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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

I refer to your letter of December 2009 requesting a scoping opinion under the Electricity Works (Environmental Impact Assessment)(Scotland)(EIA) Regulations 2000 and Regulation 13 of the Marine Works (Environmental Impact Assessment) Regulations 2007 enclosing a scoping report dated November 2009.

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 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 addition, the developer is required to give consideration to Scottish Planning Policy 6 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)(EIA) 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 ES in accordance with regulations and in formulating this opinion, Scottish Ministers have consulted the planning authority, Scottish Natural Heritage, Scottish Environment Protection Agency, and other relevant consultees. If we subsequently receive responses, we will forward them directly to you.

Please note that the EIA process is vital in generating an understanding of the biological and physical processes that operate in the area and may be impacted by the proposed wind farm. 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 development of 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 and 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. We 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 which has been collated from expert consultees whom the Scottish Government has consulted. It should provide clear advice from consultees and enable developers to address the issues they have identified and address these in the EIA process and the Environmental Statement associated with the application for section 36 consent.

3. Description of your development

Offshore elements

From your submitted information it is understood, the proposed development is for a proposed offshore wind farm with the approximate electrical output of up to 12 Megawatts (MW) located off Fife Energy Park, Methil, Fife. The development is proposed to consist of two 6MW turbines.

4. Relevant Legislation & Planning Policies

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:

Marine Scotland & Licensing

Marine Scotland 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, introduced to Parliament on April 29, 2009 and which 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 adminstrator 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 and section 34 of the Coast Protection Act 1949 will be incorporated into the streamlined marine licensing system.

National & Scottish Planning Policies

Under planning reform, Scottish Government is proposing to amalgamate the series of Scottish Planning Policies (SPPs), National Planning Policy Guidelines (NPPGs) and Planning Advice Notes (PANs). The SG Planning Division is the key contact with whom to discuss these planning policies and the intended updates. Listed below are the current NPPGs, SPPs and PANs that are generally relevant to offshore windfarms (including both onshore and offshore elements).

- National Planning Framework for Scotland
- SPP1: The Planning System
- SPP6: Renewable Energy
- SPP7: Planning and Flooding
- SPP15: Planning for Rural Development
- SPP17: Planning for Transport
- SPP 21: Green Belts
- NPPG5: Archaeology and Planning
- NPPG14: Natural Heritage
- NPPG18: Planning and Historic Environment
- PAN42: Archaeology – Planning Process and Scheduled Monument Procedures
- PAN45: Renewable Energy Technologies
- PAN 50: Controlling the Environmental Effects of Surface Mineral Workings
- PAN 51: Planning, Environmental Protection and Regulation
- PAN56: Planning and Noise
- PAN58: Environmental Impact Assessment
- PAN60: Planning for Natural Heritage
- PAN68: Design Statements

• PAN69: Planning and Building Standards Advice on Flooding
• PAN 75: Planning for Transport
• PAN 79: Water and Drainage
• PAN 81: Community Engagement – Planning with People.Development in the Countryside and Green Belts: SDD circular 24/1985• Habitats Directive: SOED Circular 6/95 (as revised June 2000)
• Scottish Government Interim Guidance on European Protected Species, Development Sites and the Planning System.
• Marine Guidance Note 275 (M)

Local Authority Guidance

It will be necessary to have regard to Development Plans (currently being prepared – SESplan and TAYplan) and any Supplementary Planning Guidance that has been produced by the relevant local authority (or authorities). For this offshore wind proposal the key local authority contact is Fife Council. The St Andrews & East Fife Local Plan 2009 and Fife Structure Plan 2006 - 2026 should be followed.

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[5] 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. Most recently, SEA 8 included consideration of the potential for offshore wind energy to achieve 25GW of additional generation capacity by 2020[7]. 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.

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.org.uk

6. General Issues

Economic Benefit

The concept of economic benefit as a material consideration is explicitly confirmed in SPP 6. 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 (ES)

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 subsequent components/scenario's procured after the ES is submitted would be subject to further environmental assessment and public consultations period if deemed to be significant.

Marine Scotland recommend that the EIA and licensing processes are proportional to the concerns posed by the development based on the scale of the developments that will follow. Therefore, due to the scale of the Methil development, the EIA should focus in detail on those aspects of the environment/resource/other legitimate users of the sea that are most susceptible to the construction, operation, maintenance and decommissioning/redeployment. In order to provide the best advice it would be very useful if the developer would confirm the next stage, if any, of the development after the redeployment of turbine 1.

Site selection and alternatives

The Developer will be aware of a previous planning approval for an 81m high wind turbine to the north east on a strip of ground lying between Dock No3 and the sea wall (planning ref 07/03447/CFULL). Fife Council would therefore advise that one of the key issues which should be fully considered in the environmental statement is the potential cumulative impact a further turbine would have on the environment at this location in terms of visual disruption, shadow flicker, telecommunication/aviation and potential noise nuisance. Furthermore, as the turbine would appear to be adjacent to a SSSI, SPA and Ramsar site, the cumulative impact a further turbine could have on sea bird populations within the protected site in terms of flight paths, nesting and feeding areas should be fully explored and any mitigation measures necessary proposed within the statement.

