch of coastline. SNH advise that appropriate assessment around this issue will be required. It will be important to establish where exactly any natural habitat is located in respect to the turbine, the bridging structure, and the other ancillary equipment proposed in respect of the turbine. It will be important to establish the level of shorebird use in this area and / or whether any disturbance impacts can be avoided by the use of timing restrictions during construction. The waters around Methil and in Largo Bay may also be accessed by foraging seabirds from the Isle of May and the Bass Rock, both of which are included in the Forth Islands SPA and are important breeding colonies for a wide range of seabirds.

## **Local Authority**

### Fife Council

It should be noted that, given Fife Council submitted detailed comments to the previous consented application, that in general Fife Council, as Planning Authority, are content with the review and updating of the documents and information that previously formed the Environmental Statement for the '2-B Energy' application. The brevity of this response reflects this.

### Landscape and Visual Impact Assessment

Submission of studies/ reports as set out in the Scoping Report including duplication of previous cumulative assessment and number and location of viewpoints. The Landscape and Visual Impact Assessment should be reviewed and updated to reflect any changes in the landscape since the previous study such as new wind farm developments, the demolition of the Methil Power Station etc.

### Ecology

Submission of studies/ reports as set out in the Scoping Report, again updated to reflect the new position and type of turbine. The 20km (SPAs etc) and 5 km (SACs etc) search radii are considered appropriate and the Scoping Report identifies the relevant designated sites.

### Ornithology

Submission of studies/ reports as set out in the Scoping Report, again updated to reflect the new position and type of turbine. Fife Council is content that the previous data collected is sufficient to inform the assessment of the ES and any mitigation methods.

### Hydrology, Hydrogeology and Ground Conditions

Carry out desktop studies/ reports as set out in the Scoping Report. It is considered that it is not necessary for the scope of these reports to exceed those specified in the previous application. A site specific risk assessment for contaminated land is recommended.

### Cultural Heritage and Archaeology

Carry out the studies/ reports as set out within the scoping.

### Noise

Fife Council's Public Protection Team is content with the approach outlined within the Scoping Report.

It should be noted that within the Scoping Report Paragraph 9.2 makes reference to consultation with North Ayrshire Council not Fife Council and Paragraph 9.4 refers to a 'recent' report carried out in 2006, 6 years should not be classed as recent. It also raises a potential concern that not all reports are site specific and an ES would only be acceptable with site specific reports.

### Other Considerations -

#### Existing Infrastructure

Carry out the consultations listed within the report.

#### Socio-Economics, Tourism & Recreation

Update/ review of previous findings as stated.

#### Access and Traffic

Agree with report. As stated within the report the ES should specify what is to be delivered (by sea or road) and what is to be manufactured on site.

#### Shadow Flicker and Reflectivity

Carry out assessment/ studies as per the Scoping Report.

#### CO<sub>2</sub> Displacement and Climate Change

No further comment.

### **Edinburgh City Council**

Despite Edinburgh's distance from the proposal (c. 25km), Fife's coast and hill ranges form an important backdrop and skyline to recognised views from Edinburgh, including the World Heritage Site. The site lies beyond Inchkeith Island in north-eastward views from the City.



Arcus Renewable Energy Consulting Ltd have provided additional clarification with regard to their rationale for restricting the study area and ZVI to 15 km and scoping out visual assessment from the Old and New Towns of Edinburgh World Heritage Site.

The rationale provided conflicts with SNH's recommendations for a proposal of this scale, as set out in Visual Representation of Wind Farms Good Practice Guidance (table 2: recommended distance of ZVI, page 36). This authority has previous experience of VIA, which demonstrated the visibility from Fife of a 105 m tower proposed at Leith Docks, using a 25 Km study area. This proposal has a maximum height of 196 m and it is therefore expected that a larger ZVI should be used.

The purpose of an EIA is to enable decision making based upon a full understanding of likely significant impacts on the environment. As there is some uncertainty with regard to effects upon visual amenity from Edinburgh, it would not be unreasonable to include at least one viewpoint from the City, as a significant urban population. It is particularly difficult to gauge the scale of a proposal and its relationship to the skyline without this information and the assessment process should not be pre-determined.

In this respect, Calton Hill represents well used viewpoint within a public park in the World Heritage Site, from which the City's setting on the Forth Estuary can be appreciated. Visual analysis from this location would allow the nature of change to views to be communicated to members of the public and assist this Council in providing informed comment at the application stage. This viewpoint could also be considered alongside the Gullane viewpoint in East Lothian, to refine the siting and design of the proposal within the landscape.

### **East Lothian Council**

There are two main potential effects on interests effecting East Lothian.

Firstly, there are potential impacts on the species which make up the qualifying interest of the Firth of Forth and Forth Islands Special Protection Area. The assessment suggested in the Scoping Report for examining this should identify any impact on these species.

Secondly, there are potential visual impacts on receptors in East Lothian. SNH guidance on visual representation of windfarms suggests a wider area of search for potential impacts for a turbine of this size than the 15km stated in the Scoping Report, or the 20km shown in Fig 2, and I am not clear why a smaller area has been chosen. I can see on the Fife side of the Forth, there is likely to be intervening topography and other objects in the view which would limit visibility and the strength of the proposal as a focal object. However, this is less the case from the East Lothian side, where there are likely to be clear views to the whole proposal across the sea. There are potential effects on viewpoints for example North Berwick Law in East Lothian, which would be included in the assessment if the study area was of the size recommended. Limiting the study area means there are areas where there may be impacts which are not being identified or considered. Although these impacts may not be significant, using the SNH recommended study area at least initially would allow a more complete understanding of the impacts of the proposal.

I note that impacts on the John Muir Way will be assessed and welcome this. The Scoping Report also notes that impacts on golf courses on the shoreline will be considered and this is welcomed. There are some golf courses which could be impacted in East Lothian: these include Muirfield, Archerfield, Gullane and Craighielaw. It is not clear that these golf courses would be included as part of the assessment as they are outwith the 15km study area; consideration should also be given to any impacts on golf courses within East Lothian,

## Scottish Environmental Protection Agency

Thank you for consulting SEPA on the revised scoping opinion for the off-shore demonstration wind turbine at Fife Energy Park. We note that the scoping opinion is being revisited as the previous 2-bladed turbine is now likely to be replaced with a slightly larger 3-bladed turbine.

As the turbine location is identical and the differences between the schemes limited to appearance we have not identified any concerns. In respect of our interests we are satisfied that the scope of the Environmental Statement can be kept the same. The only exception to this is our advice in relation to river basin management planning and marine non-native species which has changed significantly compared to that provided in our response to the EIA for the 2-bladed turbine in June 2010. Please see the advice provided below.

### River Basin Management Planning

All transitional (estuarine) and coastal waters out to three nautical miles seaward from the Scottish territorial baseline falls under the Water Framework Directive (WFD) which requires them to be considered in terms of their chemical, ecological and hydromorphological status.

In order to assist both applicants and planning authorities, we have made information available on our website ([http://www.sepa.org.uk/water/river\\_basin\\_planning.aspx](http://www.sepa.org.uk/water/river_basin_planning.aspx)). River Basin Management Plans have been prepared to support the successful implementation of the WFD and include measures set against individual water bodies which require to be implemented if Good Ecological Status is to be achieved. The GIS interactive map (<http://gis.sepa.org.uk/rbmp/>) (complete with user guide) should be used in assessing any development proposal. Information on the current (2009) ecological status classification of the Elie to Buckhaven water body (WB ID 200050) can be found on the [water body data sheets](#) and should be included in the ES. The overall classification for this water body in 2009 was good.

Clarification on whether or not the new turbine will require larger foundations to support the additional blade and slight increase in size should be provided. Any additional impacts on intertidal habitats and coastal processes should be discussed in the ES and appropriate mitigation measures included. To allow for the RBMP classification to be updated the area of the new turbine footprint on the intertidal zone should be provided in the ES.

### Marine Non-Native Species

The accidental introduction of Marine Non-Native Species (MNNS) has been highlighted as a risk for the degradation of this water body. To address this, we recommend that controls are included in development planning and marine licensing for MNNS in line with Water Framework Directive and Marine Strategy Framework Directive objectives, and [EU Biodiversity Strategy](#) targets. Accidental introduction of MNNS can occur via attachment to construction plant, specialised equipment and moorings as these are moved from one area to another. We encourage and may request a condition requiring the developer to draw up a protocol or method statement to remove the risk of introducing MNNS into a particular area during the construction, operational or decommissioning phases of a project.

Guidance that may be drawn upon includes:-

- The alien invasive species and the oil and gas industry guidance produced by the Oil & Gas industry ([www.ogp.org.uk/pubs/436.pdf](http://www.ogp.org.uk/pubs/436.pdf)).
- SNH web-based advice on Marine non-native species ([www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/](http://www.snh.gov.uk/land-and-sea/managing-coasts-and-sea/marine-nonnatives/))

- Marine Non-Native guidance from the GreenBlue (recreation advice) ([www.thegreenblue.org.uk/clubs\\_and\\_training\\_centres/antifoul\\_and\\_invasive\\_species/best\\_practice\\_invasive\\_species.aspx](http://www.thegreenblue.org.uk/clubs_and_training_centres/antifoul_and_invasive_species/best_practice_invasive_species.aspx)).

The Firth of Clyde is currently subject to a Biosecurity plan consultation ([Firth of Clyde Biosecurity](#)) being undertaken by the Firth of Clyde Forum – it is recommended that the developers consult this plan and consider measures that would prevent the spread of MNNS into the local area.

#### Regulatory Advice

Details of regulatory requirements and good practice advice for the applicant can be found on our website at [www.sepa.org.uk/planning.aspx](http://www.sepa.org.uk/planning.aspx). If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office in Glenrothes on 01592 776 910.

### **Scottish Natural Heritage**

Thank you for your scoping consultation regarding an updated proposal for a demonstrator offshore wind turbine at Fife Energy Park, submitted by Scottish Enterprise.

We have reviewed the information provided by the applicant for this scoping and we have checked our scoping and application responses (as attached) for the previous proposal submitted by 2B Energy.

For benthic / intertidal ecology, ornithology, marine mammals and coastal processes we advise that the baseline information collated by 2B Energy, if available, can be reused for the Environmental Impact Assessment (EIA) and Habitats Regulations Appraisal (HRA) of the current proposal. In this regard, the scoping advice we previously provided (response dated 22 February 2010) and the points we raised in our Section 36 response (dated 14 June 2010) to the previous proposal can be used by Fife Enterprise to inform their EIA and HRA for the current proposal.

For seascape, landscape and visual impact assessment (SLVIA) we advise that Fife Enterprise can reuse the existing baseline photography (if available) for any revised application, however, the visualisations will need to be updated with a representation of the revised turbine design (including its increased height). However, we reiterate our concerns about the standard of the SLVIA that was submitted for the previous 2B Energy proposal - see Appendix D of our Section 36 response dated 14 June 2010 - and we request that the issues we raised in pre-application dialogue are addressed by Fife Enterprise and their consultants (Arcus Renewable Energy Consulting Ltd). Please see our preliminary advice dated 26 January 2010 and our scoping response dated 22 February 2010 for the full detail of this pre-application advice.

As we stated in our Section 36 response dated 14 June 2010:

"We advise that we did not support the restriction of the study area to 15km, and while some of our recommendations on viewpoints have been adopted, we highlight that the ES has not fully considered landscape and visual impacts to the south side of the Forth - to the Lothian coastline and to Edinburgh City."

We expect any application submission for the revised proposal to address these concerns.

## **British Telecom (Radio Network Protection Team)**

The conclusion is that, the Wind turbine Project indicated should not cause interference to BT's current and presently planned radio networks.

## **Civil Aviation Authority**

Noting that whilst the subject development concerns a wind turbine designed for offshore operations, the turbine location is in fact on-shore. I trust the following is useful.

As with all UK wind turbine developments of this scale, any associated Environmental Statement (ES) will need to detail and consider the associated viewpoints of NATS, Ministry of Defence (MoD) and any aerodromes that might be captured by Scottish Circular 2/2003.

Additionally, if more generically, all parties should be aware that:

1) Given the height of the proposed turbine (some 196m) and onshore location, there would be a mandated need to equip the turbine with aviation warning lights:

- In the UK, the need for aviation obstruction lighting on 'tall' structures depends in the first instance upon any particular structure's location in relationship to an aerodrome. If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that with review the lighting requirement. For civil aerodromes, they will, in general terms, follow the requirements of CAP 168 - Licensing of Aerodromes.
- Away from aerodromes Article 219 of the UK Air Navigation Order (ANO) applies. This Article requires that for en-route obstructions (ie away from aerodromes) lighting only becomes legally mandated for structures of a height of 150m or more.
- In this case, even in the event that there were no aerodrome-related lighting requirements, lighting would be demanded by the UK ANO Article 219.

2) International aviation regulatory documentation requires that the rotor blades, nacelle and upper 2/3 of the supporting mast of wind turbines that are deemed to be an aviation obstruction should be painted white, unless otherwise indicated by an aeronautical study. It follows that the CAA advice on the colour of wind turbines would align with these international criteria.

3) There is a civil aviation requirement in the UK for all structures over 300 feet high to be charted on aviation maps. Should this development progress and the 300 feet height be breached, to achieve this charting requirement, developers will need to provide details of the development to the Defence Geographic Centre.

