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Cnoc an Eas Wind Farm

Environmental Impact Assessment

Scoping Report

Prepared by LUC and associated sub-consultants on behalf of Force 9 Energy
November 2014

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Planning & EIA
Design
Landscape Planning
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Mapping & Visualisation

LUC GLASGOW
37 Otago Street
Glasgow G12 8JJ
Tel: 0141 334 9595
Fax: 0141 334 7789
glasgow@landuse.co.uk

Offices also in:
London
Bristol
Edinburgh

FS 566056
EMS 566057

Land Use Consultants Ltd
Registered in England
Registered number: 2549296
Registered Office:
43 Chalton Street
London NW1 1JD
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Contents

1 Introduction

The Proposal

1.1 Force 9 Energy has identified a site approximately 9km west of Drumnadrochit as a potential wind farm site (see **Figure 1.1**). The proposed development site is located to the north of Loch Meiklie and is situated in an elevated position above Glen Urquhart within an area of coniferous forestry and rocky moorland.

1.2 The site lies wholly within the Highland Council administrative area. It is likely that the proposed wind farm will comprise up to 17 turbines, with a maximum blade tip height of 126.5m, and a combined installed capacity of less than 50 megawatts (MW). In addition to the wind turbines, there will be a site access point; an electricity substation; transformers; power cables; onsite access tracks; borrow pits; and a steel tower anemometer mast. An indicative layout comprising 17 turbines is provided at **Figure 1.2**, although the layout will be subject to change as the design of the site progresses and further environmental constraints are identified.

1.3 As the proposal has a generating capacity of under 50MW, Force 9 Energy will submit an application for planning permission to the Highland Council under the Town and Country Planning (Scotland) Act 1997, as amended by The Planning etc. Act (Scotland) 2006. It is acknowledged that this application should be subject to an Environmental Impact Assessment (EIA) under Schedule 2 of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 ('the Regulations') and will be accompanied by an Environmental Statement (ES).

1.4 As the wind farm will have a generating capacity above 20MW, it is technically classified as a 'Major Development' under the Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009. Planning applications for Major Developments formally require Pre-Application Consultation and are required to be accompanied by a Design and Access Statement. Therefore, these requirements will be fulfilled and a Pre-Application Consultation (PAC) Report and Design and Access Statement will be produced to accompany the planning application.

1.5 This Scoping Report (the 'Report') forms Force 9 Energy's written request to the Highland Council for a 'Scoping Opinion' as to which environmental effects are to be considered in the EIA (Regulation 14 (1) of the Regulations). It provides details of the wind farm, the site and surrounding area, identifying likely significant effects of the proposed wind farm and the proposed approach to assessing these effects.

1.6 A team of independent specialist consultants will be appointed to provide input to the wind farm design and mitigation and avoidance of adverse environmental effects to inform the production of the ES to accompany the application for consent.

Force 9 Energy

1.7 Force 9 Energy is a dedicated wind farm development company with offices in Scotland and England and with a focus on the UK market. To date, and at the time of writing, Force 9 Energy has taken eight developments through the planning/consenting process, five of which will have been consented without appeal or Public Inquiry, one of which was consented on appeal and two of which were refused consent after appeal. Three of the consented developments are now in operation, one is under construction and two are pre construction with work ongoing to discharge planning conditions. Force 9 Energy has four developments in the planning system awaiting determination and it continues to expand its wind development portfolio in response to Government targets for energy generation.

1.8 Force 9 Energy has a joint development agreement with EDF Energy Renewables (EDF). Through the agreement Force 9 Energy leads on the development process of wind farm proposals up to the start of construction. Should a wind farm be consented, EDF will take the lead during construction and subsequently own and operate the wind farm. Force 9 Energy is supported by EDF both financially and with staff resources requested by Force 9 on issues such as grid studies, access studies and public relations.

Document Structure

1.9 The remainder of this report is structured as follows:

- **Chapter 2** provides information on the Environmental Impact Assessment (EIA) process and considers the information required by the EIA Regulations;
- **Chapter 3** provides an outline of the site selection process as well as a brief description of the nature and purpose of the wind farm
- **Chapter 4**describes the policy and legislation relevant to the proposed wind farm;;
- **Chapters 5-14** outline the topic areas to be considered in the EIA, including an overview of the environmental baseline, a brief description of the likely significant effects of the wind farm and the effects which are proposed to be scoped out of the assessment.

1.10 In addition, **Appendix 1** details the consultees that will be approached either for information to inform the EIA, or for their view on the proposals set out in this report. **Appendix 2** provides an outline of the proposed contents of the ES.

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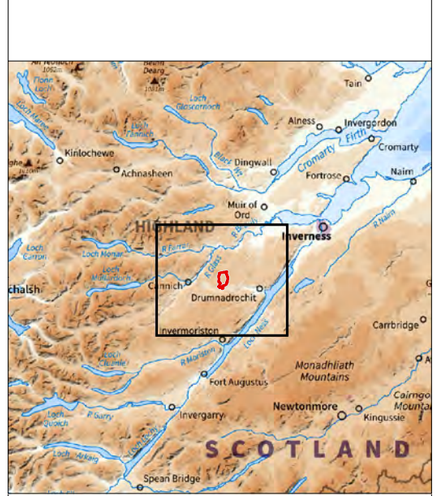
Figure 1.1: Site Location

Site Boundary



Map Scale @ A3: 1:100,000

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Figure 1.2: Turbine Layout

Turbine

Site Boundary

Map Scale @ A3: 1:25,000

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CB:JN EB:nunn_j LUCGLA FIG01-02-6042_006_r0_TurbineLayout_A3L 01/09/2014

Source: LUC

2 The Environmental Impact Assessment

The Environmental Impact Assessment Process

2.1 EIA is the process of systematically compiling, evaluating and presenting all the likely significant environmental effects, both positive and negative, of a proposed development, to assist the determining authority in considering the application. It enables the significance of these effects, and the scope for reducing negative, or enhancing positive, effects to be clearly understood. The information compiled during the EIA will be presented in an ES which will accompany the planning application. The proposed structure of the ES is provided in **Appendix 2**.

2.2 EIA is an iterative process and runs in tandem with project design. As potential effects are identified, the design of the project, for example the layout of the turbines, will be adjusted to reduce or avoid adverse effects where possible and mitigation measures will be proposed as appropriate.

2.3 The EIA will be conducted in accordance with current Government regulations, policy and guidance, including:

- The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011;
- PAN 1/2013 Environmental Impact Assessment (2013);
- Scottish Government Web Based Guidance on wind turbines (first published in February 2011 and last updated in December 2013);
- Scottish Planning Policy (SPP)(2014);
- Planning Advice Note (PAN) 3/2010 Community Engagement (2010);
- Planning Circular 3/2013 Development Management Procedures;
- SNH (2009) Handbook on Environmental Impact Assessment (EIA): Guidance for Competent Authorities, Consultees and others involved in the Environmental Impact Assessment Process in Scotland;
- Institute of Environmental Management and Assessment (2004) Guidelines for Environmental Impact Assessment; and

2.4 The following sections outline how the EIA process will be undertaken.

Scoping

2.5 The purpose of scoping is to help focus the EIA on the likely significant environmental effects of relevance to the site. Therefore, on the basis of the work undertaken to date, the professional judgement of the assessment team, experience from other similar projects, as well as policy, guidance and standards of relevance, each topic-based section within this report outlines both:

- potentially significant effects associated with the construction and/or operation of the wind farm, proposed for detailed consideration within the ES;
- effects considered likely to be insignificant, adopting a precautionary approach, which can be 'scoped out' and given only brief treatment unless further investigation suggests otherwise.

2.6 Additional objectives of the Report are:

- to establish the availability of baseline environmental data;
- to define a survey and assessment framework from which a comprehensive overall assessment can be produced;
- to invite consultees to identify any concerns that they might have in relation to the scheme;

- to comment on the proposed methodology;
- to provide and receive information relevant to the scheme; and
- to consider the way in which the findings are presented in the ES.

2.7 Each of the topic-based chapters of this report includes a list of consultees who will be, or who have already been contacted as part of the scoping process. The Report will be made available to all consultees should they require it. A combined list of consultees is provided as **Appendix 1** and additional suggestions of further stakeholders who may have an interest in the proposed wind farm will be welcomed.

Baseline Conditions

2.8 The purpose of baseline studies is to determine and describe the environmental conditions against which any future changes as a consequence of a development can be measured or predicted and assessed. As the benchmark for considering likely significant effects, baseline studies underpin both the quality and validity of an EIA, and must therefore be robust. The approach to baseline data collection and analysis is defined within each of the topic-based chapters below.