SNH notes that there are two Section 36 applications proposed 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, SNH recommend that this ES includes details of cable landing points and onshore infrastructure for all three proposed turbines and not just turbine A.

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).

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

Description of the Development

Decommissioning

Marine Scotland point out that there is no information on the decommissioning/redeployment methodology. The decommissioning operation will be regulated by DECC but no mention is made in the document about their involvement. The development should also mention the proximity of the Methil sea disposal site as the vessel interaction should be considered. Has the area been used for the disposal of munitions?

8. Baseline Assessment and Mitigation

Design, Landscape and the Built Environment

Fife Council state that advice has been sought from SNH but no response to date. We would advise that the use of a colour which helps to mitigate the impact of the turbine against the backdrop of sea and sky should be considered.

SNH believe that, as the development of windfarms has already had a major impact on many landscapes in Scotland, 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.

In defining coastal character, SNH recommend the use of methodology developed for aquaculture assessment in Scotland. This is believed to be a suitable and convenient character assessment methodology for coastal and inshore renewables proposals.

SNH note that the scoping report refers to the SNH Seascapes study. 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.

Construction

Marine Scotland recommend 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 two marine turbines and cables. Existing surveys or data may be acceptable if they can provide sufficient detail of the species and habitats present

SNH state that proposed construction methods should include information on project management and timetabling – the phasing / sequencing of proposed works – especially if the developer has identified the timing of works as a mitigation measure for environmental, navigational, or other effects. Information should be provided on the construction equipment to be used, and how this will access each proposed turbine location (locations A, B&C). In particular, details should be provided on proposed construction methods in relation to onshore infrastructure including cabling and access arrangements.

Mammals and Seabirds

RSPB recommend that the Environmental Statement should provide a clear description of the methodology of any bird .surveys that are undertaken... Section 6.9.3 of the Scoping Report indicates that bird surveys have already started, and a bird survey grid is presented in Figure 1, yet it is not apparent what these surveys involved. Data gathered for the ES needs to be collected in such a way that it would be able to inform the Approriate Assessment.

The main purpose af an Appropriate Assessment is for the competent authority, to ascertain whether it can reach the conclusion that there will be no adverse impact on the site integrity of both the Firth of Forth and Forth Islands SPAs.
The generic definition of site integrity provided in Scottish Office Circular 6/1995 (Revised June 2000), which states:

"The integrity of a site is the coherence of its ecological structure and function, across its whole area, that enables it to. sustain the habitat, complex of habitats and/or levels of populations of the species far which it was classified." (Annex E, Appendix A, Paragraph 2)

Regular bird distributions and numbers on estuaries are determined by a range of fundamental factors including season, the density and distribution of invertebrate prey and availability of invertebrate prey under differing tidal states. Bar-tailed godwit, for example, is a highly mobile estuary feeder which moves in large flocks to exploit widely separated areas under different tidal conditions. However, regular distribution and numbers will be modified by temporal or short-term factors such as weather conditions and disturbance. Under these conditions, birds need to relocate to areas of equal or near-equal value. Site integrity is affected if the site loses the ability to support qualifying populations under all of these circumstances, however temporary. It is therefore important to get a comprehensive understanding of how birds use a site under different conditions, through a combination of data searches and survey work. RSPB would be happy to provide detailed advice on the nature these surveys should take if that were desirable.

Archaeology and Cultural Heritage

National Policy for the Historic Environment is set out in:

- Scottish Planning Policy (SPP) 23 Planning and the Historic Environment at: http://www.scotland.gov.uk/Publications/2008/10/28135841/0
- 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
- Technical Guidance Note* text available at: http://www.historic-scotland.gov.uk/index/heritage/policy/memorandumofguidance.htm

Amongst other things, SPP 23 stresses that scheduled monuments should be preserved in situ and within an appropriate setting and confirms that developments must be managed carefully to preserve listed buildings and their settings to retain and enhance any features of special architectural or historic interest which they possess. Consequently, both direct impacts on the resource itself and indirect impact on its setting must be addressed in any Environmental Impact Assessment (EIA) undertaken for this proposed development.

The comments in this response relate to our statutory remit as advisors to the Ministers on those aspects of the historic environment considered nationally important. We have now checked the submitted information in relation to Historic Scotland's historic environment interests at the national level, that is:

- scheduled monuments and their settings
- category A listed buildings and their settings
- gardens and designed landscapes appearing in the Inventory
- designated wreck sites (Protection of Wrecks Act 1973)

Information on the location of all scheduled monuments, listed buildings, gardens and designed landscapes and designated wreck sites can be obtained from www.PASTMAP.org.uk This is a free, interactive website produced jointly by Historic Scotland and the Royal Commission on the Ancient and Historical Monuments of Scotland which allows anyone with internet access to display and search data on Scotland's historic environment.

