SCOPING OPINION

KYPE MUIR WIND FARM

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

SCOPING OPINION FOR THE PROPOSED KYPE MUIR WIND FARM SOUTH EAST OF STRATHAVEN, SOUTH LANARKSHIRE

1. Introduction

Any proposal to construct or operate a power generation scheme with a capacity in **excess of 50 megawatts** 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 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, the Scottish Ministers are required to consider whether any proposal for a wind farm is likely to have a significant effect on the environment. In terms of these Regulations, we must consult the planning authority, Scottish Natural Heritage and the Scottish Environment Protection Agency and other relevant consultees.

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.

**** Consultees are invited to insert definitive comments on the outline proposals complete with any cross references to the relevant information contained in the scoping report submitted by the developer.**

3. 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:

- 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
- 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.

4. 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

5. General Issues

Aviation

In the wake of recent consultation with the aviation organisations such as NATS, BAA, CAA, MOD etc, it is clear that large scale 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 focal 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.

Economic Benefit

The concept of economic benefit as a material consideration is explicitly confirmed in the SPP . This fits with the priority of the Executive 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.

Local Planning Agreements

There are two main tests in determining whether a consideration is material and relevant. These are:

- it should serve or be related to the purpose of planning – it should therefore relate to the development and use of land; and

- it should fairly and reasonably relate to the particular application.

Only those issues that meet the above tests can be taken into account when considering applications. Where relevant, developers should identify such issues in their application, including evidence to support compliance with these tests.

6. Contents of the Environmental Statement (ES)

We recommend the contents of the ES should be structured as follows below:

6.1 Format

High resolution and low resolution PDF versions should be provided. 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

6.2 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.

6.3 Site selection and alternatives

The applicant should set out the alternatives sites considered and the rationale and methods used to select the chosen site. The applicant should demonstrate that a fairly wide set of environmental and economic parameters have been used to narrow down choice of sites and how this choice takes account of the spatial framework set out in the SPP. Secondly, there should be a detailed examination on these parameters to minimise the impact of the proposal by sensitive design and layout.

Wind potential and access to the grid are key to initial sieve-mapping exercises for site selection, but environmental constraints other than landscape character should also be included in this initial site selection process. For example, areas of deep peat, watercourse crossings, wetlands and locations of protected species would be other examples of additional

environmental constraints to be considered both from the outset and in the detailed design and layout.

Architecture+Design Scotland (A+DS) suggest that a planning and design strategy should first look at the proposed location and address whether this is a sensible location in relation to wind, access to the grid and to the character of the landscape.

6.4 Description of the Development

Your description of the proposed development in the Environmental Statement should comprise information on the site boundary, design layout, and scale of the development.

Where it is required to assess environmental effects of the development (see EIA regulation 4 (1)(b), the Environmental Statement should include;

(a) a description of the physical characteristics of the whole development and the land use requirements during the construction, operation, decommissioning and restoration phases;

(b) a description of the main characteristics of the production processes and nature and quality of the materials used; and

(c) an estimate by type and quantity of expected residues and emissions resulting from the operation of the proposed development.

6.5 Track construction

The applicant should set out the alternative access routes considered and the rationale and methods used to select the chosen access routes. Applicatants should set out the intended use of access routes i.e: for transportation of turbine components, delivery of construction materials , every day operational use etc. Developers should specify which access routes/ roads are temporary and which are required for the operational duration of the development. Considered design details will be required for all aspects of site work that might have an impact upon the environment, containing further preventative action and mitigation to limit impacts.

You should be aware of useful guidance on, *inter alia*, minimising the impact from construction of the type of access roads used in wind farms. Such guidance can be found in “Forests and Water Guidelines” Fourth Edition (2003) which can be obtained from the Forestry Commission. www.forestry.gov.uk and “Control of water pollution from linear construction projects” (CIRIA C648, 2006) which can be obtained from CIRIA. However, given that tracks in some cases will be located on peat and will carry very heavy loads, evidence will be necessary of additional consideration of specific measures required in similar schemes elsewhere to deliver best practice. Additional guidance is also available in ‘Constructed tracks in the Scottish Uplands’ (2006) published by SNH and available at http://www.snh.org.uk/pdfs/publications/heritagemanagement/constructedtracks.pdf

6.6 Decommissioning

The subsequent application and supporting environmental statement should include a programme of work complete with outline plans and specifications for the decommissioning and reinstatement of the site. Information should be provided on the anticipated working life of the development and after use site reinstatement.

6.7 Grid Connection Details

The impacts of constructing, installing and operating the following infrastructure components should be considered and assessed by developers, if known;

- Substation.
- Cabling (Underground).
- Cabling (Overhead).
- Monitoring and control centre.

7. Baseline Assessment and Mitigation

This section should clearly set out a description of the environmental features of the proposed wind farm site, the likely impacts of the wind farm on these features, and the measures envisaged to prevent, mitigate and where possible remedy or offset any significant effects on the environment. It should incorporate details of the arrangements and the methodologies to be used in monitoring such potential impacts, including arrangements for parallel monitoring of control sites, timing and arrangements for reporting the monitoring results.
It should be noted that there is a danger that these measures could themselves have secondary or indirect impacts on the environment.

7.1 Air and Climate Emissions

The Environmental Statement should fully describe the likely significant effects of the development on the environment, including direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary e.g. construction related impacts, positive and negative effects of the development which result from:

a) the existence of the development.
b) the use of natural resources.
c) the emission of pollutants, the creation of nuisances and the elimination of waste.

7.2 Carbon Emissions

To assist Scottish Ministers in making a determination on the application, developers are invited to produce a statement of expected carbon savings over the lifetime of the wind farm. The statement should include an assessment of the carbon emissions associated with track preparation, foundations, steel, and transport; any carbon losses from tree felling (and offsetting from tree planting); and any carbon losses from loss or degradation of peaty soils. Reference can be made in this respect to the SNH guidance on 'Wind farms and Carbon Saving' (SNH 2003 1).

It is also important to ensure that the carbon balance of renewable energy projects is not adversely affected by management of peat resource. There need to be measures in place to ensure that the development does not lead to significant drying or oxidation of peat through, for example, development of access tracks and other infrastructure, drainage channels, or "landscaping" of excavated peat. The basis for these measures should be set out within the ES, on which a detailed peat management scheme, required through planning condition, can subsequently be designed to ensure that the carbon balance benefits of the scheme are maximised.

Developers are encouraged to submit full details of the life cycle carbon footprint of the wind farm. Guidance can be sought in the publication, "Calculating carbon savings from wind farms on Scottish peat lands - A New Approach" by Dali Rani Nayak, David Miller, Andrew Nolan, Pete Smith & Jo Smith.
This can be accessed through the following link to the Scottish Government website http://www.scotland.gov.uk/Publications/2008/06/25114657/0

Under each section below developers are asked to consider:

- Aspects of the environment likely to be affected by the proposals.
- Environmental impacts of the proposals.
- Methods to offset adverse environmental effects.
- Effects of the phases of the development; Construction, Operation, Decommissioning and Restoration.

7.3 Design, Landscape and the Built Environment

Scottish Ministers place particular importance on the layout design of wind farms and considers there is a need for a coherent, structured and quality driven approach to wind farm development. The appearance of wind farms is of particular interest and the need for a coherent design strategy to be considered at scoping stage and to be prepared before submission of the Environmental Statement. The strategy should explain the design principles behind the layout plan in a rational way that can be easily understood. The

design strategy for the wind farm should be expressed through a design statement. The Design Statement should describe a clear strategy for meeting these objectives, a justification for the resulting layout and evidence that the design ideas have been tested against the objectives.

Wind farms are prominent features in the landscape and hence a full assessment of the effects on landscape and visual amenity is important. The assessment methodology should follow the approach promoted by the Landscape Institute and Institute of Environmental Management and Assessment ('Guidelines for Landscape and Visual Impact Assessment', second edition, Spon 2002). General guidance on the range of issues to be considered in assessment of wind farms is set out, in the form of a scoping checklist, at Appendix 1 of 'Guidelines on the Environmental Impacts of Wind Farms and Small Scale Hydroelectric Schemes' (SNH 2001).

As regards the portrayal of visual and landscape impacts within Environmental Statements, guidance has also been developed, jointly by SNH and the Scottish Renewables Forum, on 'Visual Representation of Wind Farms – Good Practice Guidance' (SNH 2007).
http://www.snh.org.uk/pdfs/publications/heritagemanagement/Visual%20Representation%20of%20windfarms%20-%20excerpt.pdf

Visual information should be presented in a way which communicates as realistically as possible the actual visual impact of the proposal. The format of the images and the focal length of the lens will have to be taken into consideration.

All visualisation images should be accompanied by a description of how to view the image so that it best replicates what will be seen if the proposal is constructed. This should include the required viewing distance between the eye and the image, and whether it is a single frame image or a composite panoramic image. If a composite image, it is desirable either to curve the edges of panoramic images so that peripheral parts of the image are viewed at the same intended viewing distance, or to 'pan' across the image with the eye remaining at the recommended viewing distance. This is not required for single frame images.

The viewpoints from which the photographs are taken should be agreed with the planning authority and SNH. The horizontal field of view should be shown on a map so that the images can be used accurately on site.

The ES should include a description of the landscape character of the area and how that character will be affected by the impact on any landscapes designated for their landscape or scenic value, including National Parks, National Scenic Areas, or local landscape designations such as Area of Great Landscape Value or Regional Scenic Area (the terminology is varied) and the impact on any area which is a recognised focus for recreational enjoyment of the countryside, eg a Regional Park or Country Park.

7.4 Construction and Operation

The ES should contain site-specific information on all aspects of site work that might have an impact upon the environment, containing further preventative action and mitigation to limit impacts. Elements should include: fuel transport and storage management; concrete production (including if batching plants are proposed and measures to prevent discharges to watercourses); stockpile storage; storage of weather sensitive materials at lay-down areas; haul routes and access roads (and if temporary or permanent); earthworks to provide landscaping; mechanical digging of new or existing drainage channels; vehicle access over watercourses; construction of watercourse crossings and digging of excavations (particularly regarding management of water ingress); temporary and long-term welfare arrangements for workers during construction ; maintenance of vehicles and plant; pollution control measures during turbine gearbox oil changes; bunding or roofing of transformer areas; use of oil-cooled power cables and related contingency measures; and dewatering of turbine base excavations. With regards to oil, it is imperative that there is a detailed contingency plan to deal with large oil spills that cannot be dealt with at a local level. The ES should identify if there are particularly sensitive receptors of pollution (e.g. salmonid rivers, rivers with freshwater pearl mussels ect).

Such information is necessary in order to assess the environmental impact of the proposals prior to determination and provide the basis for more detailed construction method statements which may be requested as planning conditions (it is recommended that the relevant Planning Authorities, SNH and SEPA are provided with the opportunity to view these method statements in draft form, prior to them being finalised should development take place).

The applicant should be aware of information provided by SEPA that may be of use such as rainfall and hydrological data. The need to plan the works in order to avoid construction of roads, dewatering of pits and other potentially polluting activities during periods of high rainfall is important. The ES needs to demonstrate which periods of the year would be best practice for construction for the site, taking into account the need to avoid pollution risks and other environmental sensitivities affecting operational timing, such as fish spawning and bird nesting.

The impact of the proposed development on public footpaths and rights of way should be clearly indicated. If any re-routing of paths under a Right of Way is required alternative routes should be highlighted for consideration.

The ES should set out mechanisms to ensure that workers on site, including sub-contractors, are aware of environmental risks, and are well controlled in this context. The ES should state whether or not appropriately qualified environmental scientists or ecologists are to be used as Clerk of Works or in other roles during construction to provide specialist advice. Details of emergency procedures to be provided should be identified in the ES.

The process whereby a method statement is consulted upon before commencement of work is satisfactory at many sites where sensitivities are non-critical. However for environmentally sensitive sites it is recommend that,

following consultation, method statements be approved by the planning authority in consultation with SNH, prior to the commencement of construction work.

Scottish Natural Heritage would normally only wish to comment on Construction Method Statements where there are relevant and significant natural heritage interests involved. Developers should avoid submitting multiple versions of the Construction Method Statement to SNH.

8. Ecology, Biodiversity and Nature Conservation

Scottish Government suggests that all ecological survey methods conform to the best available standard methods for each habitat and species, and follow guidance published by SNH where this is available. Where standard methodologies do not exist, developers should propose and agree an appropriate methodology with SNH specialist advisers. SG also requires that all ecological survey data collected during ES survey work should be made available by the applicant to SG and SNH, in a form which would enable them to make future analysis of the effects of wind farms if appropriate.

8.1 Designated sites

The ES should address the likely impacts on the nature conservation interests of all the designated sites in the vicinity of the proposed development. It should provide proposals for any mitigation that is required to avoid these impacts or to reduce them to a level where they are not significant. Information on designated sites and the law protecting them can be found on the SNH website. Maps of the boundaries of all natural heritage designated sites and information on what they are designated for are also publicly available via SiteLink in the SNHi section of the SNH website http://www.snh.org.uk/snhi/. The developer is referred to this resource to ensure that they have the correct information on designated sites within the locality that may be affected by the proposed development. The potential impact of the development proposals on other designated areas such as NSA, LSA, SSI or Regional/National Parks etc should be carefully and thoroughly considered and appropriate mitigation measures outlined in the ES. Early consultation and agreement with SNH, the relevant planning authority and other stakeholders is imperative in these circumstances.