4) The number of enquiries associated with windfarm developments has been significant. It is possible that the proliferation of wind turbines in any particular area might potentially result in difficulties for aviation that a single development would not have generated. It is, therefore, not necessarily the case that, because a generic area was not objected to by the aviation industry, future, similarly located potential developments would receive the same positive response. There is a CAA perceived requirement for a co-ordinated regional wind turbine development plan, aimed at meeting renewable energy priorities, whilst addressing aviation concerns and minimising such proliferation issues.

5) Due to the unique nature of associated operations in respect of operating altitudes and potentially unusual landing sites, it would also be sensible to establish the related viewpoint of local emergency services air support units.

Any associated ES should mention and, where applicable, address the issues highlighted above.

Whilst none of the above negates the need, where applicable, for planning authorities to consult in accordance with Scottish Circular 2/2003, I trust that this information and guidance is of assistance.

### **Chamber of Shipping**

The Chamber of Shipping has no major concerns regarding the proposal to install a demonstration offshore wind turbine at Methil, Fife. However, due to the proximity of the turbine to the shoreline, we request that Northern Lighthouse Board advice is taken on any lighting and marking measures that may be necessary.

### **Crown Estate**

Do not have any comments to make.

### **Health and Safety Executive**

Environmental Impact Assessments are concerned with projects which are likely to have significant effects on the environment. HSE's principal concerns are the health and safety of people affected by work activities. HSE cannot usefully comment on what information should be included in the environmental statement of the proposed development. However, the environmental statements should not include measures which would conflict with the requirements of the Health and Safety at Work etc Act 1974 and its relevant statutory provisions.

### **Historic Scotland**

The following comments are based on our statutory historic environment interests. That is scheduled monuments and their setting, category A listed buildings and their setting and gardens and designed landscapes and battlefields in their respective Inventories.

Historic Scotland was consulted by Arcus Renewable Energy Consulting in February 2012 regarding a draft of this scoping report. In response to this we noted that our previous response to the now consented proposal stated that we were content that the predicted impacts on the historic environment would not be of such a level of significance as to warrant our objection to the proposal. Now that the scoping report has formally been submitted for the revised proposal we can confirm that the changes in the proposal in terms of 2 blades to 3 and the greater height are unlikely to alter our view on this. In light of this we note the information contained within the provided in the scoping report and can confirm that we are content with the proposed approach outlined for the assessment of the revised proposal.

## **Inshore Fisheries Group (South East)**

The scoping document had 2 lines on the possible affects on fisheries and thirty-two lines on birds; this surprise me no longer, but to say that.

“Existing information including survey and consultation response that fisheries are unlikely to be significantly affected by the development, and so no further surveys are proposed” Presumably this statement only refers to the development at Methil, and this is probably the case, though there is some creel fishing in the vicinity of Methil.

However, when the time comes to start laying cables from the proposed offshore developments, to the onshore installations, there is likely to be significant disruption to fishing activities. Fishermen who trawl for Nephrop in the south-east IFG area are already voicing concerns about this.

What is significant is the lack of observational data on the effects of offshore Wind developments of the seabed, on fish, shellfish, cephalopods, crustaceans and bivalves. There is also little observational data during the operational phase. There exists an opportunity now for a scientific study on the affects of the developments on sea life. It would be interesting to survey the area to be used for development at Methil, and do a comparative study of the effects on sea life pre and post development.

I have trawled through the Internet looking for data regarding the effect of noise from wind turbines on sealife, but there is virtually no data on this. Can one of the trial turbines not be sited in the enclosed dock at Methil? This dock is disused, but known to harbour fish, lobster etc. A study could be carried out looking at stocks:

- Pre-development.
- During development
- During operation of the wind turbine

Creels and fish traps could be placed in the area where the turbine is to be sited during the above periods. Acoustic surveys could gain an indication of fish life in the area to assess any changes.

## **Joint Radio Company**

JRC analyses proposals for wind farms on behalf of the UK Fuel & Power Industry together with the Water Industry in north-west England. This is to assess their potential to interfere with radio systems operated by utility companies in support of their regulatory operational requirements.

In the case of this proposed wind energy development, JRC does not foresee any potential problems based on known interference scenarios and the data you have provided. However, if any details of the wind farm change, particularly the disposition or scale of any turbine(s), it will be necessary to re-evaluate the proposal.

In making this judgement, JRC has used its best endeavours with the available data, although we recognise that there may be effects which are as yet unknown or inadequately predicted. JRC cannot therefore be held liable if subsequently problems arise that we have not predicted.

It should be noted that this clearance pertains only to the date of its issue. As the use of the spectrum is dynamic, the use of the band is changing on an ongoing basis and consequently, you are advised to seek re-coordination prior to submitting a planning application, as this will negate the possibility of an objection being raised at that time as a consequence of any links assigned between your enquiry and the finalisation of your project.

JRC offers a range of radio planning and analysis services.

## **Maritime and Coastguard Agency**

The scale and location of the project suggests a limited impact on shipping and navigation, however The Environmental Statement should supply detail on the possible the impact on navigational issues for both Commercial and Recreational craft, viz:

- Collision Risk
- Navigational Safety
- Risk Management and Emergency response
- Marking and lighting of Tidal Site and information to mariners
- Effect on small craft navigational and communication equipment
- Weather and risk to recreational craft which lose power and are drifting in adverse conditions
- Evaluation of likely squeeze of small craft into routes of larger commercial vessels.
- Visual intrusion and noise.

A Navigational Risk Assessment will need to be submitted in accordance with MGN 371 (and 372) and the DTI/DfT/MCA Methodology for Assessing Windfarms, taking due cognisance of section 3.4 which highlights the requirements for a small scale development.

Particular attention should be paid to any cabling routes and burial depth and subject to the traffic volumes an anchor penetration study may be necessary.

Reference should be made to any established Marine Environmentally High Risk Areas (MEHRAS)

Given that the ship collision risk is considered to have potentially significant effects we would prefer to see shipping or navigation identified as a separate Environmental subject within the EIA structure.

## **Ministry of Defence**

The principal safeguarding concerns of the MOD with respect to the development of wind turbines relate to their potential to create a physical obstruction to air traffic movements, and cause interference to air traffic control and air defence radar installations.

### Air Traffic Control (ATC) Radar & Ranae Control Radar

Where wind turbines are visible to ATC radars they have been shown to have detrimental effects on radar performance. These effects include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns which air traffic controllers must treat as real. The desensitisation of radar could result in aircraft not being detected by the radar and therefore not presented to air traffic controllers. Controllers use the radar to separate and sequence both military and civilian aircraft, and in busy uncontrolled airspace radar is the only sure way to do this safely. Maintaining situational awareness of all aircraft

movements within the airspace is crucial to achieving a safe and efficient air traffic service, and the integrity of radar data is central to this process. The creation of "false" aircraft displayed on the radar leads to increased workload for both controllers and aircrews, and may have a significant operational impact. Furthermore, real aircraft returns can be obscured by the turbine's radar returns, making the tracking of conflicting unknown aircraft (the controllers' own traffic) much more difficult.

#### Precision Approach Radar (PAR)

The MOD's PAR is a very accurate radar used by air traffic controllers to guide aircraft down in inclement weather (although the procedure is practised in all weather conditions). The accuracy and integrity of this radar is critical as air traffic controllers must control the aircraft in descent and very close to the ground. Wind turbines constructed in line of sight of the PAR can cause localised "track seduction", leading to aircraft disappearing from the radar. A further possible effect is the overload of the radar's processor, in that wind turbines generate "false plots" which use up processing ability. Once its threshold is reached the radar may be unable to detect smaller targets, which are likely to be aircraft in head-on profile. Technical aspects of the PAR are covered by international arms traffic regulations, and therefore cannot be released by the MOD, but on these grounds the MOD will object to any wind turbine constructed within the PAR's coverage.

#### Air Defence (AD) radar

Trials carried out in 2005 concluded that wind turbines can have detrimental effects on the operation of radar which include the desensitisation of radar in the vicinity of the turbines, and the creation of "false" aircraft returns. The probability of the radar detecting aircraft flying over or in the vicinity of the turbines would be reduced, and the RAF would be unable to provide a full air surveillance service in the area of the proposed wind farm.

#### Secondary Surveillance Radar (SSR)

SSR relies on co-operative transmission from aircraft carrying equipment known as transponders. For this reason confusion between returns from aircraft and from other objects is highly unlikely and many of the effects caused to normal radars will not occur. However reflection of transmissions could be caused by wind turbines particularly if they are in close proximity to an SSR site. In this eventuality misidentification or mislocation of aircraft could occur. This could have potential flight safety implications.

#### Meteorological Office radar

Wind turbines can interfere with Met Office Radars in similar ways to Air Traffic Control Radars as detailed above and impair their ability to detect weather phenomena.

#### Low Flying

The whole of the UK may be used for military low flying operations. The proliferation of obstacles is not only a safety hazard but also severely impacts on its utilisation for essential low flying training.

The MOD will often request that turbines be fitted with aviation warning lights.

#### Area Air Traffic Control (ATC) radar

There are 12 National Air Traffic Services (NATS) radars under contract to provide the MOD with airspace monitoring services throughout the UK.

#### Physical Safeguarding

Turbines constructed within statutory safeguarding zones have the potential to cause physical obstructions which could interfere with the safe operation of defence assets.



Planning guidance establishes that wind energy developers should assess the affects of their proposed development upon aviation and defence interests and that they should engage in dialogue with the MOD at an early stage to identify concerns and potential mitigation to support of their application.

Accordingly the applicant should take account of MOD aviation and radar operations in completing the EIA particularly in identifying a suitable site for development and the dimensions of the turbines that are to be installed.

We therefore ask that the MOD be consulted about all wind turbine developments with a height of 11m or more or a rotor diameter of 2m or more by the developer at the earliest possible time in the development process in accordance with 'Wind Energy & Aviation Interests Interim Guidelines'.

<http://www.bwea.com/Ddf/Wind-Enerqv-and-aviation-interim-auidelineS.pdf>.

This is so that the development can be fully assessed and any MOD concerns be made known to the developer at an early stage of the development process. We also ask that MOD be consulted by Consenting Authorities regarding all applications for wind turbine developments with a height of 11m or more or a rotor diameter of 2m or more so we can ensure that our concerns are taken into account in the decision making process.

In order to assess a proposed development, we need the following information:

1. Accurate grid coordinates for each turbine to the nearest metre,
2. The height of the turbines to blade tip, hub height and rotor diameter,
3. The number of rotor blades,
4. The wind farm generation capacity,
5. The number of turbines

MOD Safeguarding wishes to be consulted and notified about the progress of planning applications and submissions relating to this proposal to verify that it will not adversely affect defence interests.

Further information about the effects of wind turbines on MOD interests can be obtained from the following websites:

**MOD:** <http://www.mod.uk/DefenceInternet/MicroSite/DIO/WhatWeDo/Operations/ModSafeguarding.htm>

**Restats:** <https://restats.decc.aov.uk/cms/aviation-safeguarding-maps/>

**RenewableUK:** <http://www.bwea.com/aviation/index.html>

## **NERL Safeguarding (NATS)**

The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.

However, please be aware that this response applies specifically to the above consultation and only reflects the position of NERL (that is responsible for the management of en route air traffic) based on the information supplied at the time of this application. This letter does not provide any indication of the position of any other party, whether they be an airport,

airspace user or otherwise. It remains your responsibility to ensure that all the appropriate consultees are properly consulted.

If any changes are proposed to the information supplied to NERL in regard to this application which become the basis of a revised, amended or further application for approval, then as a statutory consultee NERL requires that it be further consulted on any such changes prior to any planning permission or any consent being granted.

## **Northern Lighthouse Board**

Thank you for your correspondence dated 07 March 2012 requesting a response to the Scoping Opinion and S36 application for the installation of a demonstration Wind Turbine device and near shore support base including a meteorological data gathering mast at Fife Energy Park, Methil.

We would advise that that no marking of the turbine or met mast is required and that we are content with the findings stated at section 9.6 of the scoping opinion.

We would however, require a Notice to Mariners and publication in appropriate bulletins stating the nature and timescale of any works carried out in the marine environment relating to this project. The warnings should be promulgated before commencement of any installation, operation, maintenance and decommissioning period.

## **Ports and Harbours**

Do not have any comments to make.

## **Royal Society for the Protection of Birds**

We note that the 2B energy test turbine at Fife Energy Park was consented by Marine Scotland in November 2011. RSPB Scotland objected to this application on 3rd June 2011 on the basis that *'...the information presented in the Environmental Statement lacks necessary detail regarding potential impacts on birds and habitats of both the Firth of Forth and Forth Islands SPA's. It is not possible, with reasonable scientific certainty, to conclude that there would be no adverse affect on the integrity of these SPAs and therefore it is our opinion that an Appropriate Assessment (AA) will be required...'*

RSPB Scotland's response to the earlier application was misleadingly summarised by Marine Scotland as one of non-objection, subject to appropriate assessment being carried out. We consider it essential that, in considering this new application that adequate environmental information is provided in the ES and that an appropriate assessment by the competent authority will have to conclude that no adverse impact on SPA site integrity will arise before issuing any consent.