The scoping assessment below relates to the potential impacts of the proposed development in relation to both the marine and terrestrial assets of national importance. It is noted that the location of the subsea cabling, associated with turbine no. 2 is not identified within the Scoping Report. This should be addressed within the Environmental Statement.

Potential Direct Impacts

In this case, Historic Scotland confirm that there are no scheduled monuments, category A listed buildings or gardens and designed landscapes within the search area. In addition, we can confirm that there are no designated wreck sites within the identified search area.

The developer may wish to seek specific advice on the treatment of cultural heritage in the marine environment in The Joint Nautical Archaeology Policy Committee (JNAPC) Code of Practice for Seabed Development. This can be found at: http://www.thecrownestate.co.uk/jnapc_code_of_practice_2

Impact on Setting

Historic Scotland can confirm that there are the following designations of national importance within the vicinity of the proposed scheme:

Schedule Monuments
- Macduff's Castle & dovecot (index no. 860);
- Wemyss Caves,caves (index no. 817);
- Maiden Castle,motte,Windygates (index no. 861);
- Standing Stones of Lundin, Lundin Links (index no. 797).

Category A Listed Buildings
- Durie House (HB no. 16699);
- Wemyss Castle (HB no. 16709).

Gardens and Designed Landscapes
- Wemyss Castle.

Any ES to be produced for this development should consider impacts upon these assets and any others in the wider area which may experience significant impacts. It would be helpful if such an analysis contained appropriate visualisations such as photomontage and wireframe views of the development in relation to the sites and their settings, illustrating views both towards and from the proposed development.

On the basis of the information supplied, Historic Scotland are broadly content that the setting of the identified assets shall not be significantly impacted upon by the proposed development. Seeing the full ES will enable Historic Scotland to thoroughly examine the cultural heritage assessment and the methodology employed to address potential impacts on historic environment assets of national importance in the vicinity of the development. This assessment should contain a full appreciation of the setting of the heritage assets and the likely impacts on those settings.

Historic Scotland note that there are certain unscheduled archaeological sites within the search area. The relevant Council Archaeological Service will be able to provide information and advice on sites of regional and local importance, such as these sites of unscheduled or unrecorded archaeology. In this case this is Douglas Speirs, Fife Archaeologist, Fife Council, Town House, 2 Wemyssfield, Kirkcaldy, KY1 1XW.

In addition, the Scoping Report identifies that there are also undesignated wrecks within the vicinity of the search area. It is strongly recommended that the impact on these be assessed within the ES, with appropriate involvement of archaeological expertise and in consultation with the Council Archaeological Service.

This assessment should consider the significance of potential impacts that might be caused by elements of the development on any archaeological features, such as:

- direct impacts to marine historic assets within and beyond the proposed development site which could result from permanent or temporary mooring installation, or the construction of support structures, slipways, and piers.
- indirect impacts to historic assets on the seabed or at the coast edge within the proposed development area and possibly beyond which may be caused by alteration to tidal currents and sedimentary regimes, and by changes to the chemical balance of the water and seabed sediments.

Historic Scotland would recommend reference to the relevant industry guidance on this matter (see Cowrie 2008: Guidance for assessment of Cumulative Impacts on the Historic Environment from Offshore Renewable Energy). This can be sourced at:
http://www.offshorewindfarms.co.uk/Assets/cowrie_ciarch%20web.pdf. More generic sector guidance can be sourced at:
http://www.offshorewindfarms.co.uk/Assets/4Archaeological%20guidance%20final%20version.pdf .

The developer should refer to the advice contained in Historic Scotland's setting annex and the technical guidance note on setting. These documents are available at:

http://www.historic-scotland.gov.uk/scoping_of_development_proposals_2009.pdf.

http://www.historic-scotland.gov.uk/managing-change-consultation-setting.pdf

SNH note that 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 inviews from this south shore.

SNH recommend that the ZTV (overlay) should extend to the edge of the map base that includes the recommended ZTV distance.
SNH 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, SNHy suggest that some currently listed could be omitted where they lie within the same range, for example, either VP4 or VP5; VP8 or VP9.

SNH 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. SNH 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.

Navigation

The Environmental Statement should supply detail on the possible the impact on navigational issues for both Commerical 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

Marine and Coastguard Agency (MCGA) recommend that a Navigational Risk Assessment is submitted in accordance with MGN 371 (and 372) and the DTI/DfT/MCA Methodology for Assessing Windfarms. Particular attention should be paid to 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, MCGA would prefer to see shipping or navigation identified as a separate Environmental subject within the EIA structure.

Scottish Canoe Association would ask for consideration to be given to the safety of kayaks & other small craft navigating in the area. In particular there would be concern if the development were to result in tidal flows close to shore being altered and/or landfall facilities leading to additional dangers for small craft navigating along the coast off Methil.