Assessment of Effects

2.9 The assessment of potential effects, using a range of appropriate methodologies, will take into account the construction and operation of the wind farm in relation to the site and its environs. An assessment of the decommissioning of the wind farm will not be undertaken as part of the EIA as, at this stage, the future baseline conditions (environmental and other developments) cannot be predicted accurately and both the proposals for decommissioning and the future regulatory context are unknown.

2.10 An assessment will be made of the likely significant cumulative effects of the wind farm in combination with other developments which have been submitted to the relevant determining authorities but not yet determined, or which are at the consented or construction phase, particularly other wind farms in proximity to the site.

2.11 The survey area for each discipline will be defined separately to reflect the potential extent of likely significant effects associated with the proposed wind farm.

2.12 In the interests of producing a focussed and concise report, which highlights clearly those issues of particular relevance to the proposed wind farm, the specialist topic area assessment methodologies are not presented in detail within this report as these are now generally well established and widely understood. Current guidance, standards and legislation will be adhered to in all specialist assessments.

Mitigation

2.13 Part 1(5) of Schedule 4 of the EIA Regulations notes that the ES should include "*a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.*" These measures will be termed mitigation measures and will be included for each topic area, where appropriate. Good practice measures will be identified where relevant.

2.14 The EIA will identify and assess potentially significant effects prior to mitigation, and, where mitigation measures are proposed, their likely effectiveness will be examined and the significance of the 'residual' effect then assessed. Force 9 Energy will be committed to implementing all the mitigation measures identified in the ES and where appropriate, the mitigation measures implemented will be monitored for effectiveness. Mitigation measures can be secured by planning condition on any consent for the proposed wind farm.

2.15 It is important to note that given both the prior experience of Force 9 Energy in implementing accepted good practice during the construction and operation of schemes such as this, and the current regulatory context, a number of measures are not considered 'mitigation' as such but rather an integral part of the design/construction process, and will be taken into account prior to assessing the likely impacts of the wind farm. Further tailored mitigation measures will then be proposed prior to determining the likely significance of residual effects.

3 Project and Site Description

Site Selection

3.1 Force 9 Energy has a site selection process whereby potential sites are screened against a series of technical, environmental and economic factors. In assessing a potential site the following criteria would usually need to be met:

- avoid locations within international environmental designations;
- avoid locations within national landscape and environmental designations;
- as a preference don't locate in locally designated landscapes but don't discount areas as a result of designation;
- as a preference avoid areas which may be susceptible to radar impact, but don't discount them;
- as a preference locate close to trunk roads and national grid, but don't discount other areas at this stage on account of access;
- as a preference avoid areas where other infrastructure may impact on scheme feasibility (e.g. pipelines or significant levels of telecommunications traffic), although don't discount them;
- as a preference locate in areas with a wind speed of 6.5ms at hub height or greater;
- as a preference locate in areas with grid connection availability;
- locate in areas where a land owner is willing to host wind turbines;
- locate in areas with a suitable separation distances to residential properties based on site specific conditions;
- locate in preferred areas of search for wind farms in policy documents where possible.

The Selection of the Cnoc an Eas Wind Farm Site

3.2 The location of the site was selected by Force 9 Energy for a number of reasons, including the following:

- the development area within the proposed site has no statutory planning or environmental designations which would prevent development coming forward;
- there are no planning policies which, in principle, preclude wind energy development;
- the proposed development site is a reasonable distance away from the nearest residential dwellings;
- there is likely to be an appropriate wind resource;
- there are potential connection options on the electrical grid system;
- there is no obvious radar or other technical constraints;
- access is deemed to be feasible; and
- the site is available for wind farm development;
- the site is largely within the Stage 3: Areas of Search category as identified in the Highland Council Onshore Wind Energy: Interim Supplementary Guidance (2012).

Site Location

3.3 As detailed in **Chapter 1**, the proposed wind farm site is located west of Drumnadrochit above the settled glen of Glen Urquhart in the Scottish Highlands. The site lies in an elevated position above the glen, occupying an undulating plateau, with land cover of coniferous forestry and rocky moorland, rising to 430m AOD at its highest point.

Project Description

3.4 The main elements of the wind farm will comprise:

- up to 17 turbines, with a combined installed capacity of under 50MW, and turbine foundations including associated transformer plinths and enclosures;
- an electrical substation;
- a site access point;
- power cables linking the turbines laid underground in trenches;
- graded stone tracks within the site integrated with any existing tracks and giving access to turbine bases;
- borrow pits for sourcing local materials for tracks and hardstandings;
- a steel tower anemometer mast for wind turbine performance monitoring; and
- a temporary site construction compound and associated infrastructure.

3.5 The proposed turbines will be three bladed horizontal axis turbines. The turbine towers will be of tapering tubular steel construction, likely to be finished in a light grey semi-matt colour.

3.6 At this early stage, turbines of 126.5m in height to blade tip (80m hub height and 93m rotor diameter) have been considered for the site, however other turbine specifications will be explored as the proposed wind farm design evolves. Turbine coordinates for the 17 turbine preliminary layout are presented in **Table 1.1** below. It is important to note, however, that the final choice of turbines and the most appropriate layout of the site, will be guided by the findings of the EIA, which includes consultation with all relevant stakeholders. As a consequence, a finalised layout is not presented in this report.

Table 1.1: 17 Turbine Preliminary Layout Coordinates

Turbine No.	X- Coordinate	Y-Coordinate	Elevation AOD (m)
1	241817	833834	406m
2	242265	834018	378m
3	242075	833545	347m
4	242404	833242	350m
5	242549	833694	359m
6	241646	833314	362m
7	241941	833092	331m
8	242153	832789	318m
9	242389	832502	300m

Turbine No.	X- Coordinate	Y-Coordinate	Elevation AOD (m)
10	242650	832965	382m
11	242841	833443	413m
12	241739	831898	272m
13	242186	832142	272m
14	241910	831569	247m
15	242369	831788	251m
16	241531	832688	318m
17	241789	832346	310m

Grid Connection

3.7 An application for connection to the electricity network ('the grid') will be made separately, under different consenting procedures, by the local grid operator, Scottish and Southern Energy, as required. For the purposes of the EIA, it will be assumed that the grid connection will be underground to the nearest grid supply point with available capacity. As such, there would not be expected to be any significant effects on the environment from such a proposal, and therefore it is anticipated that the effects of the grid connection can be scoped out of the EIA. The grid connection will be subject to its own environmental appraisal as and when details of the route and method of construction are finalised.

Access

3.8 The access route for construction vehicles will be subject to survey and assessment and will be selected to minimise potential effects on the local area and transport infrastructure. Whilst access options remain under review at this stage, it is proposed that access to the site will be via the A82 and A831.

3.9 The site entrance would be from the public road (A831) in the vicinity of Kilmartin Farm. The amended site entrance and approximately the first 400m of access track will be built to replace the existing access point and track in this area (which will be restored back to pasture) and as such will become permanent features of the development and will be assessed as part of the EIA. It is proposed that the existing forestry tracks within the site would be utilised by construction vehicles where appropriate and widened if necessary. New access tracks will be required to access the wind turbines; however, the length of these cannot be confirmed until a final site layout has been agreed.

3.10 A network of new tracks servicing the turbines will also be required. Additional tracks may be required to link the borrow pits, construction compound, substation and anemometer mast to the main access track network, and this will be determined by the final site layout.

Borrow Pits

3.11 Where possible, the stone required for the tracks, turbine bases and hardstandings for the operation of cranes will be predominantly sourced from onsite borrow pits. This approach will minimise transportation movements of stone to the site. However, depending on the quality of stone found and issues relating to the extent of forestry on site, it may be necessary to import stone into the site for use as a capping material for the access tracks and hardstandings. The transport implications of this approach will be assessed fully in the ES.

3.12 The location, design and reinstatement of the borrow pits will be considered as part of the design/EIA process. The borrow pits will be reinstated after use, using the excess overburden and excavated material from the track building process where possible.