The new proposal is for a taller turbine of 196m with three blades rather than two. In light of these design changes we welcome the intention stated in section 6.4 Ornithological Impact Assessment

*'Collision risk modelling will be carried out, the method and results of which will be clearly presented in the Technical Appendix to the ES.'*

No new Vantage Point survey work is proposed and data from September 2006 to September 2007 will be re-used. The relevance of data this age would be of concern for a larger site, but is adequate for a single turbine.

We also welcome the acknowledgement that:

*‘Due to the proximity of the Firth of Forth SPA and potential effects on species associated with the Forth Islands SPA, it is anticipated that a Habitats Regulations Assessment will also be required. ‘*

In light of this it would be useful to include tabulated raw data on flock sizes and date/time data and flights for target species that are at potential collision height. Maps showing numbered flight lines for different species, cross-referenced to tables, should also be provided.

### **Royal Yachting Association**

RYA Scotland does not foresee any adverse impact on recreational boating of this proposal so it can be scoped out of the EIA

### **Scottish Canoe Association**

- 1) The reports provided for the above were found to be confusing, hinting that this was a totally land-based project, and then the map hinting that it would be at high or low tide level. Nowhere was the location absolutely clear.
- 2) Sea kayaking is a very major activity in the Firth of Forth, this stretch of water being amongst one of the three most popular in Scotland.
- 3) Any shore-based hazard that tends to put sea kayakers away from hugging the shore can be dangerous, and close into shore paddling is practiced whenever the sea state or weather conditions dictate that.
- 4) It is suggested that when the location is absolutely clear, that the SCA is approached again, for advice on any necessary mitigation for safety, including any connection to the shore that impedes progress across e.g. a beach

### **Scottish Fishermans Federation**

Do not have any comments to make.

### **Scottish Government Planning**

- 1) There is no section on relevant legislation and planning policies to comment on. This should set out national and Scottish planning policy context.
- 2) From a planning perspective, the main issues to consider relate to landscape and visual impact and cumulative impact.

**Scottish Wildlife Trust**

Do not have any comments to make.

**Transport Scotland**

The proposed development represents an intensification of the use of this site however the percentage increase in traffic on the trunk road is such that the proposed development is likely to cause minimal environmental impact on the trunk road network. On this basis the Trunk Road and Bus Operations Directive has no comment to make.

## Annex 2.

### DEVELOPER APPLICATION AND ENVIRONMENTAL STATEMENT CHECKLIST

Enclosed		
1. Developer cover letter and fee cheque	<input type="checkbox"/>	
2. Copies of ES and associated OS maps	<input type="checkbox"/>	
3. Copies of Non Technical Summary	<input type="checkbox"/>	
4. Confidential Bird Annexes	<input type="checkbox"/>	
5. Draft Adverts	<input type="checkbox"/>	
6. E Data – CDs, PDFs and SHAPE files	<input type="checkbox"/>	
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Environmental Statement	Enclosed	ES Reference (Section & Page No.)
7. Development Description	<input type="checkbox"/>	
8. Planning Policies, Guidance and Agreements	<input type="checkbox"/>	
9. Economic Benefits	<input type="checkbox"/>	
10. Site Selection and Alternatives	<input type="checkbox"/>	
11. Baseline Assessment data – air emissions	<input type="checkbox"/>	
12. Design, Landscape and Visual Amenity	<input type="checkbox"/>	
13. Construction and Operations (outline methods)	<input type="checkbox"/>	
14. Archaeology	<input type="checkbox"/>	
15. Designated Sites	<input type="checkbox"/>	
16. Habitat Management	<input type="checkbox"/>	
17. Species, Plants and Animals	<input type="checkbox"/>	
18. Water Environment	<input type="checkbox"/>	
19. Sub-tidal benthic ecology	<input type="checkbox"/>	
20. Hydrology	<input type="checkbox"/>	
21. Waste	<input type="checkbox"/>	
22. Noise	<input type="checkbox"/>	
23. Traffic Management	<input type="checkbox"/>	
24. Navigation	<input type="checkbox"/>	
25. Cumulative Impacts	<input type="checkbox"/>	
26. Other Issues	<input type="checkbox"/>	

N.B. Developers are encouraged to use this checklist when progressing towards application stage and formulating their Environmental Statements. The checklist will also be used by officials when considering acceptance of formal applications. Developers should not publicise applications in the local or national press, until their application has been checked and accepted by officials.

### **Annex 3.**

#### **Methil Offshore Wind Demonstrator Site – LVIA** **SNH Preliminary advice – 26 January 2010**

Thanks for sending through the ZTV and draft viewpoint list for the proposed offshore wind demonstrator site at Methil (initially a single turbine, but potentially increasing to a maximum of two). I have discussed this with our landscape team and SNH has the following preliminary advice to offer:

We think you should use this guidance "Natural Heritage assessment of small scale wind energy projects which do not require formal Environmental Impact Assessment (EIA)" as a starting point. It's been produced by SNH and is available on:

<http://www.snh.org.uk/pdfs/strategy/Assofsmallscalewindenergyprojects.pdf>

Although this guidance has been developed for onshore turbines, the principles can equally apply to the demonstrator project that you're assessing. Guidance on landscape and visual aspects is given in paragraphs 18 – 23

Further to your query about the extent of the ZTV, we advise that the assessment will need to extend to at least 30km (as per section iii of the above guidance). We have determined from the scoping information that the proposed turbine(s) is (are) roughly 180m in height to blade tip.

For this scale of turbine, and its associated visual influence, we would expect there to be viewpoints from the south side of the Forth - both to represent key views from Edinburgh and from the coastline lying to the east of the city. This East Lothian coastline is heavily used for recreation, and views from Aberlady Bay, Gullane beach and North Berwick are all roughly orientated towards the location of the proposed turbine.

We also advise that there should be a viewpoint representative of views from the Forth Islands and from the main ferry route along the Forth. We suggest Inchkeith as an option for this.

In respect of the draft viewpoints submitted for Fife, we think these are broadly representative, and that the Fife coastal footpath is well-represented. We suggest that you check potential visibility from the south end of the Kirkcaldy prom (this may be equivalent to VP15), and from the coastal footpath at Largo Bay (this may be equivalent to VP 9). Also we suggest that you use some more high(er) elevation VPs (such as Largo Law, and further afield).

I hope this preliminary advice is helpful and it would be sensible to further discuss it pending the outcome of your site visit. We would also find it helpful, for future discussion, if the locations of chosen VPs can be marked on the ZTV. I have copied this email to Elspeth Cook in Fife Council who will forward it to the relevant Council contact. The Council will need to be kept informed of our discussions in respect of the concurrent scoping consultation from Scottish Government for which we are both consultees.

SNH will respond formally to this scoping consultation in due course but, in the meantime, if you have any further queries or need to discuss the above advice then please do not hesitate to contact me

## **Annex 4.**

### **Methil Offshore Wind Demonstrator Site – Scoping** **SNH Response - 22 February 2010**

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**THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT)  
(SCOTLAND) REGULATIONS 2000**

**SCOPING OPINION FOR THE PROPOSED  
SECTION 36 APPLICATION FOR A WIND TURBINE DEMONSTRATION  
PROJECT  
LOCATED AT METHIL, FIFE**

**1. Introduction**

Thank you for your scoping request made under the Electricity Works (Environmental Impact Assessment) (Scotland) (EIA) Regulations 2000, as accompanied by your scoping report dated 1 December 2009. As you are aware, any proposal to construct or operate an offshore power generation scheme with a capacity in **excess of 1 megawatt** requires Scottish Ministers' consent under section 36 of the Electricity Act 1989.

Schedule 9 of this Act places a duty on you to "have regard to the desirability of preserving the natural beauty of the countryside, of conserving flora, fauna and geological and physiological features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest". In respect of this duty, you need to consider all the relevant legislation, Government Policy, National Policy Planning Guidance, Planning Advice Notes, the relevant planning authorities' Development Plans and any relevant supplementary guidance – all of which is listed in Section 4 of this scoping opinion.

Under the EIA Regulations 2000, Scottish Ministers are required to consider whether your proposal is likely to have a significant effect on the environment. In this regard, and in accordance with the EIA Regulations, we have consulted with the following organisations in order to formulate this scoping opinion on Ministers' behalf:

If we receive any further scoping responses subsequent to issuing our scoping opinion, we will forward them directly to you

Environmental Impact Assessment (EIA) considers a wide range of issues and concerns including those relating to physical aspects (such as air and water quality); those relating to species and habitats (including benthic ecology and ornithology); and those relating to resource use and other socio-economic aspects (such as fisheries, navigation and the potential economic benefits of the proposal). These issues and concerns are discussed and considered by consultees. **Those which are relevant are ‘scoped in’ to EIA and, in respect of your particular proposal, please see Section 6 of this scoping opinion.**

Scottish Ministers welcome the commitments made in your scoping report to identify mitigation measures that should avoid, minimise or reduce any adverse environmental impacts. Mitigation should be informed by the EIA and should be site-specific. We recommend that you continue to consult and liaise with the relevant consultees in respect of your mitigation proposals for the range of issues set out in Section 6.

Finally, please remain aware that the advice given in this scoping opinion is provided without prejudice to the outcome of EIA.

## **2. Aim of this Scoping Opinion**

The purpose of this scoping opinion is to provide you with advice on the range of issues you will need to consider under EIA in respect of your development proposal. The advice thus presented in Section 6 has been collated by Scottish Government from the range of consultees listed in Section 1 (Introduction).

## **3. Description of your development**

From your submitted information it is our understanding that your proposal is for a demonstration project to trial a new style of offshore wind turbine – a two-bladed rotor mounted on a lattice tower, and roughly 175m in height to blade tip (see Section 3.2.1 of the scoping report for further details and Diagram 1 for illustration). The projects consist of three stages (and see Section 3.2.2 of the scoping report for further detail):

Stage 1 (single turbine at location A) – a single turbine that is to be located in an intertidal area on the edge of Fife Energy Park at Methil as illustrated in Figure 1 (location A), and is to be operational in this location for about 5 years. For access, a bridging structure is required from the turbine to land, and this is to be borne above the intertidal habitat and will be above sea level at all times. Note that the details of this bridge are still to be finalised. The turbine will also require cabling to land.

Stage 2 (two turbines – one at location A, one at location B) – a second turbine to be located roughly 1.5km offshore, as illustrated in Figure 1 (location B). This turbine will also require cabling to land; the onshore landing point is indicated as being in proximity to the turbine at location A (see Figure 2 for illustration).

Stage 3 (two turbines – one at location B, one at location C) – after 5 years of operation the original turbine (the turbine at location A) is to be relocated to a second offshore location roughly 1.7km from the coast – location C as illustrated by Figure 1. This relocated turbine will also require cabling back to shore.

## **4. Relevant Legislation & Planning Policies, including Key Contacts**

All applications (including those made prior to 1 April 2006) made to Scottish Ministers for consent under section 36 of the Electricity Act 1989 to construct and operate a electricity

generating scheme are required to comply with legislation. For offshore windfarm development this is as follows:

### **i. Marine Scotland & Licensing**

Marine Scotland<sup>1</sup> is the lead marine management organisation in Scotland. It was established on April 1 2009 as a Directorate of the Scottish Government, to integrate core marine functions involving scientific research, compliance monitoring, policy and management of Scotland's seas. Marine Scotland combines the functions and resources of the former SG Marine Directorate, Fisheries Research Services and the Scottish Fisheries Protection Agency.

Legislation relating to the marine environment is currently being updated by The Marine (Scotland) Bill<sup>2</sup>, introduced to Parliament on April 29, 2009 and which is now at its second stage and is currently being debated. This Bill introduces a framework for the sustainable management of the seas around Scotland, ensuring that their protection is integrated with economic growth of marine industries.

The main intention of the Bill is to update the planning system for the marine environment so that the increasing, and potentially conflicting, demands on our seas are well-managed, and sustainably so. It is also intended to streamline and simplify the licensing system, hopefully to minimise the number of licences required for development in the marine environment.

Marine Scotland is likely to act as the over-arching administrator for any updated licensing system and further details will be available once the changes have taken place. It is highly likely that these changes will have already occurred by the time you make any application and we recommend that you check the website.

It is intended that the current licensing requirements under Part II of the Food and Environment Protection Act 1985<sup>3</sup> and section 34 of the Coast Protection Act 1949<sup>4</sup> will be incorporated into the streamlined marine licensing system.

### **ii. Scottish Planning Policy**

Under planning reform, Scottish Government has amalgamated the series of Scottish Planning Policies (SPPs), National Planning Policy Guidelines (NPPGs) and Planning Advice Notes (PANs). The new consolidated Scottish Planning Policy<sup>5</sup> is now published, setting out the Government's view of the purpose of planning. It includes a statement of the core principles for operation of the planning system, as well as statutory guidance on sustainable development and planning, and concise subject planning policies.

### **iii. Local Authority Guidance**

You will also need to have regard to Development Plans (SESPLAN, in preparation) and any Supplementary Planning Guidance that has been produced by Fife Council.

### **iv. Strategic Environmental Assessment**

Strategic Environmental Assessment (SEA) is a process to ensure that significant environmental effects arising from policies, plans and programmes are identified, assessed and communicated to decision-makers, and that opportunities for public involvement are provided. It is a generic tool which can be used in a variety of situations. For more information on SEA, including the stages of the process, the Government's SEA gateway<sup>6</sup> contains useful guidance.