Aviation

In the wake of recent consultation with the aviation organisations such as NATS, BAA, CAA, MOD etc, it is clear that wind farm proposals can impact significantly on primary, secondary or weather radar stations and thus affect operational safety. Developers are encouraged to engage with these organisations and airport operators at an early stage in the design process, to establish the potential impacts and agree acceptable technical solutions. Where actual or potential conflicts exist, it is important that a solution is identified and that the relevant consultee agrees to that solution being realised within a suitable timescale.

A link to relevant aviation guidance is available at the following website link, however it should be note that this guidance is being reviewed;
http://www.berr.gov.uk/files/file17828.pdf

NATS En Route Plc ("NERL") is responsible for the safe and expeditious movement in the en-route phase of flight for aircraft operating in controlled airspace in the UK. To undertake this responsibility NERL has a comprehensive infrastructure of radars, communication systems and navigational aids throughout the UK, all of which could be compromised by the establishment of a wind farm. In this respect NERL is responsible for safeguarding this infrastructure to ensure its integrity to provide the required services to Air Traffic Control (ATC). In order to discharge this responsibility NERL assess the potential impact of every wind farm development in the UK which have applied for planning approval.

NERL offer services to assist in pre-planning for wind farm developments. Details of these services are available on http://www.bwea.com/aviation/nats.html or by contacting NERL directly on NATSSafeguarding@nats.co.uk or writing to:

NERL Safeguarding – Mailbox 27
NATS - CTC
4000 Parkway
Solent Business Park
Whiteley
Hampshire
PO15 7FL

NATS are unable to evaluate the proposal until the ground to blade tip height and OS Grid Reference for each individual wind turbine (eastings and northings) is received.

The Wind Energy Team at Defence Estates is the focal point for all wind farm proposals in MOD. The team seeks to work with industry at the earliest stages of proposed development to minimise the impact on Defence, to ensure public safety is not compromised, and maximise the likelihood of planning success. Each pre-planning proposal is assessed on a case by case basis by up to 10 technical advisors. Some of the main concerns the MOD has are interference with Air Defence Radar and Air Traffic Control Radar, plus the creation of obstacles in Low Flying Areas, which negate the usefulness of the training

undertaken there. Aviation safety lighting should also be considered through consultation with the aviation authorities and the relevant planning authority.

The pre-planning consultation form traditionally found at annex E of the Wind Energy and Aviation Interests – Interim Guidelines should be completed and e-mailed to Defence Estates at modwindsystems@de.mod.uk

Civil Aviation Authority Directorate of Airspace Policy (DAP) is the civil aviation regulatory focul point for all wind farm proposals. DAP seeks to work with industry at the earliest stages of proposed development to establish potential civil aviation issues associated with any particular wind turbine proposal. The best means by which to initiate the aviation related consultation process is via the **completion and submission of an associated aviation pre-planning proforma** in line with the process described within the DTI/BERR guidance document 'Wind Energy and Aviation Interests – Interim Guidelines'. Generic CAA policy and guidance on wind turbines is set out within Civil Air Publication 764, available at http://www.caa.co.uk/docs/33/Cap764.pdf.

Furthermore, developers should demonstrate that a solution to potential aviation issues is either agreed or well advanced, **prior to** submission of the application.

Civil Aviation Authority (CAA) note that, like any wind turbine development, the proposed subject development has the potential to impact upon aviation-related operations; the Department for Trade and Industry (DTI – now the Department for Energy and Climate Change)-sponsored document 'Wind Energy and Aviation Interests' and Civil Air Publication 764 refer . The related need to establish the scale of the potential impact of the Methil development (or indeed any other wind turbine related proposal) is evident.

In an effort to establish the scale of any potential impact upon aviation activity that might be caused by the Methil development, Community Windpower and the CAA have been involved in related pre-planning consultation. During July 2009 CAA confirmed that they had no site-specific observations. That remains the case.

However, more generically, all parties should be aware that:

- There might be a need to install aviation obstruction lighting to some or all of the associated wind turbines should development proposals be progressed.

This comment is made specifically if there were concerns expressed by other elements of the aviation industry, ie the operators. For example, if the Ministry of Defence (MoD) or a local aerodrome had suggested such a need, the CAA (sponsor of policy for aviation obstruction lighting) would wish, in generic terms, to support such a claim. The CAA would do so if it could reasonably be argued that the structure(s), by virtue of their location and nature, could be considered a significant navigational hazard. That said, if the claim was clearly outside credible limits (ie the proposed turbine(s) was/were many miles away from an any aerodrome or it/they were of a height that was unlikely to effect even military low flying) the Authority would play an 'honest-broker' role. Whilst responsibility

for establishing further lighting related comment rests with the developer, in isolation, the CAA would not make any related case or recommendation for aviation lighting.

If the application relates to an offshore development there will be a mandated lighting requirement; Article 220 of the UK Air Navigation Order refers.