For developments with a potential to affect Natura sites, applicants must provide in the ES sufficient information to make clear how the tests in the Habitats Regulations will be met, as described in the June 2000 Scottish Government guidance. The information in the ES should enable the assessments required by the legislation to be completed by the Scottish Government. Specific guidance on the Habitats and Birds Directive regarding the appropriate impact assessments and associated alternative solution and

IROPI tests is available on the following website link
http://www.scotland.gov.uk/library3/nature/habd-00.asp

Within the Regulations, the first test is whether the proposal is necessary for the management of the site: this will not be the case for wind farm applications. The next step is to ask whether the proposal (alone or in combination with other proposals) is likely to have a significant effect on the site. If so, the Scottish Government as the Competent Authority under the Habitats Directive will draw up an 'appropriate assessment' as to the implications of the development for the site, in view of that site's conservation objectives.

The scoping report should aim to present sufficient information to enable a conclusion to be drawn on this test, ie as to whether there is likely to be a significant effect on the site. If that information is provided, SNH will be able to advise, when consulted upon the scoping request, whether an appropriate assessment will be necessary. In the event that detailed survey or analysis is required in order to reach a view, the survey and analysis should be regarded as information contributing to that assessment. Note that such information should be provided for the wind farm itself together with any ancillary works such as grid connections and vehicle tracks, and cumulatively in combination with any other wind farm consented or formally proposed in the vicinity.

8.2 Habitats

SNH suggest that the ecological survey methods are agreed with their specialist advisers and all ecological survey data collected during ES survey work should be made available by the applicant to SNH, in a form which would enable them to make future analyses of the effects of wind farms if appropriate. Surveys should be carried out at appropriate times or periods of the year by appropriately qualified and experienced personnel, and suitability of the timing needs to be considered within the ES.

The ES should provide a comprehensive account of the habitats present on the proposed development site. It should identify rare and threatened habitats, and those protected by European or UK legislation, or identified in national or local Biodiversity Action Plans. Habitat enhancement and mitigation measures should be detailed, particularly in respect to blanket bog, in the contexts of both biodiversity conservation and the inherent risk of peat slide. Details of any habitat enhancement programme (such as native- tree planting, stock exclusion, etc) for the proposed wind farm site should be provided. It is expected that the ES will address whether or not the development could assist or impede delivery of elements of relevant Biodiversity Action Plans.

Particular attention should be paid to the effects of the proposals on any peat land habitats on the site. SEPA emphasises that the ES should demonstrate that turbine locations have been determined on the basis of habitats on the site, especially with regard to any areas of deep peat and intact hydrological units of mire vegetation. Turbines therefore need to be located in the light of vegetation survey work. Similarly, the ES needs to demonstrate that roads have been located to minimise impact on vegetation communities, peat

habitats and peat depth. Measures to avoid pH impact on peatland from use of cement/concrete (e.g. use of blinding cement on roadways, wash-out during construction, integrity of shuttering) should be set out.

8.3 Habitat Management

SNH and RSPB may wish to see a Habitat Management Plan for the area of the wind farm and any area managed in mitigation or compensation for the potential impacts of the wind farm. A commitment to maintain and/or enhance the biodiversity of the overall area is expected. Monitoring of any specific potential impacts of the development, and of the outcome of any habitat management measures, should form part of the ES proposals. Developers may also want to consult other interested parties in preparation of the HMP information or relevant studies/surveys.

The ES should also outline provisions made regarding public access, having regard for the requirements of the Land Reform (Scotland) Act 2003, clarifying the extent of any access restrictions proposed, if any, during construction or operation, and indicating any new facilities for access to be provided on or off site.

8.4 Species : Plants and Animals

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

Plants

A baseline survey of the plants present on the site should be undertaken, and field and existing data on the location of plants should be used to determine the presence of any rare or threatened species of vascular and no-vascular plants and fungi.

Birds

The ES should provide an assessment of the impact of the wind farm on birds. The assessment should follow the guidance in 'Methodology for assessing the effects of wind farms on ornithological interests (SNH and BWEA 2001). A baseline survey of the species and number of birds present on the site throughout the year should be undertaken. Particular attention should be paid to specially protected and/or vulnerable species. All ornithological survey work should conform to *Survey methods for use in assessing the impacts of onshore wind farms on bird communities (*Scottish Natural Heritage, 2005).

Survey work should include assessments of the flight lines of breeding birds and birds whose migrations or other seasonal distributions traverse or are in close proximity to the site. Collision risk analyses will be necessary for species which regularly pass through the site at any time of year. The analysis should follow the principles set out in the above SNH/BWEA guidance and in 'Wind Farms and Birds: calculating the theoretical collision risk assuming no avoidance' (SNH 2001)

In the interests of all stakeholders involved in the consultation exercise, the presence of protected species must be included and considered as part of the section 36 application process. Submitting this information as an addendum at a later date will require further publicity and consultation which will delay the overall determination.

An Annex of Environmentally Sensitive Information may be required to provide information on nest locations or other environmentally sensitive information related to specially protected species. However, the annex should not include any information that is not confidential, or if it does this information should be contained elsewhere within the text of the environmental statement.

Mammals

A baseline survey of the species and number of mammals present on the site should be undertaken. Particular attention should be paid to specially protected and/or vulnerable species, especially European Protected Mammals, and those potentially affected by the development.

Reptiles, amphibians

A baseline survey of the species and number of reptiles and amphibians present on the site should be undertaken. Particular attention should be paid to specially protected and/or vulnerable species, especially European Protected species, and those potentially affected by the development.

Fish

Fish populations can be impacted by subtle changes in water quality and quantity and changes in channel morphology that influence suitability of habitat and consequently performance and production. Further impacts can occur if issues of habitat continuity are not adequately considered when planning site drainage and river crossings. A baseline survey should be undertaken to demonstrate the species and abundance of fish present in the still and running waterbodies on and around the site throughout the year. This should extend to watercourses which may be affected by run-off from the site during construction, operation or decommissioning.

Particular attention should be paid to specially protected and/or vulnerable species, especially European Protected species, and those potentially affected by the development. However, fish and fisheries should be given due consideration regardless of conservation designation.

Developers should be aware that wind farm developments have considerable construction implications and these can be conducted without proper regard or understanding of their potential impacts on watercourses and water quality, and on fish and aquatic invertebrate populations.

The developer should ensure that the implications of changing water quality, quantity, channel morphology and habitat continuity are addressed specifically with reference to potential impacts on fish and that mitigation addresses these issues. Where this information is provided elsewhere in the document, it should be specifically highlighted.

Where a development has the potential to impact on local fish populations the developer will be asked to develop an integrated fish and water quality monitoring programme with baseline, development and post-development sampling. Details of any proposed monitoring should be detailed.

Developers are encouraged to submit fish information in a collective document or with the relevant cross references to other areas of the ES. (i.e. hydrology, hydro-geology, water quality and hydro-morphology)

Invertebrates

A baseline survey of invertebrates present on the site and in the waterbodies and watercourses on and around the site throughout the year should be undertaken. This should be guided by existing information on the presence, distribution and abundance of notable invertebrates. Sampling of aquatic invertebrates should extend to watercourses which may be affected by run-off from the site during construction, operation or decommissioning. Particular

attention should be paid to specially protected and/or vulnerable species, especially European Protected species, and those potentially affected by the development.

8.5 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 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. 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.

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/htmldb/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. Historic Scotland would also be happy to provide any further information on all such sites.

9. Water Environment

Developers are strongly advised at an early stage to consult Scottish Environment Protection Agency (SEPA) as the regulatory body responsible for the implementation of the Controlled Activities (Scotland) Regulations 2005 (CAR), to identify 1) if a CAR license is necessary and 2) clarify the extent of the information required by SEPA to fully assess any license application. Energy Consents will identify a requirement for flood prevention comments from SEPA.

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 will require to comply with CAR . In this regard, we will be advised by SEPA concerning the requirements of these Regulations on the proposed development 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, several of which should be usefully utilised in preparation of an ES and during 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.
- Operational.
- Decommissioning.

Construction contractors are often unaware of the potential for impacts such as these but, when proper consultation with the local District Salmon Fishery Board (who have a Statutary responsibility to protect salmon stocks) and Fishery Trust is encouraged at an early stage, many of these problems 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.
- Alteration to hydrological regime and water quality
- Impacts on stream morphology

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 CIRIA guidance on the control of water pollution from construction sites and environmental good practice (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.

9.1 Hydrology and Hydrogeology

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.

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. SPP 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.

9.2 Geology and soils

The Environmental Statement should fully describe the likely significant effects of the development on the environment including direct effects and any indirect, secondary, cumulative, short, medium and long term, permanent and temporary e.g. construction related impacts, positive and negative effects of the development which result from:

- The existence of the development.

- The use of natural resources (including borrow pits, the need for which and impact of which, including dust, blasting and pollution of the water environment, should be appraised as part of the overall impact of the scheme)
- The emission of pollutants, the creation of nuisances and the elimination of waste.

The ES should identify the intended source of any rock or fill material to be used for tracks or foundations, and should describe the environmental impacts associated with any new quarries or borrow pits or road or track cuttings.

SEPA seeks in relation to substantial new development, that developers demonstrate that the development includes construction practices to minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials. Further information is available from AggRegain (**www.aggregain.org.uk**);

Where borrow pits are proposed, the ES should include information regarding the location, size and nature of these borrow pits including information on the depth of the borrow pit floor and the borrow pit final reinstated profile.

The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the scheme. Information should cover, in relation to water, at least the information set out within Planning Advice Note 50: Controlling the Environmental Effects of Surface Mineral Workings in relation to surface water (pages 24-25) and, where relevant, in relation to groundwater (pages 22-23). Information on the proposed depth of the excavation compared to the actual topography, the proposed restoration profile, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement should be submitted.

9.3 Assessment of Peat Slide Risk

If the proposed development is to take place on peatland habitats, the Environmental Statement should incorporate a comprehensive peat slide risk assessment in accordance with the Scottish Government Best Practice Guide for Developers.

http://www.scotland.gov.uk/Topics/Business-Industry/infrastructure/19185/20804

Particular attention should be paid to the risks of engineering instability relating to presence to peat on the site. Turbines locations should be identified in the light of survey work on peat depth and nature, and roads will need to be carefully aligned and designed with regard to peat habitats and depth. It is recommended that both engineers and ecologists are involved in the assessment and management of the risk of peat slide.

The peat slide risk assessment should also address pollution risks to and environmental sensitivities of the water environment. It should include a detailed map of peat depth and evidence that the scheme minimises impact on areas of deep peat. The ES should include outline construction method statements or the site-specific principles on which such construction method

statements would be based for engineering works in peat land areas, including access roads, turbine bases and hard standing areas, and these should include particular reference to drainage impacts, dewatering and disposal of excavated peat.

9.4 Forestry/Woodlands

Internationally there is now a strong presumption against deforestation (which accounts for 18% of the world's greenhouse gas emissions). Reflecting this, Scottish Ministers have now approved a policy on Control of Woodland Removal which seeks to protect the existing forest resource in Scotland, and supports woodland removal (deforestation) only where it would achieve significant and clearly defined additional public benefits. In some cases, including those associated with development, a proposal for compensatory planting may form part of this balance.

The policy will apply to all new schemes submitted for Consents Scoping (or submitted as new planning applications for projects <50MW) after 1 September 2008. Where Forestry Commission Scotland (FCS) or statutory consultees did not flag concerns at the time about deforestation and where the time has now past for comment, retrospective application of the policy will not be sought formally.

For projects in scoping (or where a planning application has been submitted for projects <50MW) prior to 1 September 2008, Forestry Commission Scotland will not formally request application of the policy.

However, in situations where formal application of the policy has not been sought, FCS will still encourage informal discussions with developers and planners to consider whether there could be appropriate woodland management options (such as low intensity, low height woodland) that would avoid the need for woodland removal.

The ES should indicate proposed areas of woodland removal to accommodate new turbines and other infrastructure such as roads. Details of the area to be cleared around those structures should also be provided, along with evidence to support the proposed scale and sequence of felling. The ES should also detail any trees or woodland areas likely to be indirectly affected by the proposed development (e.g. through changes in hydrology, loss of neighbouring plantation causing instability, etc) and provide full details of alternatives and/or protection and mitigation measures in the ES.

The developer should consider the landscape, natural heritage and historic environment implications of any deforestation and/or tree felling in the relevant sections of the ES. The ES should also consider any impacts of forestry activities on soil and the water environment, with particular attention paid to ground disturbance, sedimentation, acidification and nutrient leaching. The applicant should make full use of the latest editions of the Forests and Soil Conservation Guidelines and the Forests and Water Guidelines (and other Forest Guidelines associated with the UK Forestry Standard) in proposing forestry activity and mitigation procedures.

If timber is to be disposed of on site, details of the methodology for this should be submitted. Areas of retained woodland or tree groups should be clearly indicated and methods for their protection during construction clearly described.

If areas of woodland are to be felled but then replanted shortly afterwards (typically within about 5 years) this should be indicated in the ES, and details of the replanting plan provided.

Where there is a change in land use (e.g. to non-woodland habitats) the woodland should be described in sufficient detail (e.g. including details of the age of the trees; the species type and mix; the soil types; any particular natural heritage designations or protected species present in the woodland; and the landscape and historical environment context) to enable its intrinsic public benefit value to be assessed. This will facilitate decisions on whether woodland removal is acceptable and if so, whether compensatory planting will be required.
The developer should refer to guidance documents issued by the Forestry Commission in relation to good forestry practice and associated environmental issues.

Forestry Commission Scotland can advise on all aspects of woodlands and forestry associated with developments and early discussion with them to clarify proposals and any particular restrictions or conditions on woodland removal that may apply to the area is recommended. Contact details of the nearest Forestry Commission Conservancy office can be accessed at: www.forestry.gov.uk or from fcscotland@forestry.gsi.gov.uk.

10. Other Material Issues

10.1 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.