For the offshore environment, the UK has well-established SEA procedures, having promoted SEA for oil and gas, and for aggregates. More information is available from the Department of Energy and Climate Change (DECC) who have set up a specific website for reporting on, and publishing, the SEAs they have carried out<sup>7</sup>.

Most recently, SEA 8 included consideration of the potential for offshore wind energy to achieve 25GW of additional generation capacity by 2020<sup>8</sup>. This SEA considered leasing for offshore wind in the UK Renewable Energy Zone and the territorial waters of England and Wales but it does not include the territorial waters of Scotland and Northern Ireland.

For Scottish territorial waters, Marine Scotland has commissioned an SEA for offshore wind and this is currently being undertaken.

## **v. Habitats & Birds Directives, & Habitats Regulations**

The two most influential pieces of European legislation relating to nature conservation are the Habitats and Birds Directives. The 'Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora' was adopted in 1992 and is commonly known as the Habitats Directive. It complements and amends the 1979 'Council Directive 79/409/EEC on the conservation of wild birds', commonly known as the Birds Directive.

The Birds Directive protects all wild birds, their nests, eggs and habitats within the European Community. It gives EU member states the power and responsibility to classify Special Protection Areas (SPAs) to protect birds which are rare or vulnerable in Europe as well as all migratory birds which are regular visitors.

The Habitats Directive builds on the Birds Directive by protecting natural habitats and other species of wild plants and animals. Together with the Birds Directive, it underpins a European network of protected areas known as Natura 2000. This network includes SPAs classified under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive.

The 1992 Habitats Directive complements and amends the 1979 Birds Directive. It was transposed into UK law by the 'Conservation (Natural Habitats, &c.) Regulations 1994' which came into force on 30 October 1994 – usually called simply the **Habitats Regulations** (to which further amendments have since been made). Since devolution, the Scottish Government has had responsibility for putting the Habitats Directive into practice in Scotland, and there have been several Scottish amendments to the Habitats Regulations since this time, notably in 2007 (see below).

As well as territory on land, Scottish Government responsibilities extend out to sea, to the limit of 'inshore' waters at 12 nautical miles off the coast. The Habitats Regulations apply to the inshore zone, and the rules for the protection of marine Natura sites and marine European protected species (EPS) apply here exactly as they do on land. Beyond inshore waters, between 12 and 200 nautical miles, the Offshore Marine Conservation (Natural Habitats, &c.) Regulations 2007 as amended apply<sup>9</sup> (the Offshore Habitats Regulations). These differ from the Habitats Regulations mainly in respect of the provisions for EPS – please see Section 4vii below for further discussion.

### Habitats Regulations – 2007 Scottish Amendments

In Scotland, two key amendments were made to the Habitats Regulations in 2007:

- 2007 Amendment No.1 included updates to some of the rules affecting European protected species (see Section 4vii below)<sup>10</sup>

- And 2007 Amendment No.2 clarified that “all plans and projects” have to be assessed with regard to their potential effects on Natura sites<sup>11</sup>. That is, a **Habitats Regulations** Appraisal is required for all plans or projects that could affect a Natura site.

#### Habitats Regulations Appraisal

Where a plan or project could affect a Natura site, the Habitats Regulations require the competent authority – the authority who has the power to undertake or grant consent, permission or other authorisation for the plan or project in question – to undertake a Habitats Regulations Appraisal (HRA). HRA applies to any plan or project which has the potential to affect a Natura site, no matter how far away from that site.

HRA refers to the whole process set out in regulation 48 of the Habitats Regulations, including appropriate assessment, if required. Appropriate assessment is required when a plan or project affecting a Natura site:

- Is not connected with management of the site for nature conservation, and
- Is likely to have a significant effect on the site (either alone or in combination with other plans or projects).

The competent authority, with advice from Scottish Natural Heritage (SNH), decides whether appropriate assessment is necessary and carries it out if so. Appropriate assessment focuses exclusively on the **qualifying interests** of the Natura site affected and must consider any impacts on the **conservation objectives** of the site. The applicant is usually required to provide the information to inform the assessment. A plan or project can only be consented if it can be ascertained that it will not adversely affect the integrity of a Natura site (subject to regulation 49 considerations).

#### Further Information and Advice on HRA

Further information on the qualifying interests and the conservation objectives for each Natura 2000 site in Scotland is available from SNH’s Sitelink database<sup>12</sup>. The conservation objectives documents include a list of all the qualifying habitats and/or species for each site.

SNH’s leaflet on “Natura sites and the Habitats Regulations”<sup>13</sup> provides a helpful summary of the HRA process. Some of the key concepts are explained in the European Commission’s guidance on Article 6 of the Habitats Directive<sup>14</sup>. Revised guidance updating the Scottish Office Circular 6/1995<sup>15</sup> on the implementation of the Habitats and Birds Directive in Scotland was produced in June 2000. This sets out current Government policy relating to Natura sites but is now due for further revision.

### **vi. Ramsar Sites**

Ramsar sites are designated under the Convention of Wetlands of International Importance<sup>16</sup>. The mission of the Convention is “the conservation and wise use of wetlands by national action and international cooperation as a means to achieving sustainable development throughout the world”.

More information about Ramsar and a list of the current sites in Scotland are available from JNCC’s website<sup>17</sup>. All Ramsar sites in Scotland are also Natura sites (see previous section), and many are also Sites of Special Scientific Interest (see Section 4viii below). So although there is no specific legal framework that safeguards Scottish Ramsar sites, they benefit from the measures required to protect and enhance the Natura sites and SSSIs which overlap them.

## **vii. European Protected Species**

Certain species are listed on Annex IV of the Habitats Directive as species of European Community interest and in need of strict protection. The protective measures required are outlined in Articles 12 to 16 of the Directive. The species listed on Annex IV whose natural range includes any area in the UK are called 'European protected species'.

SNH is the statutory nature conservation body who provides advice on EPS in respect of the Habitats Regulations in Scotland (including Scottish Territorial Waters). Please see their website<sup>18</sup> for the full list of EPS in Scotland and a summary of the legal provisions which apply under the Habitats Regulations. Scottish Government has also provided guidance on the 2007 amendments addressing EPS – Explanatory guidance for species related activities.<sup>19</sup>

**JNCC** is the statutory nature conservation body who provides advice on EPS in the offshore zone – 12 to 200 nautical miles – where the Offshore Habitats Regulations apply. Please see their website<sup>20</sup> for further advice on the legal provisions which apply under these Regulations.

### EPS Licences

Licences may be given authorising activities that could affect EPS which would otherwise be illegal. For Scottish Territorial Waters these licences will be issued either by Scottish Government<sup>21</sup> or by SNH<sup>22</sup> depending on the reasons for the licence request. Licences are only issued under very strict conditions as set out in regulations 44 and 45 of the Habitats Regulations.

Scottish Government produced interim guidance for local authorities in 2001 on how to deal with planning proposals where EPS are present. This guidance is also relevant to other types of development and can be viewed on the Scottish Government website.<sup>23</sup>

## **viii. Other Habitats and Species Legislation**

It will be relevant to consider the following habitat and species legislation:

### Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSI) represent the best of Scotland's natural heritage. They are 'special' for their plants, animals or habitats, their rocks or landforms, or a combination of such natural features. Together they form a network of the best examples of natural features throughout Scotland, and support a wider network across Great Britain and the European Union (and underpin the majority of Natura 2000 sites).

On 29 November 2004, the law concerning SSSIs was updated by the Nature Conservation (Scotland) Act. This new Act addresses many of the recognised shortcomings of the Wildlife & Countryside Act 1981 (as amended). SSSIs notified under the Wildlife and Countryside Act continue under the new Act.

Please see SNH's website<sup>24</sup> for more information on SSSIs and the new arrangements for their protection as put in place by the Nature Conservation (Scotland) Act.

### Species Legislation

The Nature Conservation (Scotland) Act 2004<sup>25</sup> (NCA) – contains a package of amendments to the earlier laws on species protection and wildlife crime as set out in the Wildlife and Countryside Act 1981 (WCA) and the Protection of Badgers Act 1992. These amendments seek to conserve Scotland's biological natural heritage by protecting birds, and certain

animals and plants, wherever they occur and not simply within specified protected sites. In this sense, the species protection measures in the Nature Conservation (Scotland) Act are intended to complement the site protection measures (see previous section on SSSIs) and the overall goal of the Act to further the conservation of biodiversity.

For a broad overview of current species protection in Scotland please see SNH's leaflet Scotland's Wildlife: the Law and You available as a download<sup>26</sup>. For licensing advice in respect of NCA and WCA provisions, please see the relevant pages of the Scottish Government's<sup>27</sup> and SNH's<sup>28</sup> websites (also referred to in the section on EPS above).

The Nature Conservation (Scotland) Act also required SNH to prepare and issue a code covering the watching of cetaceans (whales, dolphins and porpoises), basking sharks and other marine wildlife. This latter task has now been completed; please see the Scottish Marine Wildlife Watching Code website<sup>29</sup>.

#### **ix. Water Environment (Controlled Activities) (Scotland) Regulations 2005**

Seek updated comments from SEPA on this legislation.

#### **x. Health & Safety (Navigation)**

Seek comments from the Maritime and Coastguard Agency, and other relevant bodies on health and safety aspects in respect of navigation. And there may be other relevant health and safety issues to consider?

And make reference to Marine Guidance Note 275 (M)<sup>30</sup> here?

### **5. Contents of the Environmental Statement**

The Environmental Statement (ES) for your proposal needs to include the following information:

#### **i. Non-technical summary**

Your summary should be written in simple non-technical terms to describe your project, its environmental effects, and any mitigation measures that you are proposing.

#### **ii. Contributors to the Environmental Statement**

It is good practice to set out details of the people involved in collating, assessing or presenting the technical information in the ES. These details should include the qualifications and experience of all contributors.

#### **iii. Site Selection & Consideration of Alternatives**

Further advice on EIA requirements is provided in PAN 58 – Environmental Impact Assessment<sup>31</sup> and in SNH's Environmental Assessment Handbook.<sup>32</sup>

It is recommended good practice for the ES to contain an outline of the main alternatives you have studied and to provide an explanation as to the reasons for your final choice of site, taking into account environmental effects.

#### **iv. Description of the development**

It is proposed that there are two Section 36 applications made for this demonstration project – one for the turbine in location A, and a second for the turbines in locations B & C – with an ES supporting each application. It will be important for the first ES (i.e. that submitted for turbine A) to also include some overarching information for the subsequent phases of the demonstration project. In particular, we recommend that this ES includes details of cable landing points and onshore infrastructure for all three proposed turbines and not just turbine A.

This stretch of coastline is part of the Firth of Forth Special Protection Area (SPA), Ramsar site and Site of Special Scientific Interest (SSSI) – the designation covers the intertidal area between high and low spring tides. Therefore, at the earliest opportunity, the overall impacts of all three phases of this demonstration project should be considered in respect of the intertidal habitats encompassed by these designated sites.

#### **v. Demonstration of Good Practice**

For this demonstration project, you could encompass the demonstration of good construction practice as part of your project objectives. Other aspects that could benefit from attention include good practice in monitoring and mitigation measures for bird species and marine mammals. We would welcome discussion of such issues in order that the demonstration projects proposed in Scottish territorial waters may more widely benefit the offshore wind industry.

#### **vi. Assessment of impacts for each phase of development**

You will need to carry out an assessment of impacts for each phase of development in respect of the various interests detailed in Section 6. It will be helpful to include the following information:

- Construction  
Please detail your proposed construction methods including information on project management and timetabling – the phasing / sequencing of proposed works – especially if you have identified the timing of works as a mitigation measure for environmental, navigational, or other effects. Please provide information on the construction equipment to be used, and how this will access each proposed turbine location (locations A, B & C). And, in particular, please provide details on proposed construction methods in relation to onshore infrastructure including cabling and access arrangements.
- Operation & maintenance  
Please consider the environmental, navigational and other effects of operation and maintenance activities – the timing and frequency of routine and emergency visits, the number of boats and / or helicopters required, and the range of activities which may need to be undertaken.
- Repowering  
As this proposal is for a demonstration site we consider it unlikely that there will be any requirement for repowering – please confirm that this is the case (or otherwise) in your ES.
- Decommissioning  
Please also, at this stage, consider your decommissioning options and set out a broad overview of your options in the ES.



## **vii. Mapping**

We recommend that you use xxxxx for mapping your proposal – this will help to ensure consistency between applications. **Comment** – will there be different recommendations for offshore elements (admiralty charts?) and those onshore (OS mapping at the appropriate scale?). Are there any difficulties in ‘matching up’ or ‘patching’ different mapping sets? Has advice been sought from SG’s GIS team?

## **6. Issues to be considered through Environmental Impact Assessment**

### **6a. General**

#### **i. Air, Climate & Carbon Emissions**

SEPA to provide statutory advice.

#### **ii. Landscape & Visual Amenity**

SNH guidance on *Siting and Designing Windfarms in the Landscape* has recently been published<sup>33</sup> and we are currently updating our guidance on cumulative effects – for which the consultation draft<sup>34</sup> is available from our website.

This guidance has been developed with particular reference to onshore Windfarms and while it may have relevance in respect of landscape and visual impact assessment (LVIA) for offshore windfarm development, the methodologies first need to be critically appraised. SNH is in the process of reviewing both our own guidance and that commissioned by others (such as the GSA<sup>35</sup> commissioned by CCW) in order to draw up a list of recommendations for carrying out landscape, seascape and visual assessment in Scotland, in relation to offshore proposals. We are intending to issue this later in 2010.