- An anticipated amendment to international aviation regulatory documentation will require 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. As with the potential need for lighting, in isolation, the CAA would make no special case for marking.

- 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 Agency.

- The number of pre-planning 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.

- The relative perspectives of both the MoD and NATS should be established and any related concerns addressed.

- 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 Environmental Impact Assessment (or similar) should mention and, where applicable, address the issues highlighted.

Fife Council recommend that this environmental statement include any technical reports relating to the potential impact of the wind turbines on any signals operating in the air space around the site. This includes civil aviation interests, television, radio and phone signals and also any emergency signals operated by the Police and other emergency services operating in Fife.

9. Ecology, Biodiversity and Nature Conservation

Designated sites

Marine Scotland note that the proximity of the SPA will probably dominate the environmental concerns however progress has already been made by the developer liaising with SNH leading to the collection of survey data. Navigation may become a concern during Phase 2 & 3 but it is minimal with Phase 1, this will be addressed through section 34 of the Coast Protection Act. With the proximity of the first turbine 20m offshore visual impact on the local community, particularly in Phase 1, is very important. The depth of water will be very shallow approximately 10m or less depending on the tidal state. There is evidence for coastal erosion at Methil and the developer needs to adequately secure the coastal defence to ensure stability of the while FEP site on the adjacent foreshore. Taking into consideration scouring around the base of turbine 1 and factor it into the foundation design. However, the precise nature of the foundations is not discussed in any detail. If there is uncertainty about the foundation design then each option should be discussed so that the potential for the foundation design to impact on the environment can be properly assessed

Overall MS-LOT is satisfied that 2-B Energy has covered the main potential impacts on biodiversity for this project within 'The Potential impacts table'. The following comments refer to the planned section 6.9 (Biodiversity) of the ES. There should be a map showing the boundaries of the SPA included.

SNH point out that the 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.

The designations in this area relate to the wintering shorebirds that use the coast. In respect of Habitats Regulation Appraisal (HRA) for the SPA SNH 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. SNH 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. 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.

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.

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

Species

The ES needs to show that the applicants have taken account of the relevant wildlife legislation and guidance namely, Coast Protection Act 1949 section 34, Council Directives on The Conservation of Natural Habitats and of Wild Flora and Fauna, and on Conservation of Wild Birds (commonly known as the Habitats and Birds Directives), the Wildlife & Countryside Act 1981, the Nature Conservation (Scotland) Act 2004, the Protection of Badgers Act 1992, the 1994 Conservation Regulations, 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 SG 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 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 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.

SNH recommend that the biodiversity assessment considers whether there are UKBAP species present within the vicinity of the proposals e.g. sea grass beds. The full list of Priority UK BAP Species and Habitats can be found on http://www.ukbap.org.uk/NewPriorityList.aspx including lists marine, and coastal BAP features. UK BAP species of particular importance within the Firth of Forth include:

It may be useful to consult both the MarLIN as well as the NBN Database as the quality of marine data differs for the locations of these features. On top of this MarLIN gives ‘sensitivity’ and ‘recoverability’ information for marine features

(http://www.marlin.ac.uk/.) This latter information will help hone effective mitigation methods for these features that could stand this project as an example of good practice.

At this stage it is not clear whether any turbine components will arrive by sea. Clarification on protocols to be followed to ensure that no marine non-native species are introduced into this area either during the development of this project or during the operational phase of the wind farm should be provided. This is standard procedure for terrestrial developments and should be considered for this marine proposal.

Birds

RSPB Scotland are concerned that disturbance may result in reduced feeding rates and increased mortality in birds, particularly when energy budgets. are tight, for example, during severe weather conditions. Disturbance may lead to the temporary or permanent displacement of birds from an area. The Environmental Statement will need to identify all potential impacts of the development on SPA species from both the construction and operational phases of the development. The visits to Turbine A for the required certification and testing, for example, may cause disturbance to birds on the intertidal areas whereas visits to turbines B and C may cause additional disturbance to rafting or feeding birds on the sea.

SPA birds moving between different sectors of the SPA may be at risk from collision with the turbines. The majority of bird movements are likely to be birds flying parallel to the coastline or flying over the sea. In order to identify and assess collision risk, vantage point watches will need to be undertaken to identify the frequency of bird flights over the survey area, the relevant use of different parts of the survey area, and the proportion of flights within the collision risk zone. Further advice on survey methods to assess collision risk from onshore wind farms, much of which is relevant in the near shore environment, can be found at http://www.snh.org.uklpdfs/strategy/renewable/bird_survey.pdf. The Environmental Statement will need to address the implications for the collision risk modelling of having a 2-blade rather than the more conventional 3 - blade design.