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 therefore requests that the ES gives consideration to a full site specific Site Waste Management Plan (SWMP). 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

10.2 Telecommunications:

British Telecom will offer advice in respect of EMC and related problems, BT point to point microwave links and satellite. Any information on the likely interference to BT's current and presently planned radio networks should be enclosed.

Ofcom only comment in respect of microwave fixed links and does not include broadcast transmissions or scanning telemetry links that may be affected by your proposals. A copy of your scoping request has been sent to:

CSS Spectrum Management Services Ltd. David Tripp 01458 273 789 david.tripp@css.gb.com (for Scanning Telemetry)

Joint Radio Company (JRC). David Priestley 020 7953 7015
david.priestley@jrc.co.uk (for Scanning Telemetry)

With regard to assessing the affects to TV reception, the BBC now have an online tool available on their website, at http://windfarms.kw.bbc.co.uk/ . Ofcom will no longer be forwarding enquiries received to the BBC or carrying out assessments. Developers are advised to access the online tool. http://windfarms.kw.bbc.co.uk/rd/projects/windfarms/

Ofcom only comment in respect of fixed microwave links managed by the Ofcom, in addition you are obliged to do further checks of your proposals with the CAA, NATS, and the MOD. Further details may be obtained on the British Wind Energy Association (BWEA) website. The MoD Estates Safeguarding contact is Chris Evans on 0121 311 3847.

10.3 Noise

Wind farms have the potential to create noise through aerodynamic noise and mechanically generated noise. Noise predictions should be carried out to evaluate the likely impacts of airborne noise from the wind turbines and associated construction activities including noise from blasting or piling activities which may affect local residents, during construction, operational and decommissioning stages of the project. Advice should be sought from the relevant Council planning and/or environmental health departments in respect to the potential impacts on the local community.

You should be aware of the guidance produced by ETSU on behalf of the DTI titled “The Assessment and Rating of Noise from Wind Farms”. This publication provides developers with best practice noise monitoring and reporting techniques. Cumulative noise effects should also be considered in assessing the specific circumstances prevailing at the development site. Developers may also want refer to PAN56 in this respect.

10.4 Shadow Flicker

Information on the impact of shadow flicker on the local community should be enclosed within the ES. Developers should refer to PAN 45 for further information on this subject.

10.5 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.

10.6 Cumulative Impacts

Where a wind farm development might have cumulative impacts with other existing, approved or current wind farm applications, then the assessment of environmental impacts should include consideration of these cumulative effects. Visual or landscape cumulative effects may arise where more than one wind farm is visible from certain viewpoints, or along a journey by road or other route. Ecological cumulative effects may arise where more than one wind farm impacts upon a bird population, or on the hydrology of a wetland or peatland habitat.

SPP introduces new requirements in relation to considering cumulative impacts through the development plan process. Where relevant, proposals should identify how they comply with development plans. We also refer to the SNH guidance note 'Cumulative Effect of Wind Farms' (version 2 revised 13.4.05 [2]) for further guidance. A cumulative assessment should include other existing wind farms in the vicinity of the proposal, any wind farms which have been consented but are still to be constructed, and any which are the subject of undetermined consent applications. Inclusion within a cumulative assessment of other proposed wind farms which have not yet reached application stage is not required, unless in exceptional circumstances we advise otherwise.

http://www.snh.org.uk/pdfs/strategy/Cumulativeeffectsonwindfarms.pdf

10.7 Other planning or environmental impact issues unique to the application.

The ES should include information on any other potential impacts connected with the project.

11. 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.

11.1 Consultation

Developers should be aware that the ES should be submitted in a user-friendly PDF format. 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 **7 hard copies**. The Energy Consents Unit will issue copies of the ES internally to the following Scottish Government

consultees: Directorate for the Built Enviroment, The Forestry Commission, Historic Scotland, Marine Scotland, Transport Scotland).

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

11.2 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).

11.3 OS Mapping Records

Developers are requested at application stage to submit a detailed Ordinance Survey plan showing the site boundary and all turbines, anemometer masts, access tracks and 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.

11.4 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.

11.5 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.

11.6 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.

Developers are advised to refer to the Energy Consents website at http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-Consents

11.7 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

<u>Consultee Comments relating specifically to Kype Muir Wind Farm</u>:

Statutory Consultees

1. *South Lanarkshire Council*
2. *SEPA*
3. *SNH*

Scottish Government Internal Consultees

4. *Directorate for the Built Environment*
5. *Forestry Commission*
6. *Historic Scotland*
7. *Marine Laboratory Scotland*
8. *Transport Scotland*

Non Statutory Consultees

9. *Association of Salmon Fisheries Board*
10. *BT*
11. *CAA*
12. *Crown Estate*
13. *Defence Estates*
14. *Joint Radio Company*
15. *Mountaineering Council of Scotland*
16. *Nats*
17. *Ofcom*
18. *RSPB*

Additional Consultees

19. *Strathaven Community Council*
20. *Lesmahagow Community Council*
21. *Sandford & Upper Avondale community Council*

Listed below, under their relevant headings are the comments we received from these organisations:

Statutory Consultees

1. South Lanarkshire Council

In response to your consultation in respect of the above South Lanarkshire Council consider the following issues to be of high significance and thus given full consideration and assessment in any EIA in respect of the proposed Wind Farm.

a) Planning Policy

An assessment should be made in relation to planning policy contained in the Structure Plan, South Lanarkshire Local Plan, draft Supplementary Planning Guidance and the technical report Spatial Framework and Landscape Capacity for Windfarms prepared to inform the SPG. In accordance with SPP 6 the Council is reviewing its policy and spatial framework for windfarms over 20MW and published draft Renewable Energy SPG in January 2010. It is expected to seek committee approval for the finalised SPG in the autumn.

The draft SPG revised the areas of search identified in the Local Plan to reflect SPP 6 and take account of new information on constraints, in particular cumulative landscape and visual impacts and sensitive areas for birds. This identified a broad area of search with in which the Kype Muir proposal lies. The SPG advises that as this area is already under pressure for windfarm development, cumulative impacts will be taken into account when assessing proposals. The background technical reports prepared to inform the SPG provide further guidance on cumulative impact.

The Spatial Framework and Landscape Capacity for Windfarms study assesses the sensitivity and value of landscape character types in relation to their capacity to accommodate windfarms. The proposal site is within the 'rolling moorlands' landscape character type which is considered to have medium landscape sensitivity and value and thus a medium capacity for windfarms. Windfarm development in this landscape type should respect the rounded hilltop character by being relatively compact and well separated, relating to the landform pattern and scale, and going no further than a 'Rolling Moorlands with windfarms' landscape. The most suitable windfarm typology that could be accommodated is no larger than medium – preferably with no more than approximately 20 turbines. Furthermore there should be a significant distance (5-10km) between each such development and from the existing upland windfarms. This distance reflects the horizontal scale of the ridges and separating valleys, allowing intervening landform and

forestry where possible to reduce significant cumulative impacts and windfarms to follow the 'rhythm' of the landscape.

Although this proposal is located in a broad area of search, it is possible that the scale of the development and its proximity to other existing and consented developments could potentially raise issues in respect to the detailed design advice outlined in the Spatial Framework and Landscape Capacity for Windfarms report. The EA should therefore include a detailed landscape and visual impact assessment, including cumulative impacts. For the proposal to be acceptable it must be demonstrated that it can be accommodated without creating additional adverse cumulative landscape and visual impact and is of an appropriate scale to be accommodated within this landscape character type.

b) Landscape and Visual Impact

As set out above, the EA should include a detailed landscape and visual impact assessment, including cumulative impacts.

c) Cumulative Landscape and Visual Impact

As set out above, the EA should include a detailed landscape and visual impact assessment, including cumulative impacts. Cumulative impacts should consider all consented developments, current applications, pre-applications and scoping stage proposals.

d) Impact on Residential Properties & Communities

The ES should include an assessment of the potential impact on residential properties and local communities.

e) Ecological and Ornithological Impact

The ES should set out full survey and assessment of the impact on ecology and ornithology as required by and to the satisfaction of SNH and RSPB. Particular attention should be given to the adjacent SPA and SSSIs and to the cumulative impact of this proposal, consent and proposed wind farms.

f) Peat Stability

A full assessment of the impact of the construction of the development on the stability of peat on the site will be required at the submission stage. It is important that this assessment is based on actual measurements of peat depths and conditions across the site rather than estimates of likely peat depths and conditions. This work must be carried out by a suitably qualified person or company. Information should be included as to the procedure to be followed if a peat stability issue arises and the reporting and safety measures which will be in place during the construction process.

g) Public Recreational Access

This environmental constraint was identified to Land Use Consultants during informal consultation at an earlier stage in the development of the EIA scoping report, but does not appear to have been carried through to the final report. Public recreational access to the site should be identified as a significant environmental impact in the scoping report and be incorporated as a theme within the environmental statement. Although the constraints map (drawing No. HJB/713/SR05) identifies the existing network of public access routes running through and adjacent to the site and the Auchengilloch Covenanters Memorial Schedule Ancient Monument, public recreational access represents a significant and growing opportunity in the context of wind farm developments. As you will be aware the Council is already actively involved in a number of recreational access initiatives at windfarm sites in South Lanarkshire, most particularly Whitelee and Blacklaw and more recently Clyde Wind Farm. The development of a network of turbine array routes offers a significant opportunity for community and wider public recreational benefit and in our view this theme should be scoped in for inclusion within the environmental statement.

h) Site Access and Construction Traffic

The ES should set out in detail a full construction traffic assessment. This should provide full detail of all vehicles entering and leaving the site, by type of vehicle, route used to the site and route used leaving the site, hours and days of operation, control systems and wheel cleaning facilities at the site. Full engineering drawings must be provided of the access into the site, vehicle compounds and parking.

i) Turbine Component Transportation Assessment

A full turbine transportation route access survey report must be provided as part of the ES. This must set out in full the detailed route, procedures and traffic management measures required to enable turbine components to be transported to the site. This should include the assessment of impact of component transportation on structures along the route such as bridges and buildings.

Bridges on the Proposed Route: If components are to be transported from the M74 to the east of the site there are seventeen bridges on route along the A71 and the B743 between Junction 8 of the M74 and the proposed site at Kype Muir.

Bridges to be Assessed: Cander, Glassford, Old Castle and Browns Bridges require to be assessed by the applicant to determine their capability of carrying the loads associated with the proposed development. South Lanarkshire Council will be the Technical Approval Authority.

The assessment shall be in accordance with the Design Manual for Roads and Bridges and shall include the full Technical Approval process, the assessment, the assessment check appropriate to the category of

structure, assessment certificate, assessment check certificate appropriate to the category of structure and preparation of the assessment report. Preliminary results shall be submitted to South Lanarkshire Council for approval before finalising the report.

The final assessment report will include as a minimum the following:

(i) Executive Summary
(ii) Assessment Method
(iii) Summary of Results
(iv) Conclusions and Recommendations

South Lanarkshire Council will make available all the relevant information to facilitate the assessment of the bridges that is currently held in the Council's bridge records. If there is no or insufficient information available, then the applicant shall be responsible for any further investigative work, including site surveys and testing, to enable the assessment to be completed at no cost to the South Lanarkshire Council. All costs associated with the assessment of the bridges, including the Council's costs as acting as Technical Approval Authority, shall be borne by the applicant.

Bridges Assessed as not Capable of Carrying the Proposed Loads: If a bridge has been assessed as not capable of carrying the proposed loads then these loads will not cross the bridge until remedial measures have been adopted by the applicant and approved by the South Lanarkshire Council. These remedial measures may include:Temporary Bridging, Strengthening and Replacement.

Bridges to be Plated: Westpark Bridge requires to be overlaid with a steel plate or similar to ensure that the load exerted on the structure does not exceed that from normal Construction and Use Vehicles. Proposals, including calculations, will be forwarded by the applicant to the South Lanarkshire Council for approval.

Monitoring: All of the bridges listed will be monitored for defects during the period that the loads will be getting transported. Principal Inspections in accordance with the Design Manual for Roads and Bridges will therefore be carried out jointly between the applicant and South Lanarkshire Council. The frequency of the Principal Inspections will be as follows:

(i) Prior to the transportation of the first load
(ii) At four weekly intervals for the duration of the contract
(iii) After the transportation of the last load

Load Movement over the Bridges: Each load must cross the bridge at a maximum speed of 5mph. No braking, gear changing or manual steering of the rear trailer is permitted on the bridge. Only one load will be permitted on the bridge at any one time. No other vehicle will be permitted on the bridge at the same time as the load.

The issues and procedures set out above require to be taken into consideration when the transportation information is being compiled for the ES and Section 36 Application.

j) Noise Impact (Construction and Operational Noise)

The scoping opinion states that noise from the proposed development will be considered within the context of the document "The assessment and rating of noise from wind farms ETSU-R-97" and this is considered appropriate for the proposed development. It is noted that the applicant is to contact South Lanarkshire Council Environmental Services with regard to establishing appropriate background noise monitoring locations. In addition to noise from the completed development the applicant should also be required to give consideration to noise from construction activity, including tree felling. To this end it is recommended that noise from construction activity is assessed in terms of BS5228: 2007. Noise control on construction and open sites and suitable mitigation proposed should noise from such activity be considered excessive.

k) Private Water Supplies

The scoping opinion document recognises that there is the potential for the proposed development to adversely impact on private water supplies and this is to be considered within the Environmental Statement being produced for the development. Where any properties currently served by a private water supply will be adversely affected by the proposed development, consideration will require to be given and set out in the ES as to how a suitable and sufficient supply of drinking water will be provided to such property.

l) Dust

The applicant should give consideration to the potential generation of dust during the construction phases of the development and to this end it is recommended that a dust management plan is produced to demonstrate how dust emissions will be controlled and mitigated during construction of the proposed development.