##### Coastal character

In defining coastal character, we recommend that you use the methodology developed for aquaculture assessment in Scotland. We think that this is a suitable and convenient character assessment methodology for coastal and inshore renewables proposals.

We note that the scoping report refers to the SNH Seascapes study<sup>36</sup>. Although this study is of value in defining national, strategic units, it should be borne in mind that it is a strategic assessment to inform SNH locational guidance; it is a ‘nationwide’ look at our coast, which does not fulfil the need for a more regional and local assessment of inshore and offshore windfarm proposals.

##### Proposed design

The development of windfarms has already had a major impact on many landscapes in Scotland. We believe that it is important to design and site windfarms and turbines so that adverse landscape and visual impacts are minimised – this applies to both single turbines and small windfarm schemes of 1-3 turbines.

In Scotland, and more widely in the UK, the wind turbines installed to date are predominantly 3-bladed, and almost exclusively have solid towers. The proposed 2-B design is a twin bladed turbine with a latticed tower. This breaks with people’s familiar perception of turbines and may mean that the 2-B turbines stand out.

In respect of this, lattice towers can appear complex and the movement of two bladed turbines may appear more erratic than those with three blades. Thus both the cumulative

study (see below) and visualisations are an important aspect of the LVIA for this demonstration project.

#### Proposed location

Methil docklands and the Fife Energy Park are on a prominent location on the Forth shore, within the inner Firth and in close proximity to Methil itself. They also form part of the 'gateway' sea-borne approach into the central belt, and lead into the heart of Scotland and its capital.

The focus of views lie along and across the coastline; and between settlements concentrated along this area of the inner Firth of Forth. As the Scoping Report points out it will be important to consider this proposal (for which the turbines are roughly 175m in height) in respect of the 'impacts on existing skylines in views from the south'.

Views from the Lothian coast, a major recreational area with its popular beaches, golf links, urban areas, and considerable lengths of accessible coast are all considerations; as are views from the A1, the major east transport route into the capital. Views across the Forth are familiar and well-recognised, with notable landmarks like Cockenzie Power Station (its chimneys are 149m high), the Forth road bridge (its main towers are 156m in height above mean low water) and the Forth rail bridge (its main towers are roughly 100m high).

#### Cumulative impacts

SNH has provided comments on a separate application for a single turbine, 81m high at Methil Docks (Planning Application No: 07/03447/C full). Although we expressed no objection on landscape and visual impact grounds to this development, we recommended further thought be given to its design and turbine colour, especially with regard to the nature of views of the turbine against a predominant backdrop of the sea and sky. These concerns are equally relevant to this current application, especially in view of the proposed 2-B turbine design (as discussed above).

A study of the cumulative impact of the Methil 2-B proposal in relation to the Methil Docks application is important. The design iteration of the demonstration project should examine the siting and design of both proposals in relation to one another, in order to avoid negative impacts on landscape character and visual amenity.

The cumulative LVIA should be carried out with reference to the current SNH guidance (2005), which has been revised and circulated for consultation.<sup>37</sup>

#### Coastal, landscape and visual impact assessment

The ZTV (Arcus, Ref 323/FEAS/001. Date 25/01/10) and proposed Viewpoint List\_(Final) (27-01-10) supplement the Scoping Report. These are valuable in giving a preliminary indication of the general range of visibility of the proposed turbines, and assist in viewpoint selection.

The viewpoint list covers potential impacts from fixed locations, as well as along road corridors and other routes (Fife Coastal Path, Regional Cycle Route). It includes a good range of 'types' of view, including from residential areas. However, it should 'marry in' with the Scoping Report that identifies:

- Settings issues relating to the Old and New Towns of Edinburgh World Heritage Site.
- Special Landscape areas, identified in Fife Review of Local Landscape Designations to include Largo SLA encompassing Largo Law and Flagstaff Hill.

- Receptors along the south Forth Shore – this includes considerable lengths of coastline valued for recreation and tourism; and impacts on the existing skyline in views from this south shore.

#### SNH Recommendations:

1. We recommend that the ZTV (overlay) should extend to the edge of the map base that includes the recommended ZTV distance.<sup>38</sup>

2. We have reviewed the proposed viewpoint list and we recommend that the following viewpoints are included:

**Edinburgh Old/New Town:** the demonstration turbines lie some 25+km distance from Edinburgh Old/New Town and will be seen in some sea views looking out from the city as do the Cockenzie Power Station chimneys. In order to assess potential effects, the VP assessment needs to include a seaward view from Edinburgh, potentially one from Leith Docks or Joppa/Portobello, or else from a city landmark such as Edinburgh Castle or Arthur's Seat.

**Inchkeith:** as well as being a Special Landscape Area for its distinct character in relation to the Firth of Forth, the coastline and wider landscape, Inchkeith is prominent in views from both Edinburgh and Fife and is an important navigational landmark. Its inclusion as a VP can stand in for sea-borne views from the Forth itself.

It must be acknowledged that views from the Firth are important, with the Firth acting as a major sea-gateway into Scotland, leading to the capital.

**Largo Law:** this is a popular hill (NT 428050) for walking where its 290m summit gives superb elevated panoramic views over the Forth. It is accessed via the minor road at NT 423037. It is an important landmark, and central to urban views within Methil (Wellesley Road).

In order not to increase the overall number of viewpoints being assessed, we suggest that some currently listed could be omitted where they lie within the same range, for example, either VP4 or VP5; VP8 or VP9.

3. We also recommend that the following two viewpoints are refined:

**VP15 A917 Drumeldrie:** this mid-range VP is intended to be representative of views from the road in the vicinity of a number of historic parks and gardens. Considerable stretches of the A917 at Drumeldrie are, however, screened by properties/shelter belts to the south. We suggest that a VP south of Drumeldrie/Dumbarnie from the east side of Largo Bay would be representative of mid-range views from a popular beach, at a low water-side level.

**VP 21 Gullane:** we advise that a VP is chosen to represent views from the beach at Gullane Bay, rather than from the settlement. A high number of visitors (ELC cite 2.5 million visitors annually) come to the East Lothian coast with the majority accessing one of the 'destination' beaches. The VP which is currently proposed (at NT 479831) is up to 0.5km from the beach itself.

### **iii. Socio-economics**

Advice to be sought from Scottish Enterprise. Perhaps also from Fife Council, Edinburgh Council, East Lothian Council and Visit Scotland?

#### **iv. Fisheries**

The Scottish Fisherman's Federation, Inshore Fisheries Management Groups and Marine Scotland Science (incorporating the Fisheries Research Services) may wish to comment.

#### **v. Designated Sites**

Details of the legislative requirements relating to Natura sites – Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) – are set out in Section 4v above. Information on Ramsar sites is provided in Section 4vi, and on Sites of Special Scientific Interest (SSSIs) in Section 4viii. It is important to be aware that this stretch of coastline is part of the Firth of Forth SPA, Ramsar site and SSSI – covering the intertidal area between high and low spring tides. The designations in this area relate to the wintering shorebirds that use the coast.

In respect of Habitats Regulation Appraisal (HRA) for the SPA – as outlined in Section 4v – we advise that this demonstration project is not connected with management of the SPA for nature conservation and that further consideration is therefore required. The proposed onshore and intertidal elements of infrastructure could have a significant effect on the wintering shorebirds that may use this stretch of coastline. We advise that appropriate assessment of this issue will probably be required.

It will be important to establish where exactly any natural habitat is located in respect to turbine A, the bridging structure, and the other ancillary equipment proposed in respect of turbine A, and also for turbines B & C (please see Section 6bi – Benthic Ecology – for further discussion). It will be important to establish the level of shorebird use in this area and / or whether any disturbance impacts can be avoided by the use of timing restrictions during construction (please see Section 6bii – Ornithology).

The waters around Methil and in Largo Bay may also be accessed by foraging seabirds from the Isle of May and the Bass Rock, both of which are included in the Forth Islands SPA and are important breeding colonies for a wide range of seabirds. Again, please see Section 6bii for further discussion. For the proposed offshore turbines in locations B & C, please see Section 6cii for advice.

In addition, the cumulative effects of piling noise on cetaceans will need to be considered – including the wide-ranging bottlenose dolphins that are a qualifying interest of the Moray Firth SAC (please see Section 6ciii – Marine Mammals).

#### **vi. Tourism & Recreation**

The local authorities – Fife Council, Edinburgh Council, and East Lothian Council – may wish to comment as may VisitScotland and SportScotland. The Royal Yachting Association may wish to comment on these issues in respect of the offshore turbines.

#### **vii. Cumulative Impacts**

For SNH's advice on the assessment of cumulative landscape and visual impacts please see Section 6aii above (Landscape & Visual Amenity). In respect of potential cumulative impacts relating to piling noise please see Section 6ciii (Marine Mammals).

We consider that it is important for the developer to detail their intended project timelines, and the sequencing / timing of turbines in each location (location A only, locations A & B

together, locations B & C together). They will need to consider the cumulative effects of these different phases of their own proposal in combination with the timing of other developments, and construction activities, taking place in the Forth.

## **6b. In respect of turbine location A**

### **i. Benthic Ecology (in respect of turbine location A)**

We have established with the EIA consultant that the turbine is in an intertidal location i.e. the area is not covered by water during low tide. We recommend that supporting photographs / clarification of this location is provided to other scoping consultees, if required, and note that this information will need to be set out clearly in the Environmental Statement (i.e. for the general public as well as for statutory consultees).

This intertidal area is encompassed by SPA, Ramsar and SSSI designations so it is important to be familiar with the legislative process that applies – in particular with the process of Habitats Regulations Appraisal as discussed in Section 4v – Habitats & Birds Directives, & Habitats Regulations.

In respect of this, the ES will need to include habitat mapping of the intertidal area around the proposed turbine and the proposed bridging structure (see Section 6.9.2 of the scoping report). The mapping should clearly demarcate any natural habitats as well as ‘man-made’ and rock-armoured areas. The ES should also provide more information on the bridging structure, its route and design, and on the cabling options (see Section 3.2.5 of the scoping report) in order to understand, and assess, whether these will have any impacts on intertidal habitats.

The ES should also detail proposed construction methods – in particular, timing of works (as part of this, is it intended to time construction work to periods of low tide?) and how construction equipment is going to access the site. We recommend that information on all proposed onshore / intertidal works is provided in this first ES to be submitted i.e. that it includes this information for turbines B&C as well as for turbine A.

### **ii. Ornithology (in respect of turbine location A)**

The proposed turbine at location A is in very close proximity to the Firth of Forth Special Protection Area (SPA) – for which some species of wintering shorebird are a qualifying interest. The waters around Methil may also be accessed by foraging seabirds from the Isle of May and the Bass Rock – both of which are part of the Forth Islands SPA. Therefore it is important to be aware that the proposed turbine may have connectivity to, and effects on, these SPAs and their qualifying interests. Please see the legislative requirements referenced in Section 4v above, in particular, the process of Habitats Regulations Appraisal.

The developer will need to collate existing baseline information on birds, including any shorebird counts that may be available for this stretch of coastline. Counts undertaken for the Wetland Bird Survey (WeBs) – including the low tide count scheme – may be available<sup>39</sup>. If baseline information on wintering shorebirds is patchy then it may need to be supplemented through further counts undertaken by the developer.

The developer will need to consider the risk that birds may collide with the proposed turbine as well as any disturbance that might arise during construction. We advise that the breeding period is also included as important – to include qualifying interests of the Forth Islands SPA such as herring gull and lesser black-backed gull.

While we have provided some telephone comments on the proposed methodologies for bird survey work (as recorded in Appendix A of the scoping report) we have not actually received any written account or report of these methods as they apply to the proposed turbine in location A, or to the proposed turbines in locations B & C. We would welcome receipt of survey methodologies, and any analysis of the data that has been collected so far. It is important that the survey methodologies can provide compatible data for the assessment of cumulative impacts to bird species, where necessary.

We also recommend that some post-construction monitoring of this proposed turbine is undertaken in respect of birds – we consider that the lattice tower may prove to be attractive to a number of species as a perching area.

RSPB may also wish to provide advice on ornithology.

### **iii. Marine Mammals (in respect of turbine location A)**

We require collation of baseline data on marine mammal sightings for this area, including seals as well as cetaceans. The location and importance of any seal haul out sites along this stretch of coast should also be recorded. This information may be available from the Sea Mammal Research Unit<sup>40</sup> whilst other cetacean sightings may be obtained from SeaWatch.<sup>41</sup>

We advise that this baseline information should be presented in the Environmental Statement for the proposed turbine in location A. This will help to inform our consideration of the subsequent phases of development – the proposed turbines in locations B & C (and please cross reference with Section 6ciii below).

In respect of the proposed turbine in location A, we need more information concerning its construction methods in order to consider whether there may be any impacts on marine mammals. It will be important to know the timing of works and the choice of foundation design.

### **iv. Fish of Conservation Concern (in respect of turbine location A)**

SNH confirms that there are no freshwater Special Areas of Conservation (SACs) in vicinity of proposed turbine location A, or any qualifying fish species of these SACs that could be impacted.

### **v. Hydrodynamic Processes & Coastal Geomorphology (for turbine location A)**

This is an actively eroding stretch of coastline and we recommend that further thought is given to the possibility of effects on coastal processes – including any impacts to existing coastal defences. We recommend that a coastal geomorphologist is employed to help inform the discussions over engineering and construction.