In order to comply with The Conservation (Natural Habitats) Regulations, as amended (The Habitats Regulations), it is necessary to identify all adverse impacts of the European sites and their populations; either alone or in combination with other plans and proposals which have the potential to impact on roosting and feeding birds in this part of the Forth. Other development proposals throughout the environs of the Firth of Forth also need to be considered to identify and cumulative effects of multiple plans or projects. Of particular note are the planned Round 3 and Scottish Territorial Waters offshore wind developments iin the outer Forth.

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 SNH believe 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. 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. SNH 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.

SNH would welcome receipt of survey methodologies, and any analysis of the data that has been collected so far. Shorebased vantage point watches could provide adequate coverage of proposed locations B&C offshore, however, more detail will be needed on the developer's survey methodologies to be certain.

SNH 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.

Mammals

SNH 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 Unit40 whilst other cetacean sightings may be obtained from SeaWatch41. It is advised 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, SNH 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.

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 SNH's 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 of SNH's response, 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.

Fish

Marine Scotland state that the proposed development will need to consider potential impacts on migratory fish including salmon, sea trout, lamprey and eels. The potential for offshore renewable projects to impact on migratory fish will vary depending on the design and location of the development in relation to migratory routes for adults and juveniles. Potential impacts may include physical or avoidance reactions at both the individual and population level and there may also be avoidance due to electromagnetic sensitivity at both adult and juvenile stages. In cases where there is uncertainty over potential impacts it may be necessary for the developer to implement a monitoring strategy to assess the influence on salmonid fish populations

Sub-tidal benthic ecology

SNH 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. It is recommended 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. 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 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. SNH 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.

SNH advise 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. SNH 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. It is recommended 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.

SNH 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.

10. Water Environment

The ES should contain detailed statements of the nature of the hydrology and hydrogeology of the site, and of the potential effects the development on these. Developers should be aware that wind farm developments will have considerable construction implications and these can be conducted without proper regard or understanding of the potential impacts on hydrology, water courses, water quality, water quantity and on aquatic flora and fauna. The assessment should include statements on the effects of the proposed development at all stages on;

- Hydrology.
- Water Quality and quantity.
- Flood Risk (demonstrating compliance with Scottish Planning Policy).

The high rainfall often experienced at proposed wind farm sites means that run-off, high flow in watercourses, and other hydrological and hydrogeological matters require proper consideration within the ES.

Hydrological and hydrogeological issues should be addressed within the ES, and the following hydrological baseline information should be included.

- Long term average monthly rainfall figures.

Where the project includes significant watercourse engineering works, then SEPA would expect the following information to be included within the ES for at least a typical watercourse within the development area:

- Flood flow statistics - the flows for the Mean Annual Flood, 1:100 and 1:200 year return period.

- From a flow duration curve, the mean daily flow and Q95 flow.

- Methods used to calculate these must be identified; if non-standard methods are used, these should be described in detail with rationale for use.

Impacts on watercourses, lochs, groundwater, other water features and sensitive receptors, such as water supplies, need to be assessed. Measures to prevent erosion, sedimentation or discolouration will be required, along with monitoring proposals and contingency plans.

The applicant should refer to SEPA policy on groundwater which can be found at www.sepa.org.uk/pfd/policies/19/.pfd which will assist in identifying potential risks. It should also be noted that 1:625000 groundwater vulnerability map of Scotland often referred to in Environmental Statements has been superseded by the digital groundwater vulnerability map of Scotland (2003) and the digital

aquifer map of Scotland (2004) and it is the information used on these newer maps, available on request from SEPA, that should be used in any assessment.

If culverting should be proposed, either in relation to new or upgraded tracks, then it should be noted that SEPA has a policy against unnecessary culverting of watercourses. Schemes should be designed to avoid by preference crossing watercourses, and to bridge watercourses which cannot be avoided. Culverting is the least desirable option.

The ES must identify all water crossings and include a systematic table of watercourse crossings or channelising, with detailed justification for any such elements and design to minimise impact. The table should be accompanied by photography of each watercourse affected and include dimensions of the watercourse. It may be useful for the applicant to demonstrate choice of watercourse crossing by means of a decision tree, taking into account factors including catchment size (resultant flows), natural habitat and environmental concerns.

Culverts are a frequent cause of local flooding, particularly if the design or maintenance is inadequate. The size of culverts needs to be large enough to cope with sustained heavy precipitation, and allow for the impact of climate change. This must be taken into account by developers and planning authorities. SPP7 and PAN69 provide more information on this aspect.

Measures to avoid erosion of the hillside associated with discharge from road culverting need to be set out in the ES.

All culverts must be designed with full regard to natural habitat and environmental concerns. Where migratory fish may be present (such as trout, salmon or eels) the river crossing should be designed in accordance with the Scottish Executive guidance on River Crossings and Migratory Fish. This guidance can be found on the Scottish Executive website at: www.scotland.gov.uk/consultations/transport/rcmf-06.asp

Where the watercourse is used as a pathway by otters and other small mammals, the design of culverts will need to be modified to accommodate this.