Other issues which should be assessed and incorporated into any EIA in respect of the proposed Wind Farm include:

Contaminated Land

The applicant does not appear to have given any consideration to potential ground contamination. To address this issue, the applicant should be required to include within the ES a Desk Study of the site to confirm that there has been no previously potentially contaminating use of land. To this end, cognisance should be given to Planning Advice Note PAN 33; British Standard BS10175:2001. The investigation of potentially

contaminated sites – code of Practice and Contaminated Land Report 11 (CLR11) – Model Procedures for the Management of Land Contamination, issued by DEFRA and the Environment Agency. If any such previous usage is confirmed then a Phase 2 intrusive investigation and risk assessment is required and this should detail any methods of proposed remediation required.

I hope this provides some guidance on the issues required to be assessed in the ES other than those which fall under the remit of other agencies such as SNH, RSPB, SEPA, Scottish Water etc. South Lanarkshire Council cannot over stress the importance of a detailed and accurate Environmental Statement submitted with the application to prevent the need for delay during the assessment process and to ensure appropriate assessment of the impact of the development. This should address not only the impacts but provide mitigation measures which may address identified impacts.

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2. SEPA

1. Carbon balance and peat management

1.1 Scottish Planning Policy (SPP) recognises that "the disturbance of some soils, particularly peat, may lead to the release of stored carbon, contributing to carbon emissions" (Paragraph 133). We are currently considering our role within climate change and planning, including carbon balance assessment. However, in line with SPP and government guidance, we recommend that the ES or planning submission contains a section systematically assessing carbon balance. This assessment should quantify the gains over the life of the project against the release of carbon dioxide during construction, including loss of peat bog and construction of roads/tracks, and other infrastructure. Responsibility for validation will depend on the outcome of current consideration of agency roles. Please refer to the Scottish Government guidance *Calculating carbon savings from windfarms on Scottish peat lands – A New Approach*, which provides a methodology for estimating the impacts of this type of development on carbon dynamics of peat lands.

1.2 It is also important to ensure that the carbon balance of renewable energy projects is not adversely affected by management of the peat resource if it exists on site, in line with SPP (Paragraph 133). The ES or planning submission should include preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat. A detailed peat management scheme setting out these measures may be required through a planning condition, to ensure that the carbon balance benefits of the scheme are maximised. Whilst our full role in carbon balance appraisal has not been mapped out at present, we will provide comment on drainage

and waste management aspects of the peat management scheme.

2. Disruption to peatlands

2.1 If there are peatland or mire systems present, the ES or planning submission should demonstrate how the layout and design of the proposal, including any associated borrow pits, hard standing and roads, avoid impact on such areas where possible. For areas where avoidance is impossible details of how impact is minimised and mitigated should be provided, including a detailed map of peat depth for all construction elements that affect peatland habitats. Peatland impacts that should be considered include those from waste management, drainage, dewatering, excavation and pollution.

2.2 By adopting an approach of minimising disruption to peatland, the volume of excavated peat can be minimised and the commonly experienced difficulties in dealing with surplus peat waste reduced. The generation of surplus peat waste is a difficult area which needs to be addressed from the outset given the limited scope for re-use. Landscaping with waste peat (or soil) may not be of ecological benefit and consequently a waste management exemption may not apply, and the position regarding disposal of waste peat within borrow pits can be very difficult. Early discussion of proposals with us is essential, and an overall approach of minimisation of peatland disruption should be adopted.

3. Disposal of waste peat to borrow pits

3.1 The disposal of surplus peat waste to borrow pits is not encouraged as experience has shown that peat used as cover can suffer from significant drying and oxidation, and that peat redeposited at depth can lose structure and create a hazard when the stability of the material deteriorates. This creates a risk to people who may enter such areas or through the possibility of peat slide, and we are aware that barbed-wire fencing has been erected around some sites in response to such risks.

3.2 There are important waste management implications of measures to deal with surplus peat. Peat disposed at depth must be considered in the context of waste being landfilled, and may not be consentable under our regulatory regimes. It is therefore essential that the scope for minimising the extraction of peat is explored and alternative options identified that minimise risk in terms of carbon release, human health and environmental impact. It is also important to discuss options with us at an early stage.

4. Peat slide risk

4.1 Protection of development in relation to unstable land including landslides or landslip is not generally an area within our expertise or remit. This is a matter for the planning and building

control authorities and civil engineers, who will need to consider whether or not a detailed assessment of the risks of peat slide arising from the development should also be undertaken, what it should involve, and the extent to which the peat stability report should influence the layout of the turbines and the outline construction method statement.

4.2 Our main interest relates to the consequences of a peat-slide or bog burst which can result in severe environmental damage including the pollution of the surrounding area. The risk of this occurring should form part of any peat stability report. Guidance on preparing a peat stability report can be found on the Scottish Government website.

5. Environmental management

5.1 A key issue for us is the timing of works. Timing should be planned to avoid construction of roads, dewatering of pits and other potentially polluting activities during periods of high rainfall. Therefore, the ES or planning submission must identify which periods of the year construction activities will be undertaken in line with best practice, taking into account the need to avoid pollution risks and other environmental sensitivities affecting operational timing, such as fish spawning and bird nesting. We can provide useful information such as rainfall and hydrological data through our Access to Information Team.

5.2 Mechanisms should be set out to ensure that workers on site, including sub-contractors, are aware of environmental risks and undertake proposed preventative/mitigation measures. Consideration should be given to site presence of an appropriately qualified environmental scientist during construction to provide specialist advice. The principles of this should be considered within the ES or planning submission.

5.3 The production of an environmental management plan (EMP) along with detailed method statements may be required by planning condition or, in certain cases, through environmental regulation. Therefore, we recommend the submission of an outline EMP which incorporates the principles of all proposed pollution prevention and mitigation measures. This approach provides a useful link between the principles of development which need to be outlined at the early stages of the project and the method statements which are usually produced following award of contract (just before development commences). Further guidance on the production of EMPs can be found on our website.

6. Pollution prevention

6.1 We request that a dedicated pollution prevention section is provided in the ES or planning submission. All potential pollution risks associated with the proposals and all aspects of site work that might impact on the environment should be systematically

identified, as well as preventative measures and mitigation. This information is necessary to assess the environmental impact of the proposals prior to determination. This information can also usefully provide the basis for a more detailed environmental management plan and construction method statements, which may be requested as planning conditions or required under environmental regulation. We produce a series of Pollution Prevention Guidelines. The principles of any relevant PPGs should be incorporated into proposals rather than just referenced. Particular attention should be given to the construction PPGs.

6.2 Construction works can increase the risk of water pollution due to the release of sediment from exposed surfaces, contaminant discharges and accidental spillage. Therefore, steps must therefore be proposed to ensure that works do not cause oil, mud, silt, aggregate material or concrete to be washed away either during construction or as a result of subsequent erosion, vehicular movement or maintenance works at the site. Details of all operations involving water usage should be specified, and we encourage the use of a closed cycle system for site water needs. Concrete batching on site may require authorisation and should be discussed with us at an early stage. Measures to prevent any discharge to the water environment, and to avoid pH impact on peatland from the use of cement and concrete, should be set out.

6.3 Proposals for water quality monitoring must be set out in the ES or planning submission. The proposals should include a requirement that such monitoring generally be carried out at least six months before the commencement of any construction works to establish minimum baseline data. Our regulatory teams can advise on the likely monitoring regime that will be required for those aspects of the development that will be regulated under the Water Environment Controlled Activities (Scotland) Regulations 2006 (as amended) (CAR).

7. Storage of fuel and oil

7.1 If the storage, transport or dispensing of fuel or oil is proposed then a detailed scheme addressing location, management, maintenance, contingency measures and inspection should be included in the ES or planning submission, which demonstrates full compliance with the Water Environment (Oil Storage) (Scotland) Regulations 2006. The scheme should incorporate the best practice advice contained in PPG 7 *Refuelling facilities* and PPG 8 *Safe storage and disposal of used oils*.

7.2 Proposals for oil storage facilities should be located and designed in accordance with the Technical Handbooks and the Water Environment (Oil Storage) Regulations (Scotland) 2006.

Please refer to your local building standards office for advice on the Technical Handbooks. Due to potential risk to the environment,

underground oil storage should be avoided. Further information on the types of storage tanks to be used and additional publications can be found in the Pollution Control section of our website.

8. Site drainage strategy

8.1 Proposed temporary and long-term foul drainage facilities for workers on site must be described in the ES or planning submission. Guidance and best practice advice can be found in PPG4 *Disposal of sewage where no mains drainage is available*. We also request the submission of a site drainage strategy, detailing methods for the collection and treatment of all surface water runoff from hard standing areas and roads using sustainable drainage principles, which should be shown on a site plan.

8.2 Surface water drainage arrangements of elements such as any new access roads and buildings should incorporate the attenuation (where appropriate) and treatment principles of sustainable drainage systems (SUDS). The SUDS treatment train should be followed which uses a logical sequence of SUDS facilities in series allowing run-off to pass through several different SUDS before reaching the receiving waterbody. Further guidance on the design of SUDS systems and appropriate levels of treatment can be found in CIRIA's C697 manual entitled *The SUDS Manual*. Advice can also be found in the SEPA Guidance Note *Planning advice on sustainable drainage systems (SUDS)*. Please refer to the SUDS section of our website for details of regulatory requirements for surface water and SUDS.

9. Engineering activities in the water environment

9.1 In order to meet the objectives of the Water Framework Directive, developments should be designed wherever possible to avoid engineering activities in the water environment. The water environment includes burns, rivers, lochs, wetlands, groundwater and reservoirs. We prefer the water environment to be left in its natural state with engineering activities such as culverts, bridges, watercourse diversions, bank modifications or dams avoided wherever possible. Where watercourse crossings are required, bridging solutions or bottomless or arched culverts which do not affect the bed and banks of the watercourse should be used. If the proposed engineering works are likely to exacerbate flood risk then a flood risk assessment should be submitted in support of the planning application and we should be consulted.

9.2 Scottish Planning Policy states "Culverts are a frequent cause of local flooding, particularly if the design or maintenance is inadequate. Watercourses should not be culverted as part of a new development unless there is no practical alternative and existing culverts should be opened whenever possible. If culverts are unavoidable, they should be designed to maintain or improve existing flow conditions and aquatic life. A culvert may be

acceptable as part of a scheme to manage flood risk or where it is used to carry a watercourse under a road or railway" (Paragraph 211). Planning applications should be determined in line with this planning policy.

9.3 A site survey of existing water features and a map of the location of all proposed engineering activities in the water environment should be included in the ES or planning submission. A systematic table detailing the justification for the activity and how any adverse impact will be mitigated should also be included. The table should be accompanied by a photograph of each affected waterbody along with its dimensions. Justification for the location of any proposed activity is a key issue for us to assess at the planning stage. The detailed design of engineered structures in the water environment will be considered under regulations administered by us. Where flood risk may be an issue, this will need to be addressed at the planning stage.

9.4 Further guidance on the design and implementation of crossings can be found in our *Construction of River Crossings* Good Practice Guide. Best practice guidance is also available within the water engineering section of our website.

10. Water abstraction

10.1 Where water abstraction is proposed we request that the ES, or planning submission, details if a public or private source will be used. If a private source is to be used the information below should be included. Whilst we regulate water abstractions under The Water Environment (Controlled Activities) (Scotland) Regulations 2005 (as amended) we require the following information to determine if the abstraction is feasible in this location;

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

10.2 If other development projects are present or proposed within the same water catchment then we advise that the applicant considers whether the cumulative impact upon the water environment needs to be assessed. The ES or planning

submission should also contain a justification for the approach taken.

11. Borrow pits

11.1 Detailed investigations in relation to the need for and impact of such facilities should be contained in the ES or planning submission. Where borrow pits are proposed, information should be provided regarding their location, size and nature including the depth of the borrow pit floor and the final reinstated profile. The impact of such facilities (including dust, blasting and impact on water) should be appraised as part of the overall impact of the scheme. Information should cover, in relation to water, at least the information set out in PAN 50 *Controlling the environmental effects of surface mineral workings* (Paragraph 53) and, where relevant, in relation to groundwater (Paragraph 52).

11.2 Details of the proposed depth of the excavation compared to the actual topography, the proposed restoration profile, proposed drainage and settlement traps, turf and overburden removal and storage for reinstatement should be submitted. The reinstatement of borrow pits can raise significant waste management issues and it is essential that any proposals are discussed with our regulatory teams as part of the development of the scheme to ensure that such proposals are feasible in terms of cost and regulatory requirements.

12. Site waste management plan

12.1 Details of how waste will be minimised at the construction stage should be included in the ES or planning submission demonstrating that:

· Construction practices minimise the use of raw materials and maximise the use of secondary aggregates and recycled or renewable materials;

· Waste material generated by the proposal is reduced and re-used or recycled where appropriate on site (for example in landscaping not resulting in excessive earth moulding and mounding). There may be opportunities to utilise surplus soils for sustainable purposes elsewhere.

12.2 To do this effectively all waste streams and proposals for their management should be identified, including peat and other materials excavated on site and the importation of any waste materials to the site. Accordingly, we recommend that a site specific Site Waste Management Plan is developed to address these points. This is in accordance with the objectives of Scottish Planning Policy and the National Waste Plan which aim to minimise waste production and reduce reliance on landfill for environmental and economic reasons.

12.3 Advice on how to prepare a site waste management plan is available on the NetRegs website and from Envirowise who also provide free advice on resource efficiency. Further advice on the reuse of demolition and excavation materials is available from the Waste and Resources Action Programme . Further guidance can also be found on our website. Information on waste prevention and waste minimisation is available on our waste minimisation webpage at www.sepa.org.uk/waste/resource_efficiency.aspx.