SEPA may also wish to provide advice on these aspects.

### **vi. Archaeology & Cultural Heritage (in respect of turbine location A)**

Historic Scotland to provide statutory advice.

## **vii. Traffic Management (in respect of turbine location A)**

Fife Council to provide primary comment and this matter may also require comment from Forth Ports and/or other Harbour Authorities.

## **viii. Radar (MOD & Aviation) (in respect of turbine location A)**

Relevant Airports and the MOD, if required, to provide primary comment.

## **6c. In respect of turbine locations B & C**

### **i. Benthic Ecology (in respect of turbine locations B & C)**

SNH advises that benthic survey, and mapping, will be required for turbine locations B & C and their associated cable routes. This information is necessary for EIA – to understand the potential impacts of this proposal on benthic ecology, as well as to target any mitigation/avoid any key sensitivities. We consider that Table 1 – Potential impacts matrix (page 11) needs to include consideration of the potential impacts to benthic ecology that may arise from piling, cable laying, and scour protection.

We advise that the description / location for any onshore / intertidal infrastructure required for turbines B & C – such as cable landings, grid connections, and any substations – should be detailed and assessed in the first ES submitted for turbine A.

We consider it would be beneficial if the developer, at an early stage, considered the overall impacts to intertidal habitats encompassed by the Firth of Forth SPA, Ramsar site and SSSI.

### **ii. Ornithology (in respect of turbine locations B & C)**

As noted in Section 6bii above, we would welcome receipt of survey methodologies, and any analysis of the data that has been collected so far. We consider that shore-based vantage point watches could provide adequate coverage of proposed locations B&C offshore, however, we need more detail on the developer's survey methodologies to be certain.

We are also looking to understand how the developer proposes to analyse their data, especially in relation to the assessment of cumulative impacts. For instance, will they be trying to account for the decline in detectability of each species with increasing distance? They should be aware that since they are surveying across an environmental gradient (from shore to offshore) the pattern of species occurrence may introduce problems in determining an adequate detectability function for some species.

RSPB may also wish to provide advice on ornithology.

### **iii. Marine Mammals (in respect of turbine locations B & C)**

As advised in Section 6biii, any relevant baseline data should be collated for marine mammals (seals as well as cetaceans) and presented in the Environmental Statement for the proposed turbine in location A. This will then help to inform our consideration of the potential impacts to marine mammals arising from turbines in locations B & C.

Largo Bay and the waters around Methil may potentially be used by foraging grey seals from the Isle of May SAC and common seals from the Firth of Tay and Eden Estuary SAC. There may also be the chance of bottlenose dolphins from the Moray Firth SAC using the area. As

noted above, the potential effects of this proposal will need to be considered on these species through the process of Habitats Regulations Appraisal that is detailed in Section 4v.

In respect of other cetaceans (in addition to bottlenose dolphins) – there are a number which are European Protected Species (EPS). The legislative requirements that relate to EPS are given in Section 4vii above, and further details – including the legislation itself – can be found online.

In considering the potential effects on marine mammals that could arise from these proposed turbines, the effects of piling noise and construction activity require attention. The ES should include an assessment of the likely levels, type and scales of underwater noise expected from the piling and include details of the possible mitigation techniques to be explored.

The developer will need to consider the impacts of their own proposal, and its zone of effects, in the context of other development being undertaken in the Forth – such as the offshore windfarm proposals in territorial waters. As well as providing information on noise levels, the ES needs to include details on construction timing / phasing so that this can be considered alongside the project timelines for other development in the Forth, in order to establish whether there is any likelihood of cumulative noise / construction impacts on marine mammals.

As this is a demonstration site, the developer should also be considering the environmental good practice they could demonstrate – such as good practice for construction work / piling activities, good practice for marine mammal monitoring, mitigation and other aspects. Please see the further discussion in Section 5v above.

#### **iv. Fish of Conservation Concern (in respect of turbine locations B & C)**

SNH confirms that there are no freshwater Special Areas of Conservation (SACs) in vicinity of proposed turbine location A, or any qualifying fish species of these SACs that could be impacted.

SNH, SEPA (including the Fisheries Committee) and the relevant District Salmon Fisheries Boards to provide statutory advice.

#### **v. Hydrodynamic Processes & Coastal Geomorphology (for turbine locations B & C)**

We recommend that further thought is given to the possibility of effects on coastal processes – including any impacts to existing coastal defences. Please see the advice above in Section 6bv on this issue.

SEPA may also wish to provide advice on these aspects.

#### **vi. Sub-surface Archaeology & Cultural Heritage (for turbine locations B & C)**

Historic Scotland to provide statutory advice.

#### **vii. Navigation (Shipping) (in respect of turbine locations B & C)**

British Chamber of Shipping, the relevant Port Authorities, Northern Lighthouse Board, Maritime & Coastguard Agency and the Royal Yachting Association to provide primary comment.



### **viii. Radar (MOD & Aviation) (in respect of turbine locations B & C)**

Relevant Airports and the MOD, if required, to provide primary comment.

## **7. General Consenting Matters**

### **i. Environmental Statement**

#### Consultation

We require the ES to be submitted as hard copy (8 copies) and as e-copy – the latter is to be in a user-friendly PDF format which can be placed on the Scottish Government website. You must also provide each of the statutory consultees listed in Section 1 with a hard copy and an e-copy – to be sent direct. You can obtain consultee address lists from our Energy Consents Unit.<sup>42</sup>

#### Advertisement

When submitting an ES, you must publicly advertise your proposals in accordance with part 4 of the Environmental Impact Assessment (Scotland) Regulations 2000. You can find guidance on advertisement, including the specific details needed for your press adverts, from our Energy Consents Unit (contact as provided in the footnote).

#### Application Procedures

We enclose a checklist to help you consider and collate the relevant ES information in support of your application. When we receive your application we will be using this checklist in order to decide whether your ES is complete or not. Please also see the advice provided below in the section on ‘Timescale & Application Quality’.

#### Gaelic Language

If you are making a Section 36 application in an area where Gaelic is spoken, you are encouraged to adopt best practice by publicising your project details in both English and Gaelic (see the Energy Consents Unit website).

### **ii. Consents Procedures**

#### Timescale & Application Quality

In December 2007, Scottish Ministers announced an aspirational target to process new Section 36 applications within a 9 month period, provided a PLI is not held. This scoping opinion is specifically designed to improve the quality of advice we provide to you. If you follow this advice then we are unlikely to make requests for additional information at a later date.

In assessing the quality and suitability of your application, we will be using the advice provided in this scoping opinion along with the enclosed checklist. You are encouraged to seek advice from xxxx on the contents of your ES prior to submitting your application, although it is important to be aware that this process does not involve a full analysis of the proposals. In the event of your application missing any essential information, we reserve the right not to accept it.

Please do not to advertise your application in the local or national press until you have confirmation that we have checked your ES and have accepted your application.

#### Difficulties in Compiling Additional Information

If your ES is missing any required information, then you should state why this is and also indicate when you will be able to submit an addendum.

### **iii. Judicial review**

All cases may be subject to judicial review therefore, if required, you should make a judicial review statement available to the public.

Comment – do you want to state in what circumstances a judicial review might be called? Also, does the review statement only need to be made available to the public if a judicial review is called, or is it something that should be submitted as part of the ES?

Signed

Authorised by the Scottish Ministers to sign in that behalf.

Enclosed - Developer Application Checklist

## DEVELOPER APPLICATION AND ENVIRONMENTAL STATEMENT CHECKLIST

### Overall Information – Checklist

### Enclosed?

- |                                             |                          |
|---------------------------------------------|--------------------------|
| 1. Developer cover letter and fee cheque    | <input type="checkbox"/> |
| 2. Copies of ES and associated mapping      | <input type="checkbox"/> |
| 3. Copies of Non Technical Summary          | <input type="checkbox"/> |
| 4. Confidential Species Annexes             | <input type="checkbox"/> |
| 5. Draft Adverts                            | <input type="checkbox"/> |
| 6. Electronic Data – CDs, PDFs, SHAPE files | <input type="checkbox"/> |
- 

### ES Contents – Checklist

### Enclosed?

### ES Ref

- |                                                          |                          |  |
|----------------------------------------------------------|--------------------------|--|
| 1. Development Description                               | <input type="checkbox"/> |  |
| 2. Contributors to the ES                                | <input type="checkbox"/> |  |
| 3. Reference to Relevant Legislation & Planning Policies | <input type="checkbox"/> |  |
| 4. Site Selection & Alternatives                         | <input type="checkbox"/> |  |
| 5. Construction, Operation & Decommissioning (methods)   | <input type="checkbox"/> |  |
| 6. General Issues – Air, Climate & Carbon Emissions      | <input type="checkbox"/> |  |
| 7. General Issues – Landscape & Visual Amenity           | <input type="checkbox"/> |  |
| 8. General Issues – Socio-economics                      | <input type="checkbox"/> |  |
| 9. General Issues – Fisheries                            | <input type="checkbox"/> |  |
| 10. General Issues – Designated Sites                    | <input type="checkbox"/> |  |
| 11. General Issues – Tourism & Recreation                | <input type="checkbox"/> |  |
| 12. General Issues – Cumulative Impacts                  | <input type="checkbox"/> |  |
| 13. Turbine A – Benthic Ecology                          | <input type="checkbox"/> |  |
| 14. Turbine A – Ornithology                              | <input type="checkbox"/> |  |
| 15. Turbine A – Marine Mammals                           | <input type="checkbox"/> |  |
| 16. Turbine A – Fish of Conservation Concern             | <input type="checkbox"/> |  |
| 17. Turbine A – Hydrodynamics & Coastal Geomorphology    | <input type="checkbox"/> |  |
| 18. Turbine A – Archaeology & Cultural Heritage          | <input type="checkbox"/> |  |
| 19. Turbine A – Traffic Management                       | <input type="checkbox"/> |  |
| 20. Turbine A – Radar (MOD & Aviation)                   | <input type="checkbox"/> |  |
| 21. Turbines B&C – Benthic Ecology                       | <input type="checkbox"/> |  |
| 22. Turbines B&C – Ornithology                           | <input type="checkbox"/> |  |
| 23. Turbines B&C – Marine Mammals                        | <input type="checkbox"/> |  |
| 24. Turbines B&C – Fish of Conservation Concern          | <input type="checkbox"/> |  |
| 25. Turbines B&C – Hydrodynamics & Coastal Geomorphology | <input type="checkbox"/> |  |
| 26. Turbines B&C – Sub-surface Archaeology               | <input type="checkbox"/> |  |
| 27. Turbines B&C – Navigation (Shipping)                 | <input type="checkbox"/> |  |
| 28. Turbines B&C – Radar (MOD & Aviation)                | <input type="checkbox"/> |  |

You are encouraged to use this checklist when progressing towards application stage and collating your ES. We will be using this checklist in order to decide whether your ES is complete. Please do not to advertise your application in the local or national press until you have confirmation that we have checked your ES and have accepted your application.

1 <http://www.scotland.gov.uk/About/Directorates/Wealthier-and-Fairer/marine-scotland>  
2 <http://www.scotland.gov.uk/Topics/marine/16440/marine-bill-consultation>  
3 <http://www.marlab.ac.uk/Delivery/standalone.aspx?contentid=2184>  
4 <http://www.scotland.gov.uk/Topics/Transport/ferries-ports-canals/17699/9608>  
5 <http://www.scotland.gov.uk/Publications/2010/02/03132605/0>  
6 <http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning/Policy/themes/enviro-assessment/sea>  
7 <http://www.offshore-sea.org.uk/site/index.php>  
8 [http://www.offshore-sea.org.uk/consultations/Offshore\\_Energy\\_SEA/index.php](http://www.offshore-sea.org.uk/consultations/Offshore_Energy_SEA/index.php)  
9 [http://www.opsi.gov.uk/si/si2007/uksi\\_20071842\\_en\\_1](http://www.opsi.gov.uk/si/si2007/uksi_20071842_en_1)  
10 [http://www.opsi.gov.uk/legislation/scotland/ssi2007/ssi\\_20070080\\_en\\_1](http://www.opsi.gov.uk/legislation/scotland/ssi2007/ssi_20070080_en_1)  
11 [http://www.opsi.gov.uk/legislation/scotland/ssi2007/ssi\\_20070349\\_en\\_1](http://www.opsi.gov.uk/legislation/scotland/ssi2007/ssi_20070349_en_1)  
12 <http://www.snh.org.uk/snh/>  
13 <http://www.snh.org.uk/pdfs/publications/designatedareas/NaturaSitesHabitatsRegs.pdf>  
14 [http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision\\_of\\_art6\\_en.pdf](http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/provision_of_art6_en.pdf)  
15 <http://www.scotland.gov.uk/library3/nature/habd-00.asp>  
16 More information is available from: <http://www.ramsar.org>  
17 <http://www.jncc.gov.uk/page-161>  
18 <http://www.snh.org.uk/about/directives/ab-dir08.asp>  
19 <http://www.scotland.gov.uk/Resource/Doc/1221/0050637.pdf>  
20 <http://www.jncc.gov.uk/page-4550>  
21 <http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/16330>  
22 <http://www.snh.org.uk/licences/Lic-intro.asp>  
23 <http://www.scotland.gov.uk/Publications/2001/10/10122/File-1>  
24 <http://www.snh.org.uk/about/ab-pa01.asp>  
25 [http://www.opsi.gov.uk/legislation/scotland/acts2004/asp\\_20040006\\_en\\_1](http://www.opsi.gov.uk/legislation/scotland/acts2004/asp_20040006_en_1)  
26 <http://www.snh.org.uk/pdfs/publications/wildlife/wildlifelaw.pdf>  
27 <http://www.scotland.gov.uk/Topics/Environment/Wildlife-Habitats/16330>  
28 <http://www.snh.org.uk/licences/Lic-intro.asp>  
29 <http://www.marinecode.org/>  
30 <http://www.ukshipregister.co.uk/mgn275-2.pdf>  
31 <http://www.scotland.gov.uk/Publications/1999/10/pan58-root/pan58>  
32 <http://www.snh.org.uk/publications/on-line/heritagemanagement/EIA/>  
33 <http://www.snh.org.uk/strategy/renewable/sr-we01.asp>  
34 <http://www.snh.org.uk/strategy/renewable/sr-we00c.asp>  
35 Guide to Best Practice in Seascape Assessment CCW (2001) which is available at:  
<http://www.ccw.gov.uk/pdf/Guide-to-best-practice-in-seascape-assessment.pdf>  
36 An assessment of the sensitivity and capacity of the Scottish seascape in relation to windfarms.  
SNH Commissioned Report 103 (2005)  
37 <http://www.snh.org.uk/strategy/renewable/sr-we00c.asp>  
38 See p31, para 55 in Benson, John et al (2002) Visual Assessment of Windfarms: Best Practice.  
SNH Commissioned Report No. F01AA303A Perth: SNH.  
39 <http://www.bto.org/webs/about/lowtide/>  
40 <http://www.smru.st-andrews.ac.uk/>  
41 <http://www.seawatchfoundation.org.uk/>  
42 Contact details available at: <http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-Consents>