Vehicle Movements

3.13 A Traffic Management Plan (TMP) will be agreed in consultation with the local roads authority.

Construction Details

3.14 It is expected that the construction of the wind farm will be completed over a period of up to 18 months. The construction phase will consist of the following principal activities:

- Felling of forestry and timber removal as required;
- construction of the temporary construction compound;
- extraction of stone from the borrow pits for track and turbine base construction;
- construction of site access tracks, passing places and any watercourse crossings if required, interlinking the turbine locations and other infrastructure;
- construction of culverts under tracks to facilitate drainage and maintain existing hydrology;
- construction of turbine foundations and transformer plinths;
- construction of an onsite substation;
- excavation of trenches and cable laying adjacent to site tracks;
- connection of distribution and signal cables;
- movement onto site and erection of wind turbines;
- commissioning of the site; and
- restoration of borrow pits and temporary construction compounds.

3.15 Many of these operations will be carried out concurrently, although predominantly in the order identified. This will reduce the overall length of the construction programme. Restoration works will be programmed and carried out to allow the restoration of disturbed areas as early as possible and in a progressive manner.

Wind Farm Lifecycle

3.16 It is currently proposed that the wind farm would have an operational life of 25 years. At the end of this period, the site would be decommissioned and the turbines removed. Alternatively, a new application may be made to extend the life of the wind farm or replace the turbines.

4 Planning and Legislative Context

Introduction

4.1 This section presents a hierarchical overview of the legislative energy and planning policy context for the proposed wind farm. A more detailed review of relevant policies will be included within the Environmental Statement (ES). Force 9 Energy welcomes confirmation of this planning policy context for the determination of the wind farm application.

Legislative Background

4.2 The generating capacity of Cnoc an Eas Wind Farm will be less than 50MW, and therefore an application for planning permission is being submitted to the Highland Council, under the Town and Country Planning (Scotland) Act 1997, as amended by the Planning etc. (Scotland) Act 2006.

4.3 The application is categorised as a 'major development' under The Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, on the basis that the installed capacity of the development is above 20MW.

National Planning Policy

National Planning Framework 3

4.4 The third National Planning Framework for Scotland (NPF3), published in June 2014, represents a spatial expression of the Scottish Government's aspirations for sustainable economic growth in Scotland over the next 20-30 years. It sets out the Scottish Government's long term strategy for development and includes proposals identified as schemes of national importance. Whilst it is not prescriptive, NPF3 will form a material consideration when determining applications and, as such, will be a consideration in determining the application for the proposed Cnoc an Eas Wind Farm development.

4.5 The development of onshore wind continues to be supported in NPF3, reflecting the commitments of the Scottish and UK Governments in relation to emissions reduction and energy generation targets of generating the equivalent of at least 100% of gross electricity consumption from renewables by 2020, with an interim target of 50% by 2015. Paragraph 3.23 again highlights wind energy's continued role in contributing towards a low carbon economy and states, "*onshore wind will continue to make a significant contribution to diversification of energy supplies*".

4.6 Whilst there is continued support for renewable energy, there is also an increased focus in NPF3 on balancing this commitment with protecting nationally important landscapes and residential amenity, particularly in relation to onshore wind. One of the key tools that the Scottish Government has adopted to strike this balance is to increase the level of protection currently afforded to national parks and National Scenic Areas. In addition, the NPF3 affords greater protection to core areas of 'wild land' as identified in the SNH wild land map 2014, and states, that Scottish Planning Policy sets out the approach to be adopted by Local Authorities to guide new wind energy development to appropriate locations, taking into account important features including wild land. As discussed in the preceding chapters, the Development is not located within a National Park, a National Scenic Area or an area of wild land.

Scottish Planning Policy (SPP)

4.7 Scottish Planning Policy (SPP) was updated in June 2014 along with the NPF3 and is a statement of Scottish Government policy on land use planning. It continues to emphasise the merits of

sustainable development and the need to tackle climate change and develop renewable energy projects through supportive Development Plans. SPP forms a material consideration when determining applications such as Cnoc an Eas Wind Farm.

Renewable Energy

4.8 Paragraph 154 states that the planning system should "*support the transformational change to a low carbon economy, consistent with national objectives and targets, including deriving*:

– 30% of overall energy demand from renewable sources by 2020;

– 11% of heat demand from renewable sources by 2020; and

– the equivalent of 100% of electricity demand from renewable sources by 2020".

4.9 Paragraph 154 goes on to state that the planning system "*should support the development of a diverse range of electricity generation from renewable energy technologies – including the expansion of renewable energy generation capacity...".*

4.10 In order to achieve this, Development Plans **"***should seek to ensure an area's full potential for electricity and heat from renewable sources is achieved, in line with national climate change targets, giving due regard to relevant environmental, community and cumulative impact considerations"* (paragraph 155).

Wind Farms

4.11 In relation to onshore wind, paragraph 161 states that "*planning authorities should set out in the development plan a spatial framework identifying those areas that are likely to be most appropriate for onshore wind farms as a guide for developers and communities…Development plans should indicate the minimum scale of onshore wind development that their spatial framework is intended to apply to*".

4.12 SPP proposes that the spatial frameworks should present information on capacity based on the following groupings:

- Group 1 − Areas where wind farms will not be acceptable (National Parks and National Scenic Areas);
- Group 2: Areas of Significant Protection (National and international designations, other nationally important mapped environment interests including areas of wild land) and community separation distances for consideration of visual impact;
- Group 3: Area for potential for wind farm development. Planning Advice Notes and Specific Advice Sheets

Planning Advice Notes (PANs)

4.13 Planning Advice Notes (PANs) and Specific Advice Sheets set out detailed advice from the Scottish Government in relation to a number of planning issues. Relevant PANs and Specific Advice Sheets, not being statements of policy, are referenced in the topic chapters and include the following:

- PAN 1/2013 Environmental Impact Assessment;
- PAN 51 Planning, Environmental Protection and Regulation;
- PAN 60 Planning for Natural Heritage;
- PAN 68 Design Statements;
- PAN 69: Planning and Buildings Standards Advice on Flooding;
- PAN 73 Rural Diversification
- PAN 75 Planning for Transport;
- PAN 79 Water and Drainage;
- PAN 3/10 Community Engagement;
- PAN 1/2011 Planning and Noise and accompanying Technical Advice Note;

- PAN 2/2011 Planning and Archaeology; and
- Specific Advice Sheet: Onshore Wind Turbines.

Local Planning Policy

4.14 Section 25 of the Town and Country Planning (Scotland) 1997 Act and Paragraph 25 of Scottish Planning Policy (SPP) require that decisions on planning applications are made in accordance with the relevant Development Plan(s), unless material considerations indicate otherwise.

4.15 As the Development is situated within The Highland Council administrative area, the relevant Development Plan for the site comprises:

- Highland-wide Local Development Plan 2012; and
- Inverness Local Plan (as continued in force, April 2012)

Highland-wide Local Development Plan 2012

4.16 Adopted on 5th April 2012, The Highland-wide Local Development Plan (HwLDP) sets out the overarching vision statement, spatial strategy and general planning policies for the whole of the Highland Council area, except the Cairngorms National Park.

4.17 The Highland-wide Local Development Plan vision includes supporting "*A Competitive, Sustainable and Adaptable Highland Economy by providing opportunities which encourage development and create new employment across the area focusing on the key sectors of … renewable energy …"* (p.13:para.5.2.3).

4.18 In addition, the Plan identifies that the "*Highland area has great potential for renewable energy production and to contribute towards meeting ambitious targets set internationally, nationally and regionally"* (p.121:para. 22.1.1).

4.19 HwLDP Policy 67: Renewable Energy Developments is the main policy by which the proposal will be considered. Policy 67 encourages the development of renewable energy subject to a defined set of criteria. A range of other policies within the development plan may also be of relevance to the determination of the application including:

- Policy 28: Sustainable Design;
- Policy 30: Physical Constraints;
- Policy 36: Development in the Wider Countryside;
- Policy 51: Trees and Development;
- Policy 52: Principle of Development in Woodlands;
- Policy 53: Minerals;
- Policy 55: Peat and Soils;
- Policy 56: Travel;
- Policy 57: Natural, Built and Cultural Heritage;
- Policy 58: Protected Species;
- Policy 59: Other Important Species;
- Policy 60: Other Important Habitats;
- Policy 61: Landscape;
- Policy 62: Geodiversity;
- Policy 63 Water Environment;
- Policy 64: Flood Risk;
- Policy 68: Surface Water Drainage;

- Policy 72: Pollution;
- Policy 77: Public Access;
- Policy 78: Long Distance Routes

Inverness Local Plan (as continued in force, April 2012)

4.20 A Parliamentary Order has been made by The Highland Council to retain elements within the seven Highland Council Local Plans, until Area Local Development Plans consolidate and replace these. Although the HwLDP supersedes much of the General Policies and other related material of the Local Plans, several aspects of the Local Plans are still relevant.