13. Air quality

13.1 The local authority is the responsible authority for local air quality management under the Environment Act 1995, however we recommend that this development proposal is assessed alongside other developments that are also likely to contribute to an increase in road traffic. This increase will exacerbate local air pollution and noise issues, particularly at busy junctions and controlled crossing points. Consideration should therefore be given to the cumulative impact of all development in the local area in the ES or planning submission. Further guidance regarding these issues is provided in NSCA guidance (2006) entitled *Development Control: Planning for Air Quality*.

13.2 Excavation works, particularly through drilling and blasting, may cause nuisance to adjacent land users due to the generation of dust and noise. Comments from the local authority environmental health officers should be sought on the potential nuisance to adjacent land users during the construction and decommissioning phases of the project.

14. Flood risk

14.1 The site should be assessed for flood risk from all sources in line with Scottish Planning Policy (Paragraphs 196-211). Further information and advice can be sought from your Local Authority technical or engineering services department, Scottish Water and from our website. Our Indicative River & Coastal Flood Map (Scotland) is also available to view online. If a flood risk is identified then a flood risk assessment (FRA) should be carried out following the guidance set out in the Annex to the SEPA Planning Authority flood risk protocol. Our *Technical flood risk guidance for stakeholders* outlines the information we require to be submitted as part of a FRA, and methodologies that may be appropriate for hydrological and hydraulic modelling. Further guidance on assessing flood risk and planning advice can be found at our website.

15. Ecological impact

15.1 The proposed development site is close to the Muirkirk and North Lowther Uplands Special Protection Area (SPA) and Muirkirk Uplands Site of Special Scientific Interest (SSSI -

designated features include blanket bog) which contain many wetland features.

15.2 Initial ecology survey work has been completed. The site is dominated by commercial, coniferous forest planted on peatland. Wetland habitats are noted to be present in open areas of the forest and in forest rides. A large area of the site is a SINC (Wllochsheuch Moss and Feeshie Moss) which is noted to include active blanket bog and other wetland habitats.

15.3 It is noted that a Phase 1 habitat survey will be completed for the site. This should include use of 'SNIFFER (2009) Water Framework Directive 95 – A Functional Wetland Typology for Scotland' (currently available for free download on the SNIFFER website) to help identify wetland areas. National Vegetation Classification (NVC) survey is also proposed and this may be required for wetland areas identified on the site to ensure there are no direct or indirect (e.g. through changes to hydrology) on wetlands. This should also be completed for any wetland areas outside the site boundary that could be impacted by the development.

15.4 The results of the ecology surveys (including the NVC survey) should inform the final proposed wind farm layout (turbines, crane hardstandings, access tracks, etc). Wind farm infrastructure should not have direct or indirect impacts on wetlands. Peatland (especially active blanket bog) should be avoided.

15.5 Peat is noted to be present on the site. A full peat survey should be provided for the site detailing peat depths and peat characteristics. Wind farm infrastructure should avoid areas of deep peat. This should be considered with vegetation survey work to ensure that there are no direct or indirect impacts on peatlands and other wetlands.

16. Regulatory advice

16.1 Details of regulatory requirements and good practice advice for the applicant can be found on our website at 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 Environmental Protection and Improvement Team in your local SEPA office at:

East Kilbride Office
5 Redwood Crescent
Peel Park, East Kilbride
G74 5PP
telephone 01355 574200

If you have any queries relating to this letter, please contact me by

telephone on 01355 574200 or e-mail at planning.ek@sepa.org.uk

3. SNH

Overview of the proposal

Full details of the proposed development and all related works must be presented within the Environmental Statement (ES). While reference to Appendix 1 of the Guidelines of the Environmental Impacts of Wind farms and Small Scale Hydroelectric Schemes (SNH, 2001) will fully inform the applicant of our requirements regarding the project description, examples of the type of information required are given below:

□□Turbines – number, type, height, energy capacity and colour.

□□Turbine foundations – dimensions, materials to be used, construction methods.

□□Site access tracks - length, location, construction methodology. The ES should distinguish between floating and excavated sections of track and define the criteria used to determine which type of track goes where.

□□Borrow pits – number, size, location, restoration proposals.

□□Crushing plant – location, description.

□□Crane hardstandings – size, description, construction methods.

□□Construction compound – location, size, description.

□□Laydown area(s) - location, size, description.

□□Concrete batching plant – if on site, location, description.

□□Improvements/modifications to public roads – description (upgrading of bridges may affect bat roosts, trees may have to be felled, etc.)

The EIA should include a method statement for all infrastructure, including any borrow pits and track construction. The statement should include details of the proposed materials, method of construction, timing of operations and the proposed reinstatement and mitigation measures, following construction and after decommissioning of the proposal. SNH wishes to be consulted in the development of this method statement.

Landscape and Visual Impact Assessment (LVIA)

Designations

The application site is not within a local landscape designation, and no National Scenic Areas will be affected by the development. The wind farm is unlikely to adversely affect the setting of a few nationally important sites listed in the Inventory of Gardens and Designed Landscapes, including Candidate sites.

Impact on landscape character and cumulative landscape impact

The proposed development is located within both the Plateau Moorlands and Plateau
Farmland landscape character types, as defined within the Glasgow and Clyde Valley Landscape Assessment (1999). SNH considers that wind energy development can relate to the often expansive scale and simple landcover pattern of the Plateau Moorlands landscape, provided that it is carefully sited to reduce the landscape, visual and cumulative impacts.

However, at the meeting on 19 January 2010, we highlighted the importance of scale
indicators in the landscape, as these will affect the perceptions of the magnitude of
landscape and visual impact. In the Plateau Farmland to the north-east the turbines will be seen in conjunction with hedgerow trees and buildings of known height, that are largely absent on the moors. We also discussed the role of the head dyke in indicating where climate is more severe (windy) and agriculture less intensive (different colours and textures), given this will assist in fine-tuning the transition zone between the two Plateau landscape types. We noted that the head dyke had been a limiting factor at Whitelee windfarm (also sited in Plateau Moorland).

The proposed Kype Muir wind farm will need be well-designed itself and also take
appropriate account of the adjacent wind developments. We were advised by the developer at the January meeting that the turbines would be either 125 m or 140 m high. At 140 m, the height of the turbines may be out of scale with the Plateau Farmland surroundings, and this scale issue would be further emphasised because the turbines would be taller than the adjacent Dungavel windfarm in the Plateau Moorlands, whose tallest turbines are 120m in height.

The cumulative impacts of all the ancillary features of the wind farm development with these same features on the adjacent wind farm at Dungavel – tracks, control buildings, borrow pits, the access junction at the public road etc – should also be considered.

The secondary impacts on the adjacent sheltered and settled landscape types of smaller scale will also be relevant. The site is within approximately 2 km of the Upland River Valley character type of the Avon Water to the north, which is sensitive to wind farm development, in part because of its sheltered character which is at odds with a wind energy development. Some key characteristics are likely to change due to sight of the turbines. However, sand quarrying has also changed the valley character, so the cumulative impact of large scale development is also an issue.

Paragraph 5.9. There is no need to assess landscape character and quality within the entire study area of 30-35 km radius, as this leads to an excess of information that does not assist us in the consultation process. We advise that the design process will require a very detailed assessment (at least 1:25,000)

within the development site and its environs. We find most helpful a 1:50,000 equivalent assessment within the range of potentially significant adverse visual impact on the landscape types and sensitive VPs that fall within the ZTV (which may be 20 km radius c.f. Ochils wind farm conjoined PLI), and particularly within 5 km of the outermost turbine where the experience of the landscape is most likely to change to a 'with wind farm' landscape sub-type.

Impact on visual amenity and cumulative visual impacts

The Scoping Report does not have a map showing the Zone of Theoretical Visibility (ZTV) of the development's worse case scenario (which would be 45 turbines at 140m high). Our comments are therefore based on our own judgement and experience. Paragraph 5.7 of the Scoping Report states that the ZTVs will extend out to a 20 km radius. This is insufficient and does not accord with our guidance. A radius of 30-35 km will be required, depending on the height of the turbine.

In views from the A71, running along the settled valley to the north in close proximity, the Kype Muir wind farm (turbines at 125m or 140m high) is butted onto the Dungavel consented wind farm (turbines at 100m and 120m high). Kype Muir wind farm will be perceived as being part of the consented Dungavel development, but will have different height turbines, different spacing and different rotation speeds: all of which will emphasise the differences and increase the cumulative visual impacts.

The Kype Muir wind farm is also on the opposite side of the Avon valley and A71 from the West Browncastle wind farm Scoping site (turbines 140m high), the Whitelee operating wind farm (turbines 110m high) and the Calder Water application wind farm (turbines 147.5m high) to the north-west. It will be seen in conjunction with these sites. We draw the developer's attention to the caveats on cumulative impact in our Strategic Locational Guidance, and to our guidance on cumulative impact.

The sequential visual impacts along the A71 are a major concern to us at this development site. It may be helpful if the developer supplied the sequential impacts as a 'distance bar chart' similar to that produced for the Ochil Hills windsfarms conjoined PLI. It is likely – but we cannot be certain due to the lack of a ZTV – that in views from the east, Kype Muir will be seen in combination with the nearby Nutberry site (turbines 115m high), the operating Hagshaw wind farm (turbines 55m and 80m high) and the operating Lochhead wind cluster (turbines 91m high).

The Cumulative Zones of Theoretical Visibility (CZTV) in the ES should include a CZTV to show areas that will see only the Kype Muir turbines and none from the operating, consented or application wind farms within the range of significant visual impact.

Figure HJB / 713 / SR04 Rev:a (Cumulative Impact Plan) is slightly inaccurate:

- We understand that Bogside and Chapelton have both been refused.
- Galawhistle and Harrow's Law are applications, not scoping.

Clyde is under construction; it may be classified as Operating by the time of the ES.
Blackcraig has finished its Appeal, and is therefore not Planning.
Typos: West “Brow” Castle is West Browncastle; “Claburn” is Cloburn; “Sinsbury’s” is Sainsbury’s; “Covans” Law is Cowans Law; “Bankhead Rig” is Bankend Rig.

The list will need to be kept up to date until the cut-off time for the ES, as Scoping sites may become Applications. For example, we understand that Sanquhar will shortly be submitted.

Representative Viewpoints (VPs)

There is no list of VPs in the Scoping Report. Paragraph 5.8 states that “key viewpoints which will be agreed in consultation with the Local Planning Authority, Scottish Government and local interested parties.” This suggests that SNH is not going to be consulted on Viewpoints, or that we will be consulted as a “local interested” party. Either option does not reflect our role as statutory consultees. The VPs for the surrounding wind farms, including Chapelton (due to its location on lower ground) will provide a starting point for drawing up a list, and SNH will help confirm it if asked to do so.

The Auchengilloch monument, cared for by the Scottish Covenanter Memorials Association, may still be important as a Coventicle or location of an outdoor religious service. The ES must include an assessment of the impacts of the wind farm (e.g. noise, movement) on people’s experience and enjoyment of the natural heritage here. This would partly be covered by the monument being one of the VPs, but people’s experience at this location is not only visual.

Wirelines, photographs and photomontages are required for all VPs. Although turbines pixelate at 15 km, there may be other wind farm sites within that distance in the VP that are under construction and their turbines must be photomontaged in so that the ES gives as realistic an impression as possible. The developer should also refer to our “Visual Representation” guidance.

Forestry

The ES should indicate areas of forestry plantation which may by felled to accommodate new turbines, and the visualisations must include this. If timber is to be disposed of on site, details of the methodology for this should be submitted. Areas of retained forestry or tree groups should be clearly indicated and methods for their protection during construction clearly described.

Offsite impacts

The ES should provide information relating to the preferred route options for delivering the turbines etc. via the trunk road network. SNH wishes the ES to include an assessment of the offsite impacts of improving the public roads to allow access for the abnormal loads i.e. the landscape and visual impacts of road straightening, widening, levelling, tree and hedgerow removal, drystone

wall removal, and the upgrading/enlargement of junctions following from the swept path analysis.

Grid Connection Details

The impacts of constructing, installing and operating the following infrastructure components should be considered and assessed by developers, if known;

- Substation.
- Cabling (Underground).
- Cabling (Overhead).
- Monitoring and control centre.

We note that the grid connection S.37 application will not be included in the ES. We advise that consent of the wind farm, if this occurs, should not be taken to mean that we would not advise against the consent for the grid connection. One concern, for example, is that the grid connection may contribute to the cumulative impact of the wirescapes. Other natural heritage issues may also be relevant.

We welcome the statement that “as much information as possible on potential grid
connection options will be included in the planning application for the wind farm.” We
consider that the grid connection is part and parcel of the whole wind farm application, and its impacts may warrant objection even if the wind farm is consented. Therefore, the route corridor for the grid connection should be included as the minimum information.

Ecological Assessment

Statutory Designated Sites

Muirkirk and North Lowther Uplands Special Protection Area (SPA)

Muirkirk and North Lowther Uplands SPA qualifies under Article 4.1 by regularly supporting breeding populations of European importance of the Annex I species; hen harrier Circus cyaneus (average of 29.2 breeding females between 1994 and 1998, 6% of GB), shorteared owl Asio flammeus (average of 26 breeding pairs between 1997 and 1998, 3% of GB), merlin Falco columbarius (average of 9 breeding pairs between 1989 and 1998, 0.7% of GB), peregrine Falco peregrinus (average of 6 pairs between 1992 and 1996, 0.5% of GB), and golden plover Pluvialis apricaria (an estimated minimum of 154 pairs in 1999, 0.7% of GB). Muirkirk and North Lowther Uplands SPA also qualifies under Article 4.1 by regularly supporting a wintering population of European importance of the Annex I species hen harrier Circus cyaneus (average of 12 individuals between 1991 and 1995, 2% of GB).