The need for, and information on, abstractions of water supplies for concrete works or other operations should also be identified in the ES.

SEPA requests that evidence should also be provided to demonstrate that the proposals have been designed to minimise engineering works within the water environment, including crossing watercourses. Further to this, SEPA wishes to highlight the following national planning policy guidance and legislative aims.

National Planning Policy Guidance 14 ‘Natural Heritage’ Paragraph 55 states “Lochs, ponds, watercourses and wetlands are often both valuable landscape features and important wildlife habitats, and planning authorities should seek to safeguard their natural heritage value within the context of a wider framework of water catchment management.”

In addition, where water abstraction is proposed, SEPA requests that the ES assesses whether a public or private source is to be utilised. If a private source is to be utilised, the following information should be included within the ES to determine the environmental acceptability of the proposals.

- Source i.e. ground water or surface water;
- Location i.e. grid ref and description of site;
- Volume i.e quantity of water to be extracted;
- Timing of abstraction i.e. will there be a continuous abstraction?;
- Nature of abstraction i.e sump or impoundment?;
- Proposed operating regime i.e details of abstraction limits and hands off flow;
- Survey of existing water environment including any existing water features; and
- Impacts of proposed abstraction upon the surrounding water environment.

Although it is appreciated that many of the issues highlighted above will be scoped out during the EIA process they are important to consider. Equally, the applicant should be aware that the drilling activity does not fall under Water Environment (Controlled Activities) Regulations (CAR) and therefore would not require authorisation from SEPA as the proposal is within coastal waters.

Hydrology and Hydrogeology

SEPA advise that the ES include a dedicated pollution prevention section. All potential pollution risks associated with construction, operation and decommissioning of the proposals and all aspects of site work that might impact on the marine environment should be systematically identified, as well as preventative measures and mitigation.

Sections 6.17.1 and 6.17.2.4 refer to the SEPA National Water Quality Classification 2004. This is now out of date and has been replaced with the new Water Framework Directive classification (http://www.sepa.org.uk/water/river_basin_planning.aspx).

As described in the scoping report much of the coastline in the vicinity of the proposals has been modified by coastal development in the past. The ES should consider the cumulative impacts of this and other developments on the coastal hydrology of the area. EC guidance defines cumulative impacts as "impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project" (http://ec.europa.eu/environment/eia/eia-studies-and-reports/guidel.pdf).

Under the Water Framework Directive (WFD) the UK is now required to manage hydromorphological change in all surface water bodies to ensure that they achieve 'Good Ecological Status (GES)' and that there is no deterioration in status. This includes the consideration of hydromorphological pressures in transitional and coastal water bodies. In response to this a simple methodology to assess cumulative impacts in line with WFD objectives has been developed.

The methodology uses a concept of 'system capacity' to measure impacts to morphological conditions.

The cumulative assessment should consider the Methil proposals alongside the existing coastal development already present within the Elie to Buckhaven water body. The River Basin management Planning (RBMP) Web Mapping Application available on SEPA's website (http://gis.sepa.org.uk/rbmp/) shows the Water Framework Directive water body boundaries for transitional and coastal waters and provides further water body classification information. Please contact SEPA for further guidance on the assessment methodology.

Further information on regulatory and legislative guidance relating to coastal hydrology can be found on the Scottish Government website at (http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Infrastructure/Energy-Consents/Marine-Development-Guid).

The following document provides a very comprehensive summary of the data sets available for the characterisation of Scottish coastal waters.

- A Review of the Sources and Scope of Data on Characteristics of Scottish Waters. An Assessment of the Adequacy of the Data and Identification of Gaps in Knowledge, Mike Robertson & Ian Davies, March 2009 available http://www.frs-scotland.gov.uk/FRS.Web/Uploads/Documents/Int0609.pdf.

SNH note that this is an actively eroding stretch of coastline and it is recommended that further thought is given to the possibility of effects on coastal processes, including any impacts to existing coastal defences. SNH recommend that a coastal geomorphologist is employed to help inform the discussions over engineering and construction.

11. Other Material Issues

Waste

Potential requirement for waste management licences or licensing exemptions in relation to waste disposed to or from borrow pits should be discussed at an early stage with SEPA as decisions on waste management are likely to affect site design and layout.

SEPA advise that the ES should identify all of the waste streams (such as peat and other materials excavated in relation to infrastructure) associated with the works. It should demonstrate a) how the development can include construction

practices to minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials and b) how waste material generated by the proposal is to be reduced and re-used or recycled where appropriate on site (for example in landscaping not resulting in excessive earth moulding and mounding).

Further to the above advice, SEPA would like to highlight the use of site waste management plans which SEPA are now seeking on all large scale construction projects and which the applicant should consider during the formulation of the ES. In SEPA's experience, waste management is becoming an increasing issue on large scale projects.