## Annex 5.

### **Methil Offshore Wind Demonstrator Site – S36 Application** **SNH Response - 14 June 2010**

Marine Scotland  
Aquaculture, Freshwater Fisheries, Licensing & Policy  
Marine Laboratory, PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

For the attention of: Fiona Thompson  
Your ref:  
Our ref: CNS REN OSWF DS METHIL  
14 June 2010

Dear Sirs

#### **ELECTRICITY ACT 1989**

#### **THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2000**

#### **SECTION 36 APPLICATION FOR A DEMONSTRATION WIND TURBINE AT FIFE ENERGYPARK, METHIL**

Thank you for your consultation requesting our advice on this application for a demonstration wind turbine at the Fife Energy Park in Methil. The proposal is to test a new design of rotor (two-bladed, operating downwind) mounted on a lattice tower (as illustrated in Figure 3.1 of the ES). The proposed testing period is for five years, after which the turbine is to be dismantled and / or moved to a new location further offshore (see Section 1.3 of the ES).

#### **SNH POSITION AND SUMMARY OF OUR ADVICE**

**We object** to the proposal due to a lack of supporting information in the Environmental Statement (ES). Our objection relates to birds and marine mammals where the information in the ES is insufficient, or ambiguous, and results in an environmental impact assessment which lacks clarity. While we also have concerns about the landscape and visual impact assessment (LVIA) for this proposal, we do not object to it in this regard.

We set out our key concerns in respect of birds in [Appendix A](#). Our advice for those species which are qualifying interests of either the Firth of Forth Special Protection Area (SPA) or the Forth Islands SPA is provided in [Appendix B](#). **Our objection in respect of bird interests can be overcome** if the demonstration project is undertaken strictly in accordance with agreed conditions as discussed in [Appendix A](#), and summarised below:

- Provision and implementation of a sufficiently detailed **Construction Method Statement** to avoid disturbance impacts to birds during construction.
- Provision and implementation of a **Post-construction monitoring plan** to investigate the interaction of birds with this demonstration turbine and to record any collision mortalities.

- Provision of a sufficiently detailed **Decommissioning Method Statement** to avoid disturbance impacts to birds during decommissioning.

If these matters are addressed then the potential for any adverse impacts on site integrity of the SPAs can be avoided. As advised in Appendix B, these conditions must be confirmed by the competent authority in respect of the Habitats Regulations.

We set out our key concerns in respect of marine mammals in Appendix C. The applicant's ES does not provide evidence that marine mammals will not be disturbed by construction activity (i.e. by drilling for turbine foundations) or by decommissioning and we therefore object to the proposal as submitted. **Our objection in respect of marine mammals can be overcome** if the Construction and Decommissioning Method Statements incorporate the mitigation that we outline in Appendix C.

We set out our concerns about the applicant's approach to LVIA in Appendix D. We advise that we did not support restriction of the study area to 15km, and while some of our recommendations on viewpoints have been adopted, we highlight that the ES has not fully considered landscape and visual impacts to the south side of the Forth – to the Lothian coastline and to Edinburgh City. For further details on these matters please see our scoping advice of 22 February 2010, and our pre-scoping advice of 26 January 2010.

We consider that an adequately detailed LVIA is important in helping to explain the impacts of any proposal to the general public as well as to experts. However, despite our concerns about the quality of the LVIA for this proposal, **we do not object to it on landscape and visual grounds**. The proposal is for a demonstration turbine, operational for 5 years (in this location) – therefore its landscape and visual impacts will be more temporary than those of a commercial windfarm.

## **FURTHER INFORMATION AND ADVICE**

We would welcome meeting to discuss the overall demonstration project with the applicant, to ensure that any work undertaken for the later stages of the project (i.e. the proposed location of turbines further offshore) follows good practice. In respect of the current application, we would be grateful if you could copy us into your formal decision in due course. In the meantime, if you require any further information or advice from SNH please contact Catriona Gall in the first instance on 01738 458665 or at [catriona.gall@snh.gov.uk](mailto:catriona.gall@snh.gov.uk).

Yours faithfully,  
Iain Rennick  
Area Manager Forth & Borders  
cc. Fiona MacGregor, Arcus Renewables  
Elspeth Cook, Fife Council  
Lucy Greenhill, JNCC

## **APPENDIX A**

### **SNH advice in respect of birds**

1. Our scoping advice highlighted our key concerns in respect of birds. We indicated in that response and in subsequent telephone conversations with the applicant that we wished to discuss their bird survey work and data analysis prior to the submission of any ES. It is regrettable that this discussion did not take place, as we feel that the quality of analysis and the clarity of presentation in the ES could have been improved.

2. Our contact with the applicant and their consultants, as described in Section 1.4, has been confused for this project – until the meeting of 24 September 2009 we had no clear information from the applicant as to what they were proposing in respect of a project at Fife Energy Park. As we indicated in our scoping advice of 22 February 2010, our advice on birds as quoted by the applicant in the ES is that which we provided by telephone on 1 June 2009. Up until submission of the scoping report we had not had any maps of the proposal (such as maps of the proposed turbine locations), and up until submission of the current ES we had not had any written information on the survey methodologies for birds.

### **Key concerns**

3. Our key concerns in respect of the applicant's impacts assessment for birds are that:

- There is no provision of raw data and, in particular, no information on the tidal states when observations were made, or on the time of day.
- There is no assessment regarding the lattice tower potentially being used by birds as a perch, and the risk of increased collision mortalities as a result of this behaviour.

We consider that these two matters need to be addressed and that this can be done by providing the following information. This information must be supplied through conditions on any consent, it is not essential to receive it prior to the decision on the application. The conditions must, however, be confirmed by the competent authority in respect of the Habitats Regulations (see [Appendix B](#)).

4. We consider it would be helpful to meet to discuss the following aspects and also to resolve other (lesser) points of ambiguity about the project and the applicant's analysis of survey data.

### **Matters that must be addressed by conditions**

5. Our objection in respect of bird interests can be overcome if the demonstration project is undertaken strictly in accordance with agreed conditions to ensure provision of the following plans, protocols and method statements and their implementation on the ground:

- Provision and implementation of a sufficiently detailed **Construction Method Statement** to avoid disturbance impacts to birds during construction.

6. It would be helpful for the applicant to interpret the bird survey data in order to characterise bird activity according to time of year, time of day and tidal state. If there appears to be no pattern to bird activity then this should be stated. Understanding the bird activity in the area will help to inform construction methods and timings in order to minimise disturbance to birds i.e. to target construction to periods of low bird activity.

- Provision and implementation of a **Post-construction monitoring plan for birds** to investigate the interaction of birds with this demonstration turbine and to record any collision mortalities.

7. The applicant has not addressed our concerns about the lattice tower acting as an attractant to birds, who may be drawn to it as a perching location. They state that “most species would be unlikely to perch on the tower” (page 8-21), but provide no assessment, analysis or references to support this argument.

8. Lattice tower wind turbines are known to result in high collision risk mortality when sited at sensitive sites; for example, Altamont pass in California (as mentioned in section 3.2.2 of the ES Technical Appendix), where the lattice design of the towers attracts birds (in this case raptor species) close to the turbines and they are then subject to a higher risk of collision with turbine blades (i.e. the birds do not display avoiding action). We consider that there is a strong likelihood the proposed demonstrator turbine at Methil will be used by some species for perching – including qualifying features of the Firth of Forth SPA (cormorant *Phalacrocorax carbo*) and the Forth Islands SPA (cormorant; herring gull *Larus argentatus*; kittiwake *Rissa tridactyla*; lesser black-backed gull *Larus fuscus*; and shag *Phalacrocorax aristotelis*) – and that these birds may therefore be subject to higher risks of collision than indicated in the applicant’s ES.

9. Although we consider that the potential collision mortalities may be higher than those estimated in the ES, we recognise that this demonstration turbine has an operational lifespan of only five years, compared to the 25 years (at least) of a commercial windfarm. We confirm that the proposed turbine will not give rise to levels of bird mortality that adversely impact upon the viability of SPA populations (either in the Firth of Forth SPA or in the Forth Islands SPA). Therefore collision mortality would not give rise to any adverse impacts on the site integrity of either SPA (please see Appendix B for further discussion).

10. We do, however, advise that post-construction monitoring would be helpful to understand the interactions of birds with this demonstration turbine and to see whether they are attracted to the lattice tower as a perch. This would be helpful for the intended later phases of the project – where a demonstration turbine (of the same design) is to be located further offshore – and where such post-construction monitoring would not be so easily achieved. As well as for this project, the monitoring work would help us to understand the potential interactions of birds with met masts and other offshore windfarm infrastructure that may adopt a lattice tower design.

- Provision and implementation of a sufficiently detailed **Decommissioning Method Statement** to avoid disturbance impacts to birds during decommissioning.

11. As the demonstration turbine has a limited lifespan, we advise that decommissioning methods should be considered at an early stage, and that the decommissioning method statement should be submitted at the same time as the construction method statement. As noted above, it would be helpful for the applicant to interpret their bird survey data in order to characterise bird activity according to time of year, time of day and tidal state. If there appears to be no pattern to bird activity then this should be stated. Understanding the bird activity in the area will help to inform decommissioning methods and timings, which may help to minimise disturbance to birds i.e. to target decommissioning to periods of low bird activity.



## **APPENDIX B**

### **Habitats & Birds Directives, & Habitats Regulations**

1. The two most influential pieces of European legislation relating to nature conservation are the Habitats and Birds Directives. The 'Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora' was adopted in 1992 and is commonly known as the Habitats Directive. It complements and amends (for classified SPAs) Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds (this is the codified version of Directive 79/409/EEC as amended), commonly known as the Birds Directive.

2. The Birds Directive protects all wild birds, their nests, eggs and habitats within the European Community. It gives EU member states the power and responsibility to classify Special Protection Areas (SPAs) to protect birds which are rare or vulnerable in Europe as well as all migratory birds which are regular visitors.

3. The Habitats Directive builds on the Birds Directive by protecting natural habitats and other species of wild plants and animals. Together with the Birds Directive, it underpins a European network of protected areas known as Natura 2000 comprising SPAs classified under the Birds Directive and Special Areas of Conservation (SACs) designated under the Habitats Directive.

4. The Habitats Directive is transposed into domestic law in Scotland by the 'Conservation (Natural Habitats, &c.) Regulations 1994' which came into force on 30 October 1994 – usually called simply the **Habitats Regulations**. Several amendments have been made to the Habitats Regulations since they came into force.

### **Habitats Regulations Appraisal**

5. Where a plan or project could affect a Natura site, the Habitats Regulations require the competent authority – the authority with the power to undertake or grant consent, permission or other authorisation for the plan or project in question – to consider the provisions of regulation 48. This means that the competent authority has a duty to:

- determine whether the proposal is directly connected with or necessary to site management for conservation; and, if not,
- determine whether the proposal is likely to have a significant effect on the site either individually or in combination with other plans or projects; and, if so, then
- make an appropriate assessment of the implications (of the proposal) for the site in view of that site's conservation objectives.

This process is now commonly referred to as **Habitats Regulations Appraisal** (HRA). HRA applies to any plan or project which has the potential to affect the qualifying interests of a Natura site, even when those interests may be at some distance from that site.

6. The competent authority, with advice from SNH, decides whether an appropriate assessment is necessary and carries it out if so. It is the applicant who is usually required to provide the information to inform the assessment. Appropriate assessment focuses exclusively on the qualifying interests of the Natura site affected and their conservation objectives. A plan or project can only be consented if it can be ascertained that it will not adversely affect the integrity of a Natura site (subject to regulation 49 considerations).