Provisions under the Birds Directive 1979 and Habitats Directive 1992

The site's status as a classified SPA under the EC Directive 79/409/EEC on the
Conservation of Wild Birds (the “Birds Directive”), means that the provisions of the Revised Circular 6/95 and the Conservation (Natural Habitats, & c.) Regulations 1994 (the “Habitats Regulations”), apply. The Circular (page 3 para. 12) sets out the obligations of the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the “Habitats Directive”), which applies a common protection regime to all European sites, that:

"The Regulations require that, where an authority concludes that a development proposal unconnected with the nature conservation management of a Natura 2000 site is likely to have a significant effect on that site, it must undertake an appropriate assessment of the implications for the conservation interests for which the area has been designated ".

Paragraph 13 of the Circular states that the need for appropriate assessment extends to plans or projects outwith the boundary of the site in order to determine their implications for the interest protected within the site.

Under regulation 48 of the Habitats Regulations, this means that the Scottish Government, as 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.

The competent authority can only agree to the proposal under regulation 48 after having ascertained that it will not adversely affect the integrity of the site. If this is not the case, and there are no alternative solutions, the proposal can only be allowed to proceed if there are imperative reasons of overriding public interest. If you propose to approve the plan on the grounds of imperative reasons of overriding public interest then regulation 49 states that you must inform Scottish Ministers and you must not issue approval for a period of 21 days after receipt by Scottish Ministers unless notified otherwise. If proposals are allowed to proceed in accordance with regulation 49 then it should be noted that regulation 53 requires that Scottish Ministers shall secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected.

SNH Advice in relation to qualifying interests

From the information available it appears to SNH that the proposal is not connected with or necessary for the conservation management of the site, hence further consideration is required.

SNH's advice is that this proposal is likely to have a significant effect on the qualifying
interest of the SPA. SNH's view is that, as a consequence, the Scottish Government will be required to undertake an appropriate assessment of the

implications of the proposal for the site in view of the site's conservation objectives for its qualifying interests.

The location of the development footprint adjacent to the SPA could adversely affect the integrity of the site through;

a) the impact of collision mortality to the qualifying interest of the SPA during operation
of the wind farm
b) the impact of disturbance to the qualifying interest of the SPA through construction, occupation and operation of the development
c) the impact of construction, occupation and operation of the development on the
distribution of the qualifying interest of the SPA within the SPA
d) the impact of damage and loss to the distribution and extent of habitats supporting
the qualifying interest of the SPA
e) the impact of damage and loss upon the structure, function and supporting processes of habitats supporting the qualifying interest of the SPA
f) impact of the cumulative effect of a), b), c), d) and e) in combination with other wind
turbine proposals on the maintenance and distribution of the qualifying interest of the SPA in the long term

On the basis of information currently available, SNH considers that it is probable that it cannot be ascertained that the proposal will not adversely affect the integrity of the site. However, once this appraisal has been undertaken, SNH will be in a position to reconsider this initial view.

Other Protected Sites

The Scoping Report identifies two Sites of Importance for Nature Conservation (SINCs), as identified and protected by the South Lanarkshire Local Plan, that may be affected by the development proposal.

As suggested in the applicant's Report, SNH would expect any EIA for this proposal to assess the likely impacts on the habitats covered by these SINC designations and to identify any required mitigation.

Other Habitats

The applicant's Scoping Report states that a walkover habitat survey has been undertaken, the main findings of which were significant areas of peatland/heathland habitat and species rich acid grassland.

Areas of particular habitat value, outwith the Muirkirk and North Lowther Uplands SPA, in this locality are also protected by designation as SINCs in the South Lanarkshire Local Plan. In particular, a large SINC covers the areas of deep peat habitat at Feeshie Rig and Kypes Rig is valued for its species-rich grasslands.

The impacts on these habitats should be adequately considered in relation to the SINC designations as discussed above, however the impacts on peatland habitat in particular should be considered within the ES for this proposal. There is no indication in the material available to us to date as to the location of turbines, access tracks and other elements of the development. We would strongly advise that any construction is sited away from the areas of deep peat. The ES should include an analysis of the likely impacts on peatland - both in terms of its value as a habitat and of the potential
for carbon release where peat is disturbed. Guidance on Calculating Carbon Savings From Windfarms on Scottish Peatlands can be found on the Scottish Government's web pages at http://www.scotland.gov.uk/Publications/2008/06/25114657/0

If any significant impacts on peatland or other non-protected habitats are identified, the ES should also include a discussion of alternative solutions and mitigation.

Forestry

We would strongly support the full assessment of the deforestation impacts through the EIA process as these operations are likely to result in significant environmental impacts and form an integral part of the development. Such an approach is consistent with planning documents Scottish Planning Policy and Planning Advice Note 45. In our experience of wind farm development within afforested areas, there will be significant change in the land-use coverage. We would expect this aspect to be fully assessed in the ES and cover the following key issues:

□□Existing conditions, species, age class, condition of existing forestry.
□□The presence of other landscape features, such as stone dykes or specimen
boundary trees, that may be masked by existing forestry should also be noted
□□Landscape and visual assessment of proposed change to forest coverage.
□□Full details of the proposed felling scheme, including the timing, location and extent
of felling areas and the timescale proposed.
□□Routes for extraction and transport of felled timber.
□□Plans for disposal of any timber felled to waste or specification for clearance off site
of timber/brash – i.e. condition of site post-felling.
□□Design of re-structured forest, layout, species, densities etc. and timescale for all
replanting and restocking works.
□□Restoration of ground conditions upon forest removal and details of future long-term management which will secure environmental enhancement.

We welcome full investigation by suitably qualified personnel of any positive opportunities for landscape and habitat enhancement that may arise from forest restructuring or the development in general. In some proposals that we are aware of, the developer has agreed to make substantial commitment towards the creation of new habitat or the restoration of existing landscape features.

We are also aware of some developer's commitment towards off-site planting of native broadleaf trees for community benefit in order to compensate for the loss of existing forestry which was perceived as fulfilling a carbon sink role in its own right. We would welcome consideration of this matter and encourage the applicant to look as creatively as possible towards such issues.

Further information on this particular topic can be found on the SNH web site at: www.snh.org.uk under our guidance note: 'Wind farms and Carbon Saving'

Internationally Protected Species

Otter, great crested newt and all bat species are listed on Annex IV of EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna ('Habitats Directive') as species of European Community interest in need of strict protection. The species of animals listed in Annex IV(a) of the Habitats Directive, whose natural range includes any area in Great Britain, are also listed in Schedule 2 of the Habitats Regulations as 'European Protected Species of Animals' (EPS) and are fully protected. This means it is
illegal to:

- deliberately or recklessly kill, injure, disturb or capture EPS.
- damage or destroy the breeding sites or resting places of such animals.

We are obliged to inform planning authorities about EPS which may be affected by any development proposal. Where it is proposed to carry out works which will disturb EPS or their places of rest or shelter, whether or not they are present in these refuges at the time, a licence must first be acquired from the Scottish Government Rural Directorate. The likely impacts on EPS, and the requirement or otherwise for any associated licensing, must be established prior to the granting of any consents.

To meet these requirements, surveys for EPS likely to be found in the area of a proposed development must be undertaken. The only such species that could potentially be found within the area of this development proposal are otters, bats and great crested newts.

EPS are likely to be recorded within and adjacent to the wind farm footprint and a full
assessment of the short and long term impacts of the development upon EPS recorded must be included as part of the ES.

The application area and associated habitats must be fully surveyed. As well as the results and the assessment, SNH require the ES to include details such as surveyor experience, survey methodology applied, dates and weather conditions of each survey and confirmation of the areas and habitat surveyed. Surveys must be undertaken at optimum times.

The ES should state the significance of the site for EPS in terms of the abundance and distribution of populations, frequency of use and identification and significance of important sites. It would be helpful for records to be identified upon a map no greater than 1:10,000 scale. Alternative solutions

and mitigation must be identified where the assessment indicates that European Protected Species may be affected as a consequence of the development.

Otters

The locations of all otter places of rest/shelter on-site should be identified, along with an analysis of the nature of any development works (including the provision of access or the storage of materials) that will encroach to within 200m of such sites.

Where otter activity has been identified (as above), but no specific sites of rest/shelter have been located, an analysis of all works likely to encroach to within 200m of these water bodies will also be required in order to identify potential impacts should places of rest/shelter become established subsequent to the surveys being undertaken. Where impacts and likely licensing requirements are identified, the ES should also include consideration of alternative solutions and mitigation.

Bats

All species of bat in the UK are listed as EPS. It is stated in the applicant's Scoping Report that survey work for bats will be undertaken. SNH would expect to see full details of any such surveys included in any eventual ES.

The main likelihood for significant impacts on bats resulting from a proposal of this nature would be if there was a requirement to fell mature trees that may be used as roosts.

However, if there is significant use by bats of areas within the development footprint for foraging, there may also be the potential for impacts relating to loss of habitat or collisions with turbines. SNH would therefore expect that any ES for this proposal includes an assessment of bat usage of the development area and an analysis of any likely impacts from construction (including details of all tree felling that will be required) and operation of the wind farm. Should the potential for significant impacts be identified, the ES should also include consideration of alternative solutions and mitigation.

Interim Guidance for considering the impacts of wind farms on bats has been produced by Natural England and is available from the renewable energy section of the SNH website.

Great Crested Newts

Our advice is that all standing water bodies within 500 metres of any proposed development activity be assessed for their potential to support amphibian life. Where such potential is identified, more detailed surveys to establish the presence or absence of great crested newts will be required.

Newts can range over a wide area, and any development works relating to this wind farm proposal that encroach to within 500m of a water body

identified as supporting great crested newts will therefore require prior licensing by Scottish Government.

Should surveys identify the presence of this species, we would expect the ES also to include an assessment of the likely impacts arising from all development works, as well as a consideration of alternative solutions and mitigation.

Other Protected Species

Badgers

Badgers are protected in Britain by the Protection of Badgers Act 1992 as amended by the Nature Conservation (Scotland) Act 2004. This makes it an offence to:

- deliberately kill, injure or capture a badger, or to attempt to do so;
- destroy, damage or obstruct access to a badger sett;
- disturb a badger while it is occupying a sett.

Where it is proposed to carry out development works which will disturb a badger or involve the damage or destruction of a sett within an occupied badger territory - regardless of when it may last have been used - a licence must first be obtained from SNH.

SNH would expect the ES for this proposal to include full details of all badger surveys
undertaken in order to confirm the status of the species within the proposal site. If a
population of the species is identified within the development footprint, an analysis of likely impacts from the wind farm construction should also be given. Where potential impacts are identified, the ES should also include a discussion of alternative solutions and required mitigation.

Water Voles

Water voles are afforded some protection by the Wildlife and Countryside Act 1981 as amended by the Nature Conservation (Scotland) Act 2004. This makes it an offence to:

- damage or destroy or obstruct access to any structure or place which water voles
use for shelter or protection;
- disturb water voles while they are using such a place.

SNH would expect the ES for this proposal to include full details of all water vole surveys undertaken in order to confirm the status of the species within the proposal site. If a population of the species is identified within the development footprint, an analysis of likely impacts from the wind farm construction should also be given.

Where potential impacts are identified, the ES should also include a discussion of alternative solutions and required mitigation.

Birds

Protection for all wild bird species was significantly increased by the Nature Conservation (Scotland) Act 2004. It is now a criminal offence to deliberately or recklessly:

□□take, damage, destroy or otherwise interfere with the nest of any wild bird while that
nest is in use or being built.
□□obstruct or prevent any wild bird from using its nest.

Our advice is that surveys are conducted for raptors within 2km of the development site boundary, for black grouse within 1km of the proposed turbine locations and for all species within 500m of the current development site boundary.

SNH would expect the ES for this proposal to include full details of the breeding bird survey work undertaken and the species recorded. Consideration should be given to the likely impacts on breeding birds resulting from:

□□displacement through the direct loss of habitat
□□indirect loss of habitat resulting from birds avoiding the wind farm and its surrounding area due to turbine operation
□□indirect loss of habitat resulting from disturbance relating to maintenance and other
human activity

As many birds nest in different locations from year to year, the ES should also include details of the way in which nesting birds encountered during construction will be managed.

One of the most significant ways in which wind farm developments can potentially impact on wildlife relates to the potential for collisions with migratory or foraging birds. The applicant's Scoping Report states that 12 months of vantage point watches for birds has been undertaken – but no detailed information is provided.

SNH would strongly advise that the impacts on birds relating to this development proposal be assessed using our Guidance - Survey Methods for use in Assessing the Impacts of Onshore Wind farms on Bird Communities (SNH November 2005), which details the minimum survey and assessment requirements we consider appropriate for EIA. Survey work should, as a minimum, meet these guidelines to enable a valid assessment of the impacts to be determined. However, due to the proximity of the Muirkirk and North Lowther Uplands SPA we would expect the minimum survey effort to be greatly exceeded. This document, along with additional guidance relating to

birds and wind farms, can be found in a dedicated subsection of the renewable energy section of our website. We would additionally recommend reference to the document Assessing Significant Impacts From Onshore Windfarms On Birds Outwith Designated Sites (SNH 2006). It should be noted that additional work might be required as a consequence of initial survey results.