Coherent consideration should be given to the handling, use, short term storage and final disposal of surplus material, including peat and soils, and to waste minimisation and management. Should it be proposed that peat should be used at depth to restore excavations such as borrow pits, the applicant would need to demonstrate that this could be done without the release of carbon through oxidisation, and without risk to people and the environment. Please note that waste peat or soil from excavations spread on this land would not necessarily be to ecological benefit; if excavated peat or soil is to be used in landscaping the site, then this should be included in the plans, and not dealt with in an ad-hoc fashion as it arises.

SEPA requests that the ES gives consideration to a full site specific Site Waste Management Plan (SWMP). Paragraph 51 of the Scottish Planning Policy (SPP10) on Planning for Waste management, promotes the use of Site Waste Management Plans (SWMP) with all new planning applications. The SWMP should detail the measures for managing and minimising waste produced during construction. Further information on the preparation of these plans can be obtained from Envirowise (http://www.envirowise.gov.uk/scotland) or the Department of Trade and Industry http://www.wrap.org.uk/downloads.site_waste_management_plan.c32a4d8d.pdf .
The SWMP should also include a soils balance carried out to demonstrate need for importation/export of materials including any backfill of excavations. Given experience on other sites, clarification is sought specifically on whether or not waste materials are to be imported. Clarification of the amount of surplus materials to be permanently deposited on mounds and scale of these mounds should also be included.

SEPA encourages the recovery and reuse of controlled waste, provided that it is in accordance with the Waste Management Licensing Regulations 1994. The applicant should note the regulatory advice below. The developer should note that SEPA has produced guidance to assist in the consideration as to whether any particular material is waste, which is available on SEPA's website at http://www.sepa.org.uk/pdf/guidance/waste/is_it_waste_v2.pdf

Shadow Flicker

Fife Council note that shadow flicker has proven controversial on other sites and is important this is fully included within the environmental statement, along with any system that is to be put in place to address any remediation measures should individual properties experience a difficulty with shadow flicker.

Traffic Management

The Environmental Statement should provide information relating to the preferred route options for delivering the turbines etc. via the trunk road network. The Environmental Impact Assessment 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 Environmental Statement, eg for construction methods, mitigation, or decommissioning, form part of the application for consent.

BT recommend consulting them regarding possible interference to point to point radio links.

Consultation

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. Developers are asked to issue ESs directly to consultees. Consultee address lists can be obtained from the Energy Consents Unit. The Energy Consents Unit also requires 8 hardcopies to be issued internally to Scottish Government consultees.

Where the developer has provided Scottish Ministers with an environmental statement, the developer must publish their proposals in accordance with part 4 of the Environmental Impact Assessment (Scotland) Regulations 2000. Energy consents information and guidance, including the specific details of the adverts to be placed in the press can be obtained from the Energy Consents website; http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-Consents

Gaelic Language

Where s36 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 (see also Energy consents website above).

OS Mapping Records

Developers are requested at application stage to submit a detailed Ordinance Survey plan showing the site boundary and all turbines, access tracks and onshore supporting infrastructure in a format compatible with the Scottish Government'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 shapefile format. The SDME also contains a metadata recording system based on the ISO template within ESRI ArcCatalog (agreed standard used by the Scottish Government), 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 Environmental Statement should be provided, complete with an indication of when an addendum will be submitted.

Application and Environmental Statement

A developer checklist is enclosed with this report to help developers fully consider and collate the relevant ES information to support their application. In advance of publicising the application, developers should be aware this checklist will be used by government officials when considering acceptance 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 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 information in support of your application. The consultee comments presented in this opinion are designed to offer an opportunity to considered all material issues relating to the development proposals.

In assessing the quality and suitability of applications, Government officials will use the enclosed checklist and scoping opinion to scrutinise the application. Developers are encouraged to seek advice on the contents of ESs 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, officials reserve 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 checked and accepted by SG officials.

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

DEVELOPER APPLICATION AND ENVIRONMENTAL STATEMENT CHECKLIST

	Enclosed
1. Developer cover letter and fee cheque	□
2. Copies of ES and associated OS maps	□
3. Copies of Non Technical Summary	□
4. Confidential Bird Annexes	□
5. Draft Adverts	□
6. E Data – CDs, PDFs and SHAPE files	□

Environmental Statement	Enclosed	ES Reference (Section & Page No.)
7. Development Description	□	
8. Planning Policies, Guidance and Agreements	□	
9. Economic Benefits	□	
10. Site Selection and Alternatives	□	
11. Baseline Assessment data – air emissions	□	
12. Design, Landscape and Visual Amenity	□	
13. Construction and Operations (outline methods)	□	
14. Archaeology	□	
15. Designated Sites	□	
16. Habitat Management	□	
17. Species, Plants and Animals	□	
18. Water Environment	□	
19. Sub-tidal benthic ecology	□	
20. Hydrology	□	
21. Waste	□	
22. Noise	□	
23. Traffic Management	□	
24. Navigation	□	
25. Cumulative Impacts	□	
26. Other Issues	□	

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.