4.21 Until such time as the adoption of the Area Local Development Plans, the Inverness Local Plan remains part of the Development Plan in the case of the proposed wind farm site, and it is acknowledged that the relevant retained elements therein should be considered in conjunction with the HwLDP.

Material Considerations

Emerging Area Local Development Plans

4.22 It is The Highland Council's intention to systematically phase out the seven retained Local Plans through the adoption of three Area Local Development Plans, namely:

- The Inner Moray Firth Local Development Plan;
- The Caithness and Sutherland Local Development Plan; and
- The West Highlands and Islands Local Development Plan

4.23 The Area Local Development Plans are being prepared to include details on development proposals in their areas, which will provide an opportunity to remove any site specific development proposals from the HwLDP so that it becomes the Council's policy-based Local Development Plan.

4.24 The Proposed Inner Moray Firth Local Development Plan is at the most advanced stage of the above Local Development Plans, and was published for consultation in November 2013. The Inner Moray Firth Local Development Plan, which currently acts as a material consideration in determination planning proposals, was submitted to the Scottish Government for examination in summer 2014. It is the Scottish Government's intention to provide details of any subsequent modifications to the Plan by 25th March 2015 prior to its adoption by the Highland Council. The adoption of the Proposed Inner Moray Firth Local Development Plan will replace the retained elements of the Inverness Local Plan and will form part of the Development Plan, along with the HwLDP and Supplementary Guidance.

4.25 Although the proposed wind farm site lies within the Proposed Inner Moray Firth Local Development Plan area, there are no relevant policies or site specific plans therein relating to the proposed development. Thus it is considered that the Inner Moray Firth Local Development Plan is unlikely to be considered as material in determining the proposed wind farm application once adopted, and that the HwLDP and Supplementary Guidance will contain the principal policies relating to the wind farm proposal.

Supplementary Guidance

Onshore Wind Energy: Interim Supplementary Guidance (2012)

4.26 In March 2012, the Highland Council approved the *Onshore Wind Energy: Interim Supplementary Guidance* (2012). This supplementary guidance provides a spatial framework to inform and guide the location of large scale commercial wind farms, supplementing the aforementioned HwLDP and superseding parts of the Highland Renewable Energy Strategy and Planning Guidelines (2006).

4.27 The guidance provides:

- a spatial framework to guide the location of large wind farms;

- development guidelines for all locations;
- additional guidance.

Spatial Framework and Guidance

4.28 The spatial framework was developed in three stages as outlined below:

- ***Stage 1*** *- Identify areas requiring significant protection*
- ***Stage 2*** *- Identify areas with potential constraints*
- ***Stage 3*** *- Identify areas of search*

4.29 As indicated by the maps contained within the SPG, the proposed development site lies largely within **Stage 3 – Areas of Search**.

Highland Renewable Energy Strategy and Planning Guidelines (HRES) (May 2006)

4.30 Although partly superseded by the Interim Supplementary Guidance on Onshore Wind Energy, as detailed above, The Highland Council considers that parts of the document are still relevant in terms of strategy and supporting background material. The document strongly identifies the importance of renewable energy for the Highland economy.

4.31 The Interim Supplementary Guidance also contains advice on the design and layout of wind farms, impact on forestry, peat, cumulative impact, site restoration and mitigation.

Energy Policy and Legislation

4.32 The rationale for the development of the Cnoc an Eas site is founded upon the climate change context and the renewable energy policy context at an International, European, UK and Scottish Government level.

4.33 The Cnoc an Eas Wind Farm development is proposed as part of the response to targets set to increase the proportion of electricity generated from renewable sources and hence reduce Scotland's contribution to climate change.

European Union Renewable Energy Directive

4.34 The European Union's Renewable Energy Directive (2009/28/EC) on the promotion of the use of energy from renewable sources sets ambitious targets for all member states. This introduces the requirement for 20% of all energy used (electricity, heat and transport) to come from renewable sources by 2020, split between the member states. The national target for the UK set out in the Directive is for 15% of all energy use to come from renewable sources by 2020.

Climate Change (Scotland) Act 2009

4.35 The Scottish Government introduced the Climate Change (Scotland) Act 2009 as Scotland's policy framework for addressing climate change. This aims to reduce greenhouse emissions by 80% by 2050, but with a higher interim target for a 42% cut in emissions by 2020 and a 50% reduction by 2030. The Act also set targets for renewable energy to meet 80% of Scottish electricity demand from renewable sources by 2020. The target was further increased in May 2011, to supply 100% of Scotland's electricity demands from renewable energy by 2020.

Climate Change Delivery Plan 2009

4.36 The Climate Change Delivery Plan (2009) identifies high level measures required to meet the interim 2020 targets and the additional action required by 2030 in order to meet 2050 targets. Paragraph 3.10 states that the aim of the Scottish Government is to achieve a "*largely decarbonised electricity generation sector by 2030*". The Plan explicitly states that large-scale onshore wind will be central to achieving these aims with a further 3 Gigawatts (GW) of installed capacity required over the coming decade, in addition to the existing 5.5GW of capacity either in operation or with planning consent.

The 2020 Routemap for Renewable Energy in Scotland

4.37 On 30 June 2011, the 2020 Routemap for Renewable Energy in Scotland was launched, to "*drive forward the renewables revolution, and to meet the Scottish Government's world-leading green energy targets*". The updated Routemap reflects the challenge of a new target to meet an equivalent of 100% of demand for electricity from renewable energy by 2020 (equating to

approximately 16 Gigawatts of installed renewable generation capacity), as well as the target of 11% renewable heat.

5 Landscape and Visual Amenity

Introduction

5.1 This chapter sets out the approach to the assessment of potential effects of the proposed wind farm on the landscape and on visual amenity.

5.2 The Landscape and Visual Impact Assessment (LVIA) and cumulative landscape and visual impact assessment (CLVIA) will consider direct and indirect effects on landscape resources, landscape character and designated landscapes. It will examine the nature and extent of effects on existing visual amenity. It will extend to an assessment of effects both as a consequence of the proposed turbines, as well as all ancillary infrastructure (access tracks, borrow pits, masts, transformers etc.).

5.3 The assessment will consider effects on the landscape and on visual amenity as a result of construction, and operation of the proposed development, and will address the nature, duration and direction of effects.

5.4 The LVIA and CLVIA will inform modifications and refinements to the detailed design by the identification of appropriate mitigation measures to reduce potential effects.

5.5 The assessment will include:

- consultation with key stakeholders, including local authorities and Scottish Natural Heritage (SNH) to establish key considerations and selection of assessment viewpoints;
- baseline studies informed by development plans, policy and guidance, sensitivity and capacity studies, landscape character assessments, landscape designations and other information or guidance from relevant public bodies;
- field survey work, including a visit to the site, visits to viewpoints and designated landscapes, and extensive travel around the study area;
- an account of design evolution, and mitigation measures which will help avoid, reduce or offset any potential effects;
- a description of potential and residual effects upon designated landscapes, landscape resources, character and visual amenity;
- a description of residual cumulative effects; and
- zone of theoretical visibility (ZTV) maps, wirelines and photomontages to illustrate the nature of effects.

5.6 The LVIA and CLVIA will be undertaken following the approach set out in *Guidelines for Landscape and Visual Impact Assessment: Third Edition* (Landscape Institute and Institute of Environmental Management and Assessment, 2013).

5.7 The assessment will also draw upon the following good practice guidance:

- Landscape Institute (2011) *Advice Note 01/11 Use of Photography and Photomontage in Landscape and Visual Assessment*;
- Scottish Natural Heritage and the Countryside Agency (2002) *Landscape Character Assessment: Guidance for England and Scotland*;
- University of Newcastle (2002) *Visual Assessment of Windfarms Best Practice. Scottish Natural Heritage Commissioned Report F01AA303A*.
- Scottish Natural Heritage (2014) *Visual Representation of Windfarms Version 2*;
- Scottish Natural Heritage (2009; revised 2014) *Siting and Designing Windfarms in the Landscape*;

- Scottish Natural Heritage (March 2012) *Assessing the Cumulative Impact of Onshore Wind Energy Developments*;
- Scottish Natural Heritage (2003) *Wildness in Scotland's Countryside, Policy Statement No. 02/03*;
- Scottish Natural Heritage (2007) *Assessing the Impacts on Wild Land, Interim Guidance Note*; and
- Scottish Natural Heritage (2014) Core Areas of Wild Land 2013 Map - Advice to Government – 16th June 2014.