In order to ensure that a suitable assessment methodology has been adopted, and to avoid additional survey work being required at a later stage, vantage point survey methods should ideally be addressed as part of the scoping exercise - with vantage point locations agreed at suitable locations where the presence of an observer does not influence flight behaviour within the survey area and adequate observation effort and coverage of the site has been attained. In that respect it is unfortunate that the applicant has undertaken such work without prior consultation with SNH.

SNH would ultimately expect that the eventual ES will include full details of the methods employed in the vantage point survey work undertaken, including the amount of hours of watches, start/finish times, dates, weather conditions and the surveyor's initials. Any departures from the SNH guidance should be highlighted, explained and fully justified. The ES should include maps showing the extent of the site visible from each vantage point and provide the area (ha) visible from each vantage point and the area (ha) visible within the turbine envelope including a 200m buffer from the turbine envelop.

SNH also request that a cumulative impact assessment be carried out to identify whether any notable species would be significantly affected by this development. Wind farms within the formal planning system and those with planning permission must be included in the assessment.

South Lanarkshire Local Biodiversity Action Plan – habitats and species

We would recommend that the application area be surveyed for relevant habitats and
species included within the South Lanarkshire Local Biodiversity Action Plan (LBAP).

In particular your attention is brought to the potential for significant species of butterfly. These would need to be surveyed for at the optimum time of year. Where recorded, an assessment of the significance of the development's impact should be undertaken and mitigation and/or restoration proposals identified.

Hydrology, geology and soils

While the Scottish Government's "Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments" was developed for s36 applications, its adoption for all renewable developments affecting peatland is considered good practice. SNH welcome the intention to conduct such an assessment. Baseline survey should include:

- Underlying geology
- Soil type and characteristics
- Current process affecting soil
- Hydrogeological regime
- Groundwater vulnerability
- Surface catchment mapping
- Hydrological regime
- Water quality characteristics
- Water resource usage
- Sensitivity and status of soil and water

Having identified the interests, and the significance of these, the ES must consider direct and indirect construction and operational effects, the significance of these, how these might be mitigated and the significance of any residual impacts.

We would recommend that technical advice be sought from the Scottish Environment
Protection Agency (SEPA) on the adequacy of any hydrological work that is undertaken as part of EIA for the wind farm proposal.

For the proposed development, we advise that specific attention should be given to
minimising adverse impacts to surface waters, in particular to tributaries flowing into the Avon Water. Any mobilisation of sediment or nutrients into surrounding watercourses should be avoided. Mitigation should be identified in the ES to address these issues.

Recreation and Access Assessment

SNH would seek to ensure that the impacts of any development proposal on public access to and enjoyment of the countryside are adequately considered. The applicant's scoping report does not include a specific section relating to such impacts and we would therefore seek to ensure that the eventual ES includes an assessment of any impacts on Rights Of Way, Core Paths, footpaths and other access routes.

This should include impacts both during and following construction. In particular, we are aware that the proposed development footprint contains a number of Rights Of Way (as have been indentified on the applicant's constraints map).

We would encourage the developer to establish links from the site access tracks to footpaths beyond the site boundary, in order to establish or strengthen links with nearby settlements for example. The ES should therefore contain a simple Access strategy. The draft Access Strategy for Whitelee wind farm is a helpful example.

Grid connection

SNH understands that the developer does not yet have a contract for connection to the electricity grid. The route corridor for this connection should

be identified in the ES, and the ES should confirm whether the connection will be made underground or overhead. If natural heritage constraints allow, we would prefer an underground link to the grid connection point.

Decommissioning

Full site restoration and re-instatement details at both post-windfarm construction and
decommissioning stages should be included.

Mitigation

All opportunities for mitigating the impact of the development on the natural heritage should be explored, based on the results of the ecological and landscape and visual impact assessments, with particular reference to upland breeding bird species.

Mitigation proposals could include opportunities for restructuring the remaining forest, particularly its edges, and for new broadleaf planting for landscape and habitat benefit both on-site and off-site. There may also be opportunities for habitat creation of nature conservation value within the site.

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4. Directorate for the Built Environment

No comment

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5. Forestry Commission

Forestry/Woodlands

Internationally there is now a strong presumption against deforestation (which accounts for 18% of the world's greenhouse gas emissions). Reflecting this, Scottish Ministers have now approved a policy on *Control of Woodland Removal* (refer Scottish Planning Policy paragraph 148) which seeks to protect the existing forest resource in Scotland, and supports woodland removal only where it would achieve significant and clearly defined additional public benefits. In some cases, including those associated with development, a proposal for compensatory planting may form part of this balance.

The criteria for determining the acceptability of woodland removal and further information on the implementation of the policy is explained in the Control of Woodland Removal Policy. These should be taken into account when preparing the development plans for this wind farm proposal. The developer should also be aware of the *National Planning Framework 2* and specifically paragraph 93 which reiterates Scottish Government determination to decrease the loss of existing woodland and aspiration for further expansion.

The ES should indicate proposed areas of woodland for felling to accommodate new turbines and other infrastructure such as roads. Details of the area to be cleared around those structures should also be provided, along with evidence to support the proposed scale and sequence of felling. The ES should also detail any trees or woodland areas likely to be indirectly affected by the proposed development (e.g. through changes in hydrology, loss of neighbouring plantation causing instability, etc) and provide full details of alternatives and/or protection and mitigation measures in the ES.

The developer should consider the wildlife implications of any tree felling in the relevant sections of the ES. The ES should also consider any impacts of forestry activities on the water environment, with particular attention paid to acidification and nutrient leaching. The applicant should make full use of the *Forests and Water Guidelines* in proposing forestry activity and mitigation procedures.

If timber is to be disposed of on site, details of the methodology for this should be submitted. Areas of retained forestry or tree groups should be clearly indicated and methods for their protection during construction clearly described.

If areas of woodland are to be temporarily removed but then replanted shortly afterwards (typically within 1-5 years) this should be indicated in the ES, and details of the replanting plan provided.

Where there is a change in land use (e.g. to non-woodland habitats) the woodland should be described in sufficient detail (e.g. including details of the age of the trees; the species type and mix; the soil types; any particular natural heritage designations or protected species present in the woodland; and the landscape and historical environment context) to enable its intrinsic public benefit value to be assessed. This will facilitate decisions on whether woodland removal is acceptable and if so, whether compensatory planting will be required.

The developer should refer to guidance documents[3] issued by the Forestry Commission in relation to good forestry practice and associated environmental issues.

In summary, the developer should consider their response to the Control of Woodland Removal Policy, including the consequences of such removal on carbon sequestration and mitigating the potential effects of climate change.

Forestry Commission Scotland can advise on all aspects of woodlands and forestry associated with developments and early consultation with them to clarify proposals and any particular restrictions or conditions on woodland removal that may apply to the area is recommended. Contact details of the nearest Forestry Commission Conservancy office can be accessed at: www.forestry.gov.uk or from fcscotland@forestry.gsi.gov.uk.

11.7 Forest and woodland ecology

The *Scottish Forestry Strategy* (SFS) (2006) and *Scottish Biodiversity Strategy* (both of which have Ministerial endorsement) and *Nature Conservation (Scotland) Act 2004* should be essential documents that the developer should be aware of.

The SFS recognises the importance of native woodlands, especially those that are of ancient and semi-natural origin. It also incorporates targets for priority habitats and species, sets priorities for action in terms of improving the management of semi-natural woodlands, and extending and enhancing native woodlands by developing forest habitat networks (page 48).

The SFS also recognises the potential for well designed productive forests to contribute environmental benefits through the restructuring process and future management systems, such as habitat and landscape value from increased open space (page 48).

The SFS also identifies and promotes the importance of sustainable forest management as an essential contributor to the conservation of soils, the quality of water and air (page 44), and the general contribution that forests and woodlands can make to tackle climate change.

The *Scottish Biodiversity Strategy* contains delivery of targets for priority habitats and species as key aims as well as enhanced management of whole landscapes for biodiversity, including reducing fragmentation of habitats. This strategy has been designated by Ministers under the terms of the *Nature Conservation (Scotland) Act 2004*, to confirm that all public bodies have a duty to further biodiversity where consistent with their functions, in ways which are guided by the strategy.

This would suggest that the developer should be obliged to carry out an assessment of the implications of the wind farm proposals on biodiversity.
This should be in both general terms of effects on the biodiversity strategy aims, and specifically the impacts on priority habitats and species; i.e. those with national targets (*HAPs* and *SAPs* identified in the *Biodiversity Action Plan*).

It would also suggest that the developer should be obliged to carry out an assessment of the implications of the wind farm proposals on water, soil and air resources, and an appreciation of the potential consequences of the loss of woodland cover with regards climate change, specifically carbon sequestration.

Consultation with the local Forestry Commission Scotland Conservancy should also be undertaken during the development of proposals for the planned restructuring and/or woodland removal to accommodate the wind farm proposals.

Regards the FC *Forest and Water Guidelines* please note that this publication is now in its 4th Edition, published 2004.

11.8 Landscape and visual assessment

The *UK Forestry Standard*, FC *Forest Landscape Guidelines* and *Lowland Design Guidelines,* FC Forestry Practice Guide: *Forest Design Planning – A Guide to Good Practice*, The *Scottish Forestry Strategy 2006* and SNH suite of *Landscape Character Assessments* should all be on the list of documents that the developer should be aware of.

The *Scottish Forestry Strategy* identifies that forests and woodlands contribute to Scotland's diverse and attractive landscape. It promotes the benefits of well designed and managed woodlands that reflect local landscape character, and that their contribution to the wider landscape should help Scotland meet the undertakings of the *European Landscape Convention* (page 44).

The Scoping Report should promote a full assessment by the developer of all the landscape and visual issues. This should include a full description of the general landscape character within which the developer proposes to introduce the wind farm, and a statement of the landscape and visual sensitivities that may be potentially affected by that development.

It should also include an assessment of the cumulative landscape and visual impacts affecting the wind farm proposal, and identify relevant criteria that may have a bearing on that assessment.

The *UK Forestry Standard* sets out the criteria and standards for the sustainable management of all forests and woodlands in the UK. Landscape is a specific *Criteria for Sustainable Forest Management* (page 18) and the two *Forest Management Unit Indicators* as evidence that landscape quality is enhanced are:

- Landscape principles of forest design are used;
- Cultural and historical character of countryside is taken into account when…making changes to existing woods.

The first point refers to the FC *Forest Landscape Guidelines* and *Lowland Design Guidelines* (both extracted from the FC book *The Design of Forest Landscapes* (Oliver W.R. Lucas; pub. Oxford University Press 1991)).

The second point on the appraisal of the landscape with regard to appreciating its local character is similarly covered in the aforementioned Guidelines and *The Design of Forest Landscapes*. Further, the *Scottish Forestry Strategy* specifically advocates the use of Scottish Natural Heritage's suite of *Landscape Character Assessments*, which provide valuable descriptive information about the landscape of Scotland. The potential removal of the existing woodlands within the wind farm proposal area may create significant areas of open ground (that is, ground without woodland cover).

The principles and process of restructuring an existing forest are described in the aforementioned FC Forestry Practice Guide: *Forest Design Planning – A Guide to Good Practice*. Not only should such a plan consider how best to clear fell the forest for the wind farm development, but also describe how the remaining woodland elements beyond the scheme boundary can be best integrated with the development site. Such integration could be achieved, for

example, by the selective restocking of strategic areas within the wind farm site area.

We would advise that when forest landscape design is being considered as part of the forest management associated with such a development, a chartered Landscape Architect with a comprehensive knowledge of forestry should be commissioned.

11.9 Historic environment of forests and woodlands

The developer should recognise the wider aspects of the wind farm proposals on historic environment policies. In terms of forests and woodlands, besides the legacy of the past to be found within woodlands, the cultural heritage of ancient woodlands and veteran trees are particularly important. The value of the historic environment in woodlands is recognised in the *UK Forestry Standard* the *Scottish Forestry Strategy* (SFS) (page 45) and FCS Policy Statement *Scotland's Woodlands and the Historic Environment*.

The SFS not only identifies the duty to safeguard evidence of the historic environment but also encourages their active management, enhancement and interpretation. Reference should also be made to the FC *Forests & Archaeology Guidelines*.

11.10 Management Plan

With regards both ecological and landscape considerations for the site and immediate environs, we would advocate the preparation of a long-term management plan.

This should be carried out in consultation with FCS, Local Authority, SNH, landowners and other interested parties. Essentially what is required is an integrated land-use and management plan that fosters optimising the ecological and landscape benefits of both the wind farm site and neighbouring land uses.

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6. Historic Scotland

Potential Direct Impacts

In this case we can confirm that there are no scheduled monuments, listed buildings or gardens or designed landscapes within the search area.

Indirect Impacts

We can confirm that the following scheduled monuments/category A listed buildings/gardens and designed landscapes are located in the vicinity of the search area and should be considered in terms of impact on their setting:

Scheduled Monuments

- Burnbrae,barrow 170m NW of (Index no. 4298);
- Dungavel Hill,cairn (Index no. 2848).

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. This would be of particular use in relation to Burnbrae,barrow 170m NW of (Index no. 4298).

The Scoping Report identifies that the impacts on historic environment assets will be assessed within a distance of 5 km beyond the site boundary. We would advise caution with this approach since there may be monuments which would experience a significant impact beyond this distance. The application of a Zone of Theoretical Visibility model may help to identify such sites. We would be happy to discuss the findings of this search with the developer once this model is produced.

We note that the Scoping Report refers to Auchengilloch monument. For reference purposes, this is a category B listed building (HB no. 1279). The developer should seek advice on this building and its setting from the Local Authority.

Potential Cumulative Impacts

We note that the cumulative impact of the proposed development in combination with other developments in the vicinity shall be assessed. This should assess the incremental impact or change when the proposal is combined with other past, present and reasonably foreseeable developments.