## Advice on Habitats Regulations Appraisal relating to SPAs

7. Our advice is given to the competent authority, as required under Article 6.3 of the Habitats Directive; Regulation 48 of the Habitats Regulations; and as laid out in Revised Circular 6/95. From the information available it appears to SNH that this demonstration turbine is not connected with, or necessary for, the conservation management of either the Firth of Forth SPA or the Forth Islands SPA. Hence, further consideration is required.

## Advice on Likely Significant Effect

8. SNH considers that this demonstration project could have significant effects on the qualifying bird interests of these SPAs through disturbance during construction and decommissioning and / or through potential collision mortalities in the operational phase. There is also the possibility that birds may be displaced from foraging in proximity to the turbine during its operational phase.

9. We therefore advise that the competent authority needs to undertake an **appropriate assessment** of the potential impacts to SPA bird species and to the integrity of the designated site. We provide our advice to inform the assessment as follows:

## Advice on Appropriate Assessment

10. We highlight the potential impacts on SPA bird species and identify the plans, protocols and method statements that are needed to avoid such impacts, and to avoid any impacts to the integrity of the designated site:

## Disturbance to SPA bird species during construction and/or decommissioning

11. The SPA bird species which may be disturbed during construction activities are those which use the intertidal area:

### Firth of Forth SPA

- Bar-tailed godwit (*Limosa lapponica*)
- Curlew (*Numenius arquata*)
- Dunlin (*Calidris alpina alpina*)
- Golden plover (*Pluvialis apricaria*)
- Grey plover (*Pluvialis squatarola*)
- Knot (*Calidris canutus*)
- Oystercatcher (*Haematopus ostralegus*)
- Redshank (*Tringa totanus*)
- Ringed plover (*Charadrius hiaticula*)
- Turnstone (*Arenaria interpres*)

### Forth Islands SPA

- There are no likely significant effects to qualifying interests of the Forth Islands SPA in this regard.

12. The ES does not address this issue in any detail; it does not provide any analysis of the survey information according to tidal state or time of day, which could have helped inform our understanding of how birds are using this intertidal area. As discussed in our scoping advice we consider it would have been helpful for the ES to provide more detail on proposed

construction methods and to provide habitat mapping for this area. This has not been done, and we identify that this information will be required as part of a **Construction Method Statement** for the project to be submitted to the decision authority for consultation and agreement prior to the commencement of construction (and see further discussion in [Appendix A](#)).

13. This type of information and analysis is also required in respect of decommissioning. Due to the short operational life-span of the demonstrator turbine we advise that the **Decommissioning Method Statement** should also be drawn together prior to the commencement of construction.

14. Conditions on any consent should ensure submission of Construction and Decommissioning Method Statements which address these matters and which are subsequently implemented. If this is done and such conditions are applied, then we advise the competent authority that adverse impacts on the site integrity of the Firth of Forth SPA can be avoided.

#### **Collision risk to SPA bird species during operation of the demonstration turbine**

15. Although the ES contains collision risk modelling, default avoidance rates have been used and no account has been taken of the concern we raised about birds being attracted to the lattice tower as a perching location (raised during scoping, and see further discussion in [Appendix A](#)). The SPA bird species for which this concern is relevant are:

##### Firth of Forth SPA

- Cormorant (*Phalacrocorax carbo*)

##### Forth Islands SPA

- Cormorant (*Phalacrocorax carbo*)
- Herring gull (*Larus argentatus*)
- Kittiwake (*Rissa tridactyla*)
- Lesser black-backed gull (*Larus fuscus*)
- Shag (*Phalacrocorax aristotelis*)

16. As discussed in [Appendix A](#), the applicant will need to undertake post construction monitoring to investigate bird behaviour and the interaction of birds with the demonstration turbine: do they use it as a perching location? Is collision mortality therefore increased? We would welcome detailed discussion with the applicant in this regard so that they can prepare an adequately detailed **Post-construction monitoring plan for birds**. There is the slight possibility, dependent on timescales, that this monitoring could be combined with the applicant's bird survey work for the additional turbines (the next phase of the project) that they are proposing further offshore.

17. While we have identified the risk of collision mortality as a likely significant effect, we confirm that estimated levels of mortality (and accounting for potential bird attraction to the turbine) would not reach such magnitude as to cause adverse impacts on the population viability of bird species in the Forth Islands SPA (as listed above) or, in respect of cormorant, of its population viability in either the Forth Islands SPA or the Firth of Forth SPA.

18. Rather, we identify that this post-construction monitoring is required to inform subsequent assessments – so that we know more about the interactions between birds and this design of turbine and can therefore assess its impacts should such a turbine be located

further offshore (as discussed in Section 1.3 of the ES). The monitoring would also help to inform our understanding of the potential interactions between birds and other elements of offshore windfarm infrastructure that may utilise a lattice tower, such as met masts.

### **Displacement of SPA bird species during operation of the demonstration turbine**

19. The SPA bird species noted above in paragraph 11 could be displaced from foraging in proximity to the turbine. While this is a likely significant effect, we do not consider that displacement would reach such levels as to result in an adverse impact on the population viability of these birds in the Firth of Forth SPA, nor to result in any other adverse impacts on the integrity of the designated site.

## **APPENDIX C**

### **SNH advice on marine mammals**

1. The applicant does not fully consider the potential disturbance that could arise to marine mammals from this proposal, particularly from noisy activities during construction. In respect of section 7.3.3.6 of the ES relating to survey methodologies, we would highlight that neither the ecological nor the ornithological surveys had a focus on marine mammals, or included them as target species.

2. The “lack of records” (as referred to in section 7.3.3.6) should be clarified as relating to a lack of survey effort – with very few or no surveys for marine mammals having been undertaken in this area. In respect of the small amount of survey data that is available, we would note that while no seal haul outs have been recorded in proximity to the proposed demonstration turbine, there is seal tracking data from SMRU which indicates that individuals are, on occasion, present in the waters off Methil.

3. While the literature review on noise impacts as provided in section 7.5.2 is helpful, there are many unknowns as indicated in section 7.5.2.3 and the applicant has not undertaken a project specific noise impact assessment. While we understand that borehole drilling is a less noisy activity than percussive piling, it still does generate noise, and it is unclear how much. Such noise impacts would be additional to those arising from coastal defence works i.e. cumulative. While chapter 6 of the ES presents a noise impact assessment, it relates to noise transmission via air and does not address the issue of underwater noise from construction. We advise that inclusion of an assessment of underwater noise impacts on marine mammals will not be required as long as the applicant undertakes the mitigation detailed below.

4. The proposed Construction Method Statement and Decommissioning Method Statement should include the mitigation measures set out in the JNCC good practice guidance for piling, blasting and seismic survey activities<sup>1</sup>. A primary requirement is to employ a marine mammal observer (MMO) who conducts watches for marine mammals prior to, and during, noisy activities so as to ensure that no individuals come so close to the source point of the noise as to be at risk of injury. We note that any person employed as an MMO needs to have the relevant training from JNCC as well as relevant work experience.

<sup>1</sup> <http://www.jncc.gov.uk/page-1534>

5. Adoption of these mitigation measures will ensure that there is no significant disturbance to marine mammals, including those which are European Protected Species (EPS) i.e. cetaceans. Therefore if the applicant adopts the above mitigation then they do not also need to make an application for an EPS licence under The Conservation (Natural Habitats, &c.) Regulations 1994 (the Habitats Regulations). Please see our website for further details on licensing requirements<sup>2</sup>.

<sup>2</sup> <http://www.snh.gov.uk/protecting-scotlands-nature/protected-species/legal-framework/habitats-directive/regulations/>

## **APPENDIX D**

### **SNH Landscape & Visual advice**

1. Our comments solely relate to the scope and quality of the applicant's Landscape and Visual Impact Assessment (LVIA) which we consider to be incomplete. We would welcome a meeting with the applicant to discuss our concerns and to ensure that these are addressed in any assessments for subsequent stages of this demonstration project (i.e. the proposed turbine(s) located further offshore).

### **Methodology**

#### **Study area restricted to 15km**

2. The ES states (5.1.3) that restricting the Study Area to 15km, is an 'approach agreed with SNH'. This is not the case.

3. We agree with the caveat that the 15km study area is not 'a definitive boundary beyond which the demonstration turbine will not be seen' (i.e. visibility may extend beyond 15km). However, the ES maintains that significant effects will only be found within this 15km study area; basing this judgement on 'visibility' as the definitive factor and disregarding the many other factors that determine significance, for example the type of receptor, and type of effect. The ES therefore introduces circular reasoning to the basis of assessment: restricting the study area to a visual catchment pre-determined as being significant.

#### **Landscape character assessment underestimates the development's impacts**

4. The ES methodology correctly sets out to examine Fife's Landscape Character, within the study area, and describes them at the Regional Character Area scale. However, Landscape Character Types (LCTs) are described only where the ZTV is interpreted as showing that the proposed turbine will be visible. Impacts in relation to the non-visual, inherent characteristics and features of landscapes have not been considered.

5. An example is the assessment in the ES of the demonstration turbine's impacts on Largo Law – a pronounced volcanic hill and a prominent local and regional landmark. Because the applicant's landscape character assessment is formulaic, Largo Law is only considered from within the 'Largo Unit' (Lowland Den Unit 51, 5.4.3.3). The ES does not consider Largo Law as a backdrop to other LCTs, as a distinctive Fife coastal landmark or as a prominent skyline from the south. Therefore the scale and location of the turbine (how it is perceived) in relation to Largo Law has not been assessed.

#### **There is minimal assessment of the coast/seascape**

6. Our scoping advice suggested defining coastal character. This has not been done and the ES gives scant consideration to the relationship between landscape character (the Coastal Hills, Lowland Dens and Coastal Flats LCTs) and the seascapes of the Firth of Forth. This is an omission, particularly in respect of Fife where the wide range of coastal types within a relatively small area majorly defines the region's identity.

7. We highlight that viewpoint assessment / analysis is only one part of overall LVIA and we draw the applicant's attention to paragraphs 2.13 and 2.14 of the Guidelines for Landscape and Visual Impact Assessment.

## **There is minimal assessment of impacts on beaches**

8. As we highlighted in our scoping advice, the beaches of the Fife and Lothian coastlines are of considerable amenity value, well-visited and enjoyed by many. Impacts on beaches have not been properly addressed in the ES with the section on 'Settlements, Routes, Features, Attractions' primarily concerned with visual impacts on settlements and the Fife Coastal Path. As an example, a major oversight is consideration of Largo Bay. The ES mentions it as lying on the Fife Coastal path, but does not address its importance as a major coastal access point and as a valued amenity in its own right.

## **Turbine scale**

9. There is no analysis in the ES regarding the comparative scales of vertical man-made structures (marked in the landscape) and the relative heights of landmark hills. This would have helped people understand / conceptualise the relative height of the demonstration turbine. A prime function of the ES is to identify key landscape and visual characteristics of the area (such as landform and elevation). Their sensitivity to and capacity for change, will help to inform decisions on size.

## **Visual Assessment**

### **Restricted assessment of visual impacts on Forth's south shores**

10. Because the study area has been restricted to 15km, the ES does not consider the importance of the Lothian coast. Please see our scoping response in this regard. We also advised that VP 21 (Gullane) be taken from the beach in order to highlight the recreational views enjoyed by residents and tourists to this popular coastline.

### **Over-reliance on visualisation materials in interpreting visibility and significance**

11. The limitations of photomontages should be recognised and acknowledged in the ES (please see our good practice guidance on the Visual Representation of Windfarms for further advice – paragraphs 7 and 11 in particular). We note that the quality of photographs and photomontages is very important, and that the visualisations in the ES do not always achieve the following standards:

- photographs should ideally be front or side lit; not taken directly into the sun;
- all images used should be correctly exposed and sharp, with a satisfactory level of brightness and contrast;
- turbines should be shown in a colour that shows up clearly against both the sky and the background landscape as appropriate.

## **Annex 6.**

### **Methil Offshore Wind Demonstrator Site – SNH S36 Addendum** **SNH Response - 16 December 2010**

Marine Scotland  
Licensing Operations Team  
PO Box 101  
375 Victoria Road  
Aberdeen  
AB11 9DB

For the attention of:  
By email.  
Your Ref:  
Our Ref: CNS REN OSWF DS METHIL  
Date: 16 December 2010

Dear Sirs

#### **ELECTRICITY ACT 1989**

#### **THE ELECTRICITY WORKS (ENVIRONMENTAL IMPACT ASSESSMENT) (SCOTLAND) REGULATIONS 2000**

#### **ADDENDUM TO SECTION 36 APPLICATION FOR A DEMONSTRATION WIND TURBINE AT FIFE ENERGY PARK, METHIL**

Thank you for your recent consultation over this Section 36 addendum. It concerns the relocation of the proposed demonstration turbine at Fife Energy Park in Methil.

We welcome the further mapping which clearly presents the revised location for the proposed turbine. I confirm that this revision – as presented in Figures 1.2, 3.3, 6.1 and 7.2 of the addendum – does not cause us to change the advice we previously submitted on this application. Please continue to refer to our response letter of 14 June 2010 for our detailed advice on this proposal.

If you require any further information or advice from SNH about this matter then please contact me on.