Existing Conditions

5.8 A high level, desk based review of the site and its context has been undertaken based on Ordnance Survey (OS) mapping, relevant character assessments and landscape designations. The results of this and the key receptors are described below.

Study Area

5.9 The survey area for each discipline will be defined separately to reflect the potential extent of likely significant effects associated with the proposed wind farm.

5.10 The proposed study area for the LVIA is defined as 35 km from the outermost turbines of the proposed wind farm in all directions, as recommended in current guidance for turbines of 101 m - 130 m to blade tip[1].

5.11 To consider cumulative effects of the proposed wind farm in relation to other schemes in the wider area, a review of patterns of development will be provided for operational, consented and proposed wind farms up to 60 km from the site, following guidance from SNH[2]. The cumulative assessment will focus on wind energy developments considered to have potential to give rise to significant cumulative effects. This is likely to be those wind farms within 35 km of the wind farm site, but will be subject to more detailed consideration.

Location and Site Description

5.12 The proposed wind farm site is located west of Drumnadrochit above the settled glen of Glen Urquhart in the Scottish Highlands. The site lies in an elevated position above the glen, occupying an undulating plateau, with land cover of coniferous forestry and rocky moorland, and the site rises to 430m AOD at its highest point, Creag Muigeil. The rocky summits of Carn Mòr (456 m AOD), Carn an t-Slamain (444 m AOD), Carn na Feuchrain (453 m AOD) and Creag nan Calman (437 m AOD) flank the site to the north, and the moorland of Eskdale Moor extends north and east from the site.

5.13 Within Glen Urquhart to the south, scattered properties are located across the south facing slopes of the glen, and along the River Enrick and banks of Loch Meiklie, often contained by coniferous and/or deciduous tree cover.

Landscape Baseline

Landscape Character

5.14 The landscape character of the site and majority of the study area is described within the *Inverness District Landscape Character Assessment*[3]. The outer extents of the study area are described within the following landscape character assessments:

- Caroline Stanton, (1996). *Skye and Lochalsh Landscape Assessment.* Scottish Natural Heritage Review No. 71;

[1] SNH (2014) *Visual Representation of Windfarms Version 2*
[2] SNH (2012) *Assessing the Cumulative Effects of Onshore Wind Energy Developments*
[3] SNH & John Richards, (1999). *Inverness and Distract Landscape Character Assessment.* Scottish Natural Heritage Review No. 114.

- Environmental Resources Management, (1998). *Lochaber Landscape Character Assessment*. Scottish Natural Heritage Review No. 97;
- Alison Grant, (2009). *Cairngorms National Park Landscape Character Assessment*. Prepared for the Cairngorms National Park Authority in partnership with British Geological Survey;
- Ferguson McIlveen, (1999). *Ross and Cromarty Landscape Character Assessment.* Scottish Natural Heritage Review No. 119;
- Turnbull Jeffrey Partnership, (1998). *Moray and Nairn Landscape Assessment*. Scottish Natural Heritage Review No. 101;

5.15 The proposed wind farm site lies predominantly within the *Rocky Moorland Plateau* Landscape Character Type (LCT), with the southern slopes through which the site will be accessed defined by the *Wooded Glen* LCT. Landscape Character Types are shown on **Figure 5.1**.

5.16 The *Rocky Moorland Plateau* LCT consists of high rocky plateau which covers much of the central part of the Inverness District area, rising westwards to the Rugged Massif and lying above the Great Glen and Loch Ness to the east.

5.17 The LCTs within the Highland Council area have been reviewed as part of the *Assessment of Landscape Sensitivity to Wind Turbine Development in Highland*[4], with modifications to some LCT boundaries; however, the site remains within the *Rocky Moorland Plateau* LCT as described in the *Inverness District Landscape Character Assessment*.

5.18 The LCTs within 35 km of the proposed development will be described in the LVIA. Theoretical inter-visibility with the proposed wind farm (ZTV coverage) will be described and used as a means of identifying which LCTs require further assessment, and which LCTs can be scoped out because they are unlikely to be affected by the proposed wind farm site.

Wild Land

5.19 In 2002 SNH published its Wildness in Scotland's Countryside Policy Statement. This considers the value of wild places to society, the main pressures on the resource, and identifies 'search areas for wild land' (SAWL), which include most of the significant and valued areas of wild land character.

5.20 In January 2012 SNH published a detailed analysis which maps relative levels of wildness for the whole of Scotland. The search areas for wild land identified in the 2002 publications are reflected in the 2012 study, by the indicated relative wildness, but should also be considered in relation to any wind energy proposal on the Cnoc an Eas site.

5.21 The proposed development site lies within an area of moderate relative wildness as indicated by the 2012 study. Directly north of the site lies the Eskdale Moor where there are several areas of relative high level wild land, situated across the rugged craggy summits and upland slopes which lie above the settled straths and glens and are largely unaffected by human habitation, land management or visual intrusion from man-made development and infrastructure. Potential effects upon the wild land attributes of these small areas and the larger areas of the Balmacaan Forest to the south and the hill summits and upland areas to the north-west of Strathglass will be considered within the assessment of landscape effects.

5.22 The Core Areas of Wild Land 2013 map was published by SNH in April 2013. The Scottish Government recently consulted on the Main Issues Report for the National Planning Framework 3 (NPF3), and draft revised Scottish Planning Policy (SPP), and these consultation documents outlined the Government's existing approach to areas of wild land character and proposed a policy approach that refers to SNH's Core Areas of Wild Land 2013 map.

5.23 At the request of the Scottish Government, consultation was undertaken by SNH in late 2013 to obtain views on the proposed map and devised areas, in order to establish whether it effectively identifies this key natural heritage asset.

5.24 In June 2014 the Scottish Government published the National Planning Framework 3 (NPF3) and Scottish Planning Policy (SPP). SPP includes national planning policies which reflect Scottish Ministers' priorities for operation of the planning system and for the development and use of land.

[4] Macaulay Land Use Research Institute (2010) Assessment of Landscape Sensitivity to Wind Turbine Development in Highland

To accompany SPP, SNH published its Wild Land Areas Map 2014 which shows areas of wild land identified across Scotland and recognised as 'Areas of Significant Protection' within SPP. SPP states that wind farms in these areas may be appropriate in some circumstances and that "*Further consideration will be required to demonstrate that any significant effects on the qualities of these areas can be substantially overcome by siting, design or other mitigation*".

5.25 Two Wild Land Areas (WLAs) are located within the study area as shown on **Figure 5.2** and detailed below.

- 20 Monadhliath
- 24 Central Highlands

5.26 Theoretical visibility of the proposed wind farm (ZTV coverage) is predicted from these WLAs as shown on **Figure 5.3**. Effects on the Central Highlands WLA (24) will be assessed in accordance with the *Assessing the Impacts on Wild Land Interim Guidance Note* (SNH, 2007), which considers the potential effects on the physical and perceptual attributes of wild land.

5.27 Three visual assessment viewpoints are also located within the Central Highlands WLA (24), from which visual effects will be considered, as shown on **Figure 5.3**.

5.28 It is considered that given the distance between from the proposed site, and the limited theoretical visibility predicted from the Monadhliath WLA (20), an assessment of effects on this WLA will be scoped out of the LVIA.

Nationally Designated Landscapes

5.29 A number of nationally designated landscapes have been identified within the proposed 35km radius study area. SPP states that wind farms located within National Parks and National Scenic Areas (NSAs) will not be acceptable. These are shown on **Figure 5.2** and detailed below.

National Scenic Areas (NSAs)

5.30 Two NSAs are located within the 20 km study area from the proposed development site, as outlined below:

- Glen Strathfarrar NSA (approximately 6.5 km north-west);
- Glen Affric NSA (approximately 14 km south-west).

5.31 The Glen Strathfarrar NSA is likely to experience limited visibility of the proposed development site, restricted to views from south-east and east facing upland slopes on higher ground and hill summits, which are not characteristic of the special qualities of the NSA.

5.32 The Glen Affric NSA is also likely to experience limited visibility of the proposed development site, restricted to views from north-east and east facing upland slopes on higher ground and hill summits, which are not characteristic of the special qualities of the NSA.

Gardens and Designed Landscapes (GDLs)

5.33 GDLs often form an important part of an area's history, character and scenery and often provide a landscape setting for an important building. The primary aim of the GDL designation is to protect and if possible enhance these often small scale designed landscapes.

5.34 Four GDLs are located within 20 km of the proposed wind farm site. These GDLs are listed below:

- Beaufort Castle (approximately 10 km to the north-east);
- Aldourie Castle (approximately 17 km to the north-east);
- Dochfour (approximately 17 km to the north-east);
- Fairburn (approximately 18 km to the north).

5.35 GDLs are now covered under the remit of Historic Scotland with regard to Environmental Impact Assessment as part of cultural heritage assessment, but have nevertheless been included here for their contribution to landscape character. GDLs will be considered in the Cultural Heritage assessment and are covered in more detailed in **Chapter 10 Cultural Heritage** of this report.

Locally Designated Landscapes

5.36 A number of locally designated landscapes have been identified within the proposed 35 km radius study area. These are shown on **Figure 5.2** and detailed below.

Special Landscape Areas (SLAs)

5.37 Six SLAs are defined in the Highland Council Local Development Plan (LDP) and are located within the 35 km radius study area of the proposed wind farm site.

- Strathconon, Monar and Mullardoch SLA (approximately 8.5 km at nearest point);
- Loch Ness and Duntelchaig SLA (approximately 9 km at nearest point);
- Moidart, Morar and Glen Shiel SLA (approximately 28 km at nearest point);
- Ben Wyvis SLA (approximately 30 km at nearest point);
- Loch Lochy and Loch Oich SLA (approximately 30 km at nearest point);
- Ben Alder, Laggan and Glen Banchor SLA (approximately 32 km at nearest point);

5.38 These locally designated areas were subject to a review in 2011, the Assessment of Highland Special Landscape Areas[5] was undertaken in advance of the adoption of the current LDP and some SLA boundaries were subject to minor revisions to ensure they are contiguous with the NSA boundary. The Highland Council identified areas which '*it considers are at least regionally important for scenic quality through the Highland Structure Plan (2001). These Areas of Great Landscape Value (now known as Special Landscape Areas) are significant to Highlands and are valued beyond their locale.'*

5.39 Effects upon the special qualities and key characteristics of these SLAs will be considered within the assessment of landscape effects, however it is envisaged that significant effects upon SLAs located beyond 15 km from the proposed wind farm site are unlikely, and these SLAs will be scoped out of the detailed assessment.

Visual Baseline

5.40 Visual receptors are people, visual receptors will comprise individuals or groups of people who may experience views of the proposed wind farm and the assessment of visual effects will consider the changes that people will see in views from various locations. Viewers can be defined within the following groups:

- Residential receptors;
- Receptors in their place of work, who may or may not have a focus on views of the surrounding landscape;
- Tourists or visitors, which includes users of outdoor recreational facilities, footpaths, cycle routes or rights of way, whose attention may be focused on the landscape, important landscape features with physical, cultural or historic attributes, documented views, beauty spots of picnic areas;
- Hill walkers, which include those walking on unmarked footpaths; and
- Road and rail users.

Representative Viewpoints

5.41 Pre-scoping consultation was undertaken with the Highland Council (THC) and Scottish Natural Heritage (SNH) to agree an appropriate and proportionate selection of viewpoints for the assessment of potential visual effects.

5.42 Informed by the preliminary Zone of Theoretical Visibility (ZTV), 17 assessment viewpoints for the assessment of effects on visual amenity were agreed with THC and SNH. These viewpoints were chosen to represent locations where receptors (people) may experience theoretical visibility of the proposed wind farm, as indicated by the ZTV. This list of viewpoints is set out in **Table 5.1**

[5] Horner + Maclennan with Mike Wood, Landscape Architect, (June 2011) *Assessment of Highland Special Landscape Areas*

below and includes location, approximate grid reference, and distance from the nearest proposed turbine. All of the viewpoints lie within the ZTV and are shown on **Figure 5.3**.

Table 5.1: Representative Assessment Viewpoints

No.	Location	Approximate Grid Reference	Reason for inclusion
1	A833 from Glen Convinth	NH 49900 32651	Represents views experienced by road users on the A833 when travelling south from Glen Convinth and north from Glen Urquhart.
2	Carn na Leitire	NH 54613 34485	Hill summit, represents views from the Arbriachan Forest Trails north-east of the proposed wind farm site.
3	Great Glen Way nr. Altourie	NH 57679 40289	Represents views of walkers and cyclists travelling on the Great Glen Way.
4	A831 nr. Balnain	NH 45092 30053	Viewpoint represents sequential views experienced from the A831 through Glen Urquhart and nearby residential properties within the Glen.
5	Carn Bàn	NH 33794 41807	Representative of views from the summit of Carn Bàn (773m AOD), representative of views from the Glen Strathfarrar NSA and the Strathconon, Monar and Mullardoch SLA.
6	Corrimony Chambered Cairn	NH 438295 30295	This viewpoint represents views towards the proposed wind farm site from the Corrimony passage grave.
7	Balbeg	NH 45032 31284	Viewpoint represents views from nearby residential properties located to the east, south-east of the proposed development site, situated on the wooded mid-slopes of Glen Urquhart.
8	Meall Fuar-mhonaidh	NH 45892 22253	Hill summit representing views from the edge of the Balmacaan Forest to the south-east of the proposed wind farm site.
9	A831 nr. Crask of Aigas	NH 46290 41768	Represents views when travelling south on the A831 and nearby residential receptors.
10	Loch Ness Tourist Ferry Route	NH 54371 29220	Represents views experienced by tourists on the Loch Ness Ferry to the east of Glen Urquhart.
11	B852 east of Loch Ness	NH 55176 28556	This viewpoint represents views across Loch Ness from a popular picnic location on the eastern shore, which offers views across Loch Ness to

No.	Location	Approximate Grid Reference	Reason for inclusion
			Urquhart Castle and west along Glen Urquhart.
12	A82 nr. Strone	NH 52445 28985	Represents sequential views experienced by road users on the A82 along the western shore of Loch Ness.
13	Minor road, Strathglass	NH 32042 30053	Represents views from the Glen Affric NSA, south-west of the proposed wind farm site.
14	Shenval	NH 40749 29700	This viewpoint represents the views experienced from residential properties located at the head of Loch Meiklie within Glen Urquhart.
15	A9 north of Tore Roundabout	NH 60122 53185	Suggested by THC. Represents views from the Black Isle, receptors travelling south of the A9 and nearby settlements/residential properties
16	Toll Creagach	NH 19497 28228	Representative of views from the summit of Toll Creagach (1054m AOD), a Munro which provides representative views from the Glen Affric NSA and the Strathconon, Monar and Mullardoch SLA and SAWL area.
17	Sgurr nan Conbhairean	NH 13096 13900	Suggested by SNH. Viewpoint representing views experienced from the SAWL area SW of Cougie Lodge and popular Munro summits.

5.43 The viewpoints have been selected to represent views of receptors locations across the study area, such as settlements, routes, significant natural and cultural heritage sites and visitor attractions as well as views from popular hill summits and walking routes. They will also be used to assess the potential cumulative visibility of the proposed wind farm in association with other relevant wind farms.

Settlements

5.44 The assessment of visual effects will also consider the change in views from settlements located in the study area. As settlements are generally located on lower ground and in valleys, views to the higher ground of the proposed wind farm site above Glen Urquhart will generally be restricted by the steep slopes of the valley and the intervening topography surrounding the wind farm site. The theoretical visibility of the wind farm from settlements across the study area is illustrated by **Figure 5.3**.

Residential Visual Amenity

5.45 Residential properties located within close proximity of the proposed wind farm site may experience visibility of wind turbines, however the majority of properties located on the middle slopes of Glen Urquhart are often enclosed by dense deciduous and/or coniferous tree cover. Potential significant effects on the visual amenity of properties located within the vicinity of the proposed wind farm site will be considered within the assessment of visual effects.

Sequential Routes

5.46 In addition to static viewpoints, the visual assessment will consider the effects on sequential views from principal routes across the study area. Analysis of effects on views from the following routes will be included:

- A82 (between Fort Augustus and Inverness);
- A831 (between Drumnadrochit and Kilmorack);
- A833 (between Kiltarlity and Drumnadrochit);
- B852 (between Dores and Foyers);
- B862 (between Fort Augustus and Inverness);
- Minor roads within 10 km of the proposed site;
- Great Glen Way; and
- National Cycle Routes.

Cumulative Baseline

5.47 The cumulative LVIA will consider cumulative effects arising from the relationship between the proposed wind farm and other wind farms in the surrounding area. LUC propose to include all wind farms and individual wind turbines located within the 35 km radius study area and with a blade tip height of over 80 m, within the assessment of cumulative landscape and visual effects. Consideration will also be given to the relationship between the proposed wind farm and wind turbines located within 5 km of the proposed development, with a blade tip height of between 50 m - 80 m.

5.48 **Table 5.2** outlines the wind farms located within 35 km of the site which it is currently proposed will be included within the cumulative landscape and visual impact assessment. These wind farms are also shown on **Figure 5.4**. This draft list will be reviewed and updated, following further consultation with the Highland Council and SNH to obtain details of all existing and proposed wind farms within the 35 km study area.

Table 5.2: Draft Cumulative Wind Farm List[6]

Wind Farm	Number of Turbines	Current Status
Corrimony	5	Operational
Beinn Mhor	7	Application Submitted
Allt Carach	25	Design/Scoping
Bhlaraidh	32	Consented
Auchmore	1	Operational
Auchmore Extension	1	Consented
Fairburn	20	Operational
Aberarder	13	Design/Scoping
Moriston	36	Design/Scoping
Corriegarth	20	Under Construction

[6] **Table 5.2** lists known schemes to September 2014

Wind Farm	Number of Turbines	Current Status
Corriegarth Extension	3	Application Submitted
Dunmaglass	33	Under Construction
Aberarder	13	Design/Scoping
Meikle Phoineas	1	Application Submitted
Westermoy Farm	1	Design/Scoping
Dell	14	Application Submitted
Aberchalder	13	Design/Scoping
Knockbain	1	Consented
Millenium	26	Operational
Millenium South	10	Application Submitted
Carn Gorm	14	Application Submitted
Culachy	25	Design/Scoping
Millenium Extension	4	Operational
Farr	40	Operational
Stronelairg	83	Consented
Culbin Farm	1	Application Submitted
Craggie Farm	1	Design/Scoping
Woodlands	5	Application Submitted
Bunlionn Forest	1	Design/Scoping
Beinneun	25	Consented
Beinneun Extension	7	Design/Scoping
Foulis	1	Under Construction
Lochluichart	17	Operational
Corriemollie	19	Consented
Lochluichart Extension	6	Operational
Moy	20	Consented

5.49 The baseline of operational, consented and proposed wind farms is an ever dynamic entity, and will no doubt change substantially before the submission of a planning application for the proposed wind farm development. LUC proposes to agree a 'cut-off date' with the Highland

Council and SNH of 6 weeks prior to the submission of a planning application, for the inclusion of wind farm developments to be considered in the cumulative LVIA.

Effects on Landscape and Visual Amenity

5.50 The LVIA and Cumulative LVIA will assess the potential effects of the construction and operation of the wind farm on landscape and visual receptors located within the 35 km radius study area as outlined above.

Construction Effects

5.51 The changes arising from the construction of the proposed wind farm may include:

- the introduction of construction activity and vehicular/personnel movements around the site and on local roads;
- the felling of forestry across the site;
- the construction and use of works compounds;
- the disturbance of areas of land and surface vegetation at the locations of the site access track, borrow pits, substation, and turbine bases;
- the potential need for lighting during construction if work extends into hours of darkness;
- the introduction of tracks, crane hardstandings at each turbine location and a substation;
- the introduction of tall vertical structures (turbines and a permanent monitoring mast) and the use of cranes
- the construction of the site access arrangements from and alongside the A831.

Operation Effects

5.52 Effects arising from the operation of the proposed wind farm on landscape and visual amenity will be considered in terms of:

- Effects on the physical landscape of the site;
- Effects on the perceived landscape character of the LCTs within the study area;
- Effects on the reasons for designation of the designated landscapes within the study area;
- Effects on Wild Land Areas (WLAs) within the study area;
- Effects on views from representative viewpoints; and
- Effects on views from settlements, routes and recreational receptors in the study area.

Cumulative Effects

5.53 Cumulative effects arising from the operation of the proposed wind farm in combination with other developments which have been consented, subject to a valid planning application submitted to the relevant determining authorities but not yet determined, will be considered for both landscape and visual receptors assessed in the LVIA.

Effects scoped out

5.54 On the basis of the initial desk based work undertaken, the professional judgement of the LVIA and EIA team, experience from other relevant projects and policy guidance or standards, the following areas have been scoped out:

- effects on landscape receptors beyond 35 km from the proposed wind farm site, where it is judged that potential significant effects are unlikely to occur;
- significant cumulative landscape and visual effects in conjunction with other wind farm developments beyond 35 km form the proposed wind farm site; and

- effects on receptors with minimal or no predicted visibility of the wind farm, as predicted by the ZTV.

Approach to Mitigation

5.55 Force 9 Energy is committed to using the design process to avoid and minimise, as far as possible, adverse landscape and visual effects of the wind farm. Whilst additional mitigation measures will be considered, given the intrinsic characteristics of wind turbines, some landscape and visual effects will be unavoidable.

Consultation Proposals

5.56 The consultees below will be approached for information to inform the LVIA, including discussion of methodology and identification of developments to be included in the cumulative assessment. They may also be contacted by the Highland Council regarding the scope of the EIA.

- The Highland Council (landscape architects)
- Cairngorms National Park Authority (CNPA); and
- Scottish Natural Heritage (SNH).

Cnoc an Eas Wind Farm

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Figure 5.1: Landscape Character Types (LCTs)

- Turbine
- Site Boundary
- 5km interval from outer turbines

SNH Landscape Character Types

- CNG2. Uplands and Glens
- CNG3. Cairngorm Straths
- INV1. Rugged Massif
- INV10. Farmed Straths
- INV11. Narrow Farmed Straths
- INV12. Rolling Farmland and Woodland
- INV13. Enclosed Farmland
- INV14. Crofting Settlement
- INV15. Inverness
- INV2. Rolling Uplands
- INV3. Rocky Moorland Plateau
- INV4. Rocky Moorland Plateau with Woodland
- INV5. Flat Moorland Plateau with Woodland
- INV6. Farmed and Wooded Foothills
- INV7. Broad Steep-Sided Glen
- INV8. Wooded Glen
- INV9. Narrow Wooded Glen
- LBR4. Broad Forested Strath
- LBR5. Smooth Moorland Ridges
- LBR6. Rocky Moorland
- MRN1. Coastal
- MRN2. Coastal Lowlands
- MYF10. Forested Backdrop
- MYF2. Enclosed Firth
- MYF3. Narrow Firth Corridor
- MYF5. Crofting
- MYF6. Open Farmed Slopes
- MYF7. Forest Edge Farming
- MYF8. Enclosed Farmed Landscapes
- RCY10. Forest Edge Farming
- RCY2. Undulating Moorland
- RCY3. Sloping Terrace Moorland
- RCY4. Rocky Moorland
- RCY7. Rounded Hills
- RCY8. Narrow Farmed Strath
- RCY9. Wide Farmed Strath
- SKL2. Rocky Moorland and Rocky Undulating Plateau
- SKL4. Peat Hag
- SKL5. Rugged Massif

Map Scale @ A3: 1:275,000

LUC

CB:JN EB:nunn_j LUCGLA FIG05-01-6042_009_r0_LCT 01/09/2014

Source:

Cnoc an Eas Wind Farm

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Figure 5.2: Landscape Designations and Wild Land Areas

- Turbine
- Site Boundary
- 5km interval from outer turbines
- The Cairngorms National Park
- National Scenic Area
- Special Landscape Area (SLA)
- SNH Wild Land Areas (June 2014)

Map Scale @ A3: 1:275,000

LUC

CB:JN EB:nunn_j LUCGLA FIG05-02-6042_004_r0_LandscapeDesignations 22/09/2014

Source: SNH, CNP, Scottish Government, THC

Cnoc an Eas Wind Farm

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Figure 5.3: Zone of Theoretical Visibility (ZTV) and Viewpoints

- Turbine
- Site Boundary
- 5km interval from outer turbines

Number of Turbines Potentially Visible

- 1 - 3
- 4 - 6
- 7 - 9
- 10 - 13
- 14 - 17
- Great Glen Way
- Great Glen Canoe Trail
- Viewpoint

1. A833 from Glen Convinth
2. Carn na Leitire
3. Great Glen Way near Altourie
4. A831 near Balnain
5. Carn Bàn
6. Corrimony Chambered Cairn
7. Balbeg
8. Meall Fuar-mhonaidh
9. A831 near Crask of Aigas
10. Loch Ness Tourist Ferry Route
11. B852 east of Loch Ness
12. A82 near Strone
13. Minor road, Strathglass
14. Shenval
15. A9 north of Tore Roundabout
16. Toll Creagach
17. Sgurr nan Conbhairean

Notes

The ZTV is calculated to turbine tip height (126.5m) from a veiwing height of 2m above ground level.

The terrain model is bare ground and derived from OS Terrain 50 height data.

Earth curvature and atmospheric refraction have been taken into account.

Map Scale @ A3: 1:275,000

LUC

CB:JN EB:nunn_j LUCGLA FIG05-03-6042_007_r0_ZTV_A3L 17/10/2014

Source: LUC, SNH

Cnoc an Eas Wind Farm

FORCE 9 ENERGY

Figure 5.4: Cumulative Wind Farm Developments

- Turbine
- Site Boundary
- 5km interval from outer turbines

Wind Farm Status

- Operational
- Under Construction
- Consented
- Appeal/Public Inquiry
- Application Submitted
- Design/Scoping

Lochluichart Extension
Corriemollie
Lochluichart
Woodlands
Foulis
Carn Gorm
Culbin Farm
Lower Whitebog, Fortrose
Knockbain
Auchmore Extension
Westermoy Farm
Fairburn
Auchmore
Allt Carach
Meikle Phoineas
Craggie Farm
Moy
Poll Lochaig
Farr
Corrybrough Estate
Beinn Mhor
Corrimony
5km
Bhlaraidh
10km
Aberarder
Dunmaglass
Corriegarth Extension
Moriston
15km
Corriegarth
Allt Duine
Bunlionn Forest
Millenium South
Millenium
Beinneun
Millenium Extension
Beinneun Extension
20km
Dell
Culachy
25km
Stronelairg
30km
Aberchalder
35km

Figure 5.4: Cumulative Wind Farm Developments

Map Scale @ A3: 1:275,000

0 10 20 km

CB:JN EB:nunn_j LUCGLA FIG05-04-6042_008_r0_CMLWF_A3L 01/09/2014

Source: LUC

6 Geology, Hydrology, Hydrogeology and Peat

Introduction

6.1 This chapter sets out the proposed approach to the assessment of potential effects of the proposed wind farm on geology, hydrology, hydrogeology and peat during both construction and operation.

6.2 Following the approach to assessment **Chapter 2**, the assessment will be carried out in line with relevant legislation and standards, as well as the following guidance:

- SEPA Regulatory Position Statement – Developments on Peat (2010);
- Technical Flood Risk Guidance for Stakeholders, Version 6 (SEPA, August 2010);
- Scottish Renewables, SNH, SEPA and the Forestry Commission Scotland (2010) Good practice during wind farm construction;
- PAN 51: Planning, Environmental Protection and Regulation (Scottish Government, revised 2006);
- Scottish Government (2006) Peat Landslide Hazard and Risk Assessments: Best Practice Guide for Proposed Electricity Generation Developments;
- PAN 69: Planning and Buildings Standards Advice on Flooding (2004);
- SEPA guidance (e.g. CAR Practical Guide);
- SEPA updated guidance on Groundwater Dependent Terrestrial Ecosystems (GWDTE's) (March 2012): Planning Guidance on Windfarm developments, Land use planning system, SEPA Guidance Note 4;
- Scottish Environment Protection Agency (SEPA) Pollution Prevention Guidelines (PPGs).
- Scottish Government (2011) Calculating Potential Carbon Losses & Savings from Wind Farms on Scottish Peatlands. Windfarms and Carbon savings on peatlands. Version 2.0.1, 25 August 2011.

Existing Conditions

6.3 The site is located west of Loch Ness, within the River Ness and Beauly catchments and there are several watercourses within the site. The Allt na Dalach Moire and its associated tributaries drain the majority of the site, where the watercourse flows south and joins the River Enrick, which drains into Loch Meiklie. The Allt Drimneach drains the west of the site and joins the River Enrick to the southwest of the site. The Camault Burn and Bearnock Burn drain the east and south areas of the site respectively, and flow directly into Loch Meiklie. The most northern part of the site has an unnamed tributary that flows north into Loch Garbh Iolchan, and forms part of the Loch Neaty catchment.

6.4 The River Enrick flows south of the site boundary and continues eastwards towards Drumnadrochit 8km away. The River Enrick is classified by SEPA as having as overall 'Good' status.

6.5 The underlying groundwater is classified by SEPA as having 'Good' status and is within the Drinking Water Protection Area. Highland Council will be consulted to confirm the locations of any private water supplies within the hydrological study area and Scottish Water will be consulted to identify the location and use of any public water supply infrastructure within the hydrological study area.

6.6 An initial review of SEPA flood mapping suggests that the site watercourses are highly prone to surface water flooding, with the River Enrick downstream of the site displaying extensive river flooding across the valley with a high likelihood of occurrence, with the nearby Loch Meiklie becoming a much larger waterbody during such periods.

6.7 There are no Sites of Special Scientific Interest (SSSIs) within the site boundary, however there are two SSSI designated areas within 5km of the site. North Inverness Lochs is a designated Special Protection Area of international importance, for the breeding of Slavonian grebe birds. Dubh Lochs, which is a designated Site of Special Scientific Interest, covers the same area.

6.8 According to the Macaulay Land Use Institute Depth of Peat Map (2010), the site lies in an area where the depth of peat ranges between approximately 0m – 1m however deeper areas of peat may be present onsite. Peat probing will need to be undertaken to determine the presence and depth of peat on the site, including to determine whether a peat slide risk assessment would be required.

Effects on Geology, Hydrology, Hydrogeology and Peat

6.9 Taking account of the findings of the work undertaken to date, whilst still adopting a precautionary approach at this preliminary stage, potential effects associated with the construction and/or operation of the proposed wind farm include:

- pollution of public/private drinking water supplies caused by sedimentation of watercourses from excavated/stockpiled material during wind farm construction;
- pollution of surface water (including particularly the Allt na Dalach Moire and its tributaries) and groundwater, including drinking water supplies, through operation of machinery (e.g. spillage of fuels, oils etc.) during site preparation and construction of the wind farm;
- modifications to natural drainage patterns, changes to runoff rates and volumes and a consequent increase in flood risk during construction and operation of the wind farm as a result of increased areas of temporary and permanent hardstanding;
- pollution of surface water and groundwater as a result of maintenance activities associated with the operation of the wind farm (e.g. spillage of fuels, oils, etc.);
- reductions in natural flows arising from any temporary or permanent abstractions.

6.10 Should construction of watercourse crossings be required for access tracks, the following effects may result if not properly controlled, however should be mitigated through appropriate design:

- localised flooding and bank erosion caused by impediments to flow, particularly in conditions of high discharge;
- pollution of public/private drinking water supplies from high levels of suspended solids and turbidity in watercourses as a result of soil erosion and sedimentation.

6.11 The assessment will also consider the site within its hydrological catchment, thus taking account of any cumulative influences in the local area, particularly with regard to water quality.

6.12 On the basis of the work undertaken to date, the professional judgement of the assessment team and experience from other similar projects, it is considered likely that the following effects can be scoped out:

- increased flood risk caused by impediments to flow in watercourses during operation and maintenance of the wind farm.

Approach to Mitigation

6.13 Given Force 9 Energy's commitment to implementing accepted good practice during construction and operation and the current regulatory context, many potential effects on the water environment can be avoided or reduced. With respect to the current regulatory context, the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR) requires

authorisation in relation to a number of activities e.g. engineering works in inland waters and wetlands. Consultation with SEPA throughout the EIA process will be undertaken in relation to those activities for which a licence or registration is required.

6.14 As a consequence, a number of measures are not considered to be mitigation as such, but rather an integral part of the design/construction process; and it is proposed that these will be taken into account prior to assessing the likely effects of the wind farm. However, where appropriate, more tailored mitigation measures will be identified prior to determining the likely significance of residual effects.

Consultation Proposals

6.15 The consultees below will be approached for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- Highland Council (regarding Private Water supplies)
- Scottish Environment Protection Agency (SEPA);
- Scottish Natural Heritage (SNH);
- Scottish Water

7 Ecology

Introduction

7.1 This chapter sets out the proposed approach to the assessment of potential effects of the proposed wind farm on flora and fauna, during both construction and operation. Potential impacts on birds are considered separately in the following chapter.

7.2 Following the approach to assessment set out in **Chapter 2**, the ecological assessment will be carried out in line with relevant legislation and standards:

- Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna ("Habitats Directive");
- Council Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy ("Water Framework Directive");
- European Commission (27 October 2010) Natura 2000 Guidance