Our Views on the Principle of this Proposal

Without prejudice and on the basis of the information supplied, we can indicate that while it may be possible to accommodate a wind farm development in this location, we do have concerns about potential adverse impacts on the setting of Burnbrae, barrow 170m NW of (Index no. 4298), which is located in close proximity to the site boundary. Given these concerns, we would be keen to discuss this with the developer at the earliest opportunity, and would wish to be involved in any engagement with them as this development progresses.

The developer should refer to the advice contained in our 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

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7. Marine Scotland

The proposed construction has the potential to impact on tributaries of the Avon Water, which flows within the development area. Headwater tributaries of the River Nethan may also be within a zone of potential impact from the development. All rivers are within the Clyde River catchment. These upper tributaries are likely to be important spawning and juvenile rearing habitat for brown trout and, where barriers have now been removed, salmon may also be present. Dr. Willie Yeomans of The Clyde River Foundation would be a useful contact regarding fish stocks in the area.

The report did discuss electro-fishing surveys to be carried out at a number of sites. If the proposed development has the potential to impact on fish populations the developer will be asked to carry out, in addition to baseline surveys, further quantitative fish surveys during and after construction and to include control sites, sites unlikely to be affected from the development, thereby allowing developmental or natural causes to be identified if any differences in fish data are observed during fish surveys.

Impacts from the proposed construction on fish inhabiting these waters could include: an increase in sedimentation; altered hydrological pathways; pollution; physical obstruction through road construction, use of culverts; removal of fish habitat including spawning beds and food supply. All of these processes, if applicable, should be discussed in the Environmental Statement (ES) with appropriate mitigation measures. The Scottish Executive guidance “River Crossings and Migratory Fish” (2000) should be consulted to ensure free passage for fish movement if tracks are intended to cross streams.

Within the section entitled “Environmental effects not considered to be significant” the report mentions hydrological and hydrogeological investigations in relation to watercourses within the development area. However no further details are provided on what is correctly considered to be essential background information regarding water quality for fish and fisheries interests. Hydrochemistry data including sediment/turbidity should be collected at least one year prior to construction, during and after construction at sites likely to be impacted from the development and at control sites. From this data early detection and remediation can be made of any changes in water quality before any long term ecological damage has occurred.

SEPA should be contacted regarding hydrology information in the area.

If the development is likely to cause impacts on the macroinvertebrate community then a monitoring programme should be carried out to assess the composition and abundance of macroinvertebrtes at sites likely to be impacted by the proposed construction and at control sites before, during and after construction.

The “Forest and Water Guidelines” should be consulted as felling can have a significant effect on water quality and fisheries.

The combined effect of other wind farms in the area should also be considered in relation to water quality and fisheries issues.

In summary the developer should provide detailed methodologies for the electrofishing, hydrochemistry and macroinvertebrate baseline surveys and monitoring programme in the ES, appropriate mitigation plans should also be included.

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8. 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 TRNMD have no comment to make.

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9. Association of Salmon Fisheries Board

The ASFB represents the network of 41 Scottish District Salmon Fishery Boards (DSFBs) including the River Tweed Commission (RTCL who have a statutory responsibility to protect and improve salmon and sea trout fisheries. We work very closely with the fishery trust network and their representative body, RAFTS, who provide a research, educational and monitoring role for all freshwater fish.

ASFB and RAFTS and our respective members have a considerable interest in the development of renewable sources of energy given that many of these developments are likely to take place in rural areas with potential for impact on migratory fish species and the fisheries they support.

We would make the following general comments on the Kype Muir project:

1. Whilst there is no DSFB for the Clyde catchment, the project proposals should be conducted in full consultation with the Clyde River Foundation (CRF). The CRF are responsible for research and monitoring of the aquatic environment and would have an interest in the scoping report proposals for assessment of potential impact on fish, fisheries and the aquatic environment. I have therefore copied this to Dr Willie Yeomans at the Foundation.

2. In general, we would like to record our own concerns that such developments will have considerable construction implications and these very often can be conducted without proper regard or understanding of the potential impacts on water courses, water quality and migratory and other fish species. Such impacts could include:

• obstruction to upstream and downstream migration both during and after construction
• disturbance of spawning beds during construction - timing of works is critical
• increases in silt and sediment loads resulting from construction works

• point source pollution incidents during construction
• drainage issues

Experience would suggest that construction contractors are often unaware of the potential for impacts such as these but, when proper consultation with the local fishery board and trust is encouraged at an early stage, many of these problems can be averted or overcome. I would recommend that the developers engage with the CRF in so far as assessing the current data on aquatic ecology at the site and considering the potential impacts on fish and fisheries at both the construction and operational phase.

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10. BT

Did not require a copy of the scoping report

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11. Civil Aviation Authority

Like any wind turbine development, as detailed within the SR 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 refer1. The related need to establish the scale of the potential impact of the Kype Muir development (or indeed any other wind turbine related proposal) is evident.

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 aforementioned DTI guidance document. To date, notwithstanding any enquiry that may have been submitted within the past few weeks, I can find no record of the submission of a pre-planning proforma in respect of a development under the title of 'Kype Muir'.

Notwithstanding the above, having reviewed the SR and in particular the site in question, given the proliferation of wind turbine developments with the general area in question, I would suggest that any associated Environmental Statement (ES) would do well to examine the potential for the development to impact upon operations associated with Glasgow Airport, Prestwick Airport and Stathaven Aerodrome. This, notwithstanding the related comments within the SR.

Given that aerodrome safeguarding responsibility rests with the aerodrome operator / licensee, the initial findings recorded in the SR need validating by the relevant aerodrome licensee / operators. Similarly, as will all wind turbine developments of this scale, the ES will need to detail the associated viewpoints of both NATS and Ministry of Defence (MoD).

Additionally, from a more generic perspective, 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 MoD or a local aerodrome had suggested such a need, we the CAA would wish, in generic terms, to support such a claim. We 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, I should highlight that, in isolation, the CAA would not make any related case or recommendation for aviation lighting.
• 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. 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.
• 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.

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. For completeness, you will see that I have copied this letter to Banks.

12. Crown Estate

Having checked our records I can confirm that The Crown Estate's Salmon fishings interests in the vicinity of the proposed turbines may be affected.

We have the following comment to make, the Environmental Statement should consider the potential adverse impact of this development upon fisheries and the need for electro fishing surveys to be undertaken prior to any development occurring on site in order to establish base lines against which any such adverse impact of the wind farm construction could be measured and mitigated.

13. Defence Estates

The scheme outlined involves the construction of 45 free standing wind turbines with associated infra-structure. The turbines are expected to be 145m in height to blade tip above ground level.

The principal safeguarding concern of the MOD with respect to the development of wind turbines relates to their potential to create a physical obstruction to air traffic movements and cause interference to Air Traffic Control and Air Defence radar installations.

Banks Developments have consulted the Ministry of Defence, and based on the information provided to date, it is not anticipated that the proposed wind turbines will affect military air traffic movements in the area.

We have, therefore, assessed this application using the grid references as shown in the Scoping Document.

Turbine	100km Square Letter	Easting	Northing
1	NS	65657	42709
2	NS	74213	42709
3	NS	65657	34153
4	NS	74213	34153

In the interests of air safety, the MOD requests that the turbines are fitted with aviation lighting. All turbines should be fitted with 25 candela omni-directional red lighting at the highest practicable point. The cardinal turbines should be fitted with 200 candela omni-directional red lighting at the highest practicable point

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.

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

If the application is altered in any way we must be consulted again as even the slightest change could unacceptably affect us.

It should be noted that this response is based on current levels of wind farm development in the area. If additional wind farms are consented or built prior to this development being submitted for planning consent, our position may change.

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14. Joint Radio Communications

Were not contacted at scoping stage

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15. Mountaineering Council of Scotland

I have scrutinised your material and have decided that there are no issues the Mountaineering Council will need to comment on on behalf of our members, so we will not therefore be submitting a response to you or to the Consents Unit.

I would, however, urge you to consider making provision for public access, via walking/cysling/riding track availability on the site as this would improve the recreational amenity in the area.

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16. Nats

We are unable to evaluate your proposal until full information about the proposed development is received.

(1) The OS Grid Reference in Eastings & Northings (ie 123456, 123456) for each proposed wind turbine (x35-45) . If this information is not available, site boundary points would be sufficient.

Any time limit which you have imposed on NATS (En Route) Public Limited Company ("NERL") will start running once we have received full details of the proposed development

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17. Ofcom

Did not require a copy of the scoping .

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18. RSPB Scotland

RSPB Scotland is supportive of the use of renewable technology but believes locations must be carefully selected to avoid negative impacts on sites and species of conservation importance.

RSPB Scotland has serious concerns with this proposal because of its proximity to the Muirkirk and North Lowther Uplands SPA and North Lowther Uplands SSSI. The SPA is a site of European importance for breeding hen harrier, merlin, peregrine, short-eared owl and golden plover and for its aggregation of non-breeding hen harrier. Therefore, if this proposal is to be progressed, it is vital that the Environmental Impact Assessment (EIA) properly assesses the potential impacts on the features of interest of the SSSI and SPA. This, in turn, may trigger the need for an appropriate assessment under the Conservation (Natural Habitats, &c.) Regulations 1994 (as amended).

We are disappointed in the level of detail provided in Ecology/ Ornithology section of the Scoping Report, particularly given the importance of the area. As it stands, the Scoping Report does not give us confidence that sufficient information gathering and assessment will be carried out as part of the EIA or to inform an appropriate assessment.

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19. Strathaven Community Council

At this early stage we have received no comment from members of the community in the area but we would like to inform you of some of our concerns. These are:-

Accumulative Impact - The wind turbines at Whitelees Windfarm are already very visible to the east from the higher areas of Strathaven. Dungavel (adjacent to the Kype Muir Proposal) and Bankend Rigg windfarms to the south of the town have been consented and Calder Water (Planning) and West Browncastle (Scoping) are proposals in preparation. The Turbines at Lochhead Farm are also visible from higher areas of the town. We believe that closer attention must be given to accumulative impact as the town is threatened with being totally surrounded by windmills

Access for abnormal loads - Planning permission has been granted for the development of a windfarm at Dungavel by E-on and there is a condition in the approval which requires that abnormal loads will be transported along the A71 in convoys of three units. The movements are to take place in daylight hours using a rolling roadblock. This will cause major traffic congestion on a

very busy stretch of road resulting in pollution and danger to pedestrians in the town of Strathaven.

The Community Council have had a good relationship with E-on and a full risk assessment and method statement was provided prior to planning approval. However neither the developer nor ourselves anticipated the police requirement to move the loads during daylight hours. We are currently in correspondence with South Lanarkshire Council with a view to having the daylight hours condition removed so that the loads can be moved at night causing less disruption to traffic and less risk to the school children and pensioners who regularly cross the road in the town.

We anticipate that the developers of the other windfarms in the area are proposing to follow the same route and fear that further approvals will lead to continuous disruption and danger at regular intervals over periods of many months or years. We believe that the ES for Kype Muir Windfarm has to contain specific proposals with a detailed method statement and risk assessment.

The Scoping Report states that the tower sections will be transported to site on low loaders. The ES will have to demonstrate the security of the fixings holding the units onto the low loader. Any failure occurring in the built up area of the town could be very serious.

Peat -We would expect the layout to be designed to minimise the disturbance and exposure of peat to ensure that the release of carbon dioxide to the atmosphere and the destruction of the storage capacity is limited. Further we expect the ES to contain a risk assessment together with proposed actions require to mitigate the risk of peat slides.

Grid Connection - We are disappointed that the grid connection will not be included with the planning application. Without the grid connection the development is useless and of no value to the developer. It should, therefore, be included as an integral part of the proposal so that comment can be made on the totality of the proposal. Although it is not a requirement of the planning rules we would like to have an early indication of the proposals. Banks' Scoping Report suggests that they could elect to put the grid connection overhead on wooden poles. We would like to see the ES consider other options.

Strathaven Airfield and Annual Balloon Fest - The use of the airfield is growing and it is a popular amenity. The annual Balloon Festival is a well established event on the Strathaven calendar. Notwithstanding the statement regarding the airfield in the Scoping Report we would like to see the likely effects on both these activities identified and details provided of any mitigating actions

20. Lesmahagow Community Council

No comment.

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21. Sandford & Upper Avondale Community Council

Firstly, in the light of recent research suggesting that peat wetlands provide a precious resource for soaking up carbon dioxide from the atmosphere, we would like there to be further investigation of the peat undertaken within the EIA to characterise the peat present and assess the impact of the windfarm installation on the water table within the peat area.

Secondly, we would like a detailed statement regarding the methodology to be applied in assessing cumulative impact in the light of recent consents and comments in the SLC consultation regarding the sensitivity of peat moorland areas to further windfarm development.

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. OS co-ordinates for site and turbine layout		□
9. Planning Policies, Guidance and Agreements	□	
10. Natural Heritage	□	
11. Economic Benefits	□	
12. Site Selection and Alternatives	□	
13. Construction and Operations (outline methods)	□	
14. Decommissioning	□	
15. Grid Connection details	□	
16. Baseline Assessment data – air emissions		□
17. Design, Landscape and Visual Amenity	□	
18. Archaeology	□	
19. Ecology, Biodiversity & Nature Conservation	□	
20. Designated Sites	□	
21. Habitat Management	□	
22. Species, Plants and Animals	□	
23. Water Environment - Hydrology	□	
24. Geology - Peat survey data and risk register		□
25. Forestry	□	
26. Waste	□	
27. Aviation	□	
28. Telecommunications	□	
29. Noise	□	
30. Shadow Flicker	□	
31. Traffic Management	□	
32. Cumulative Impacts	□	

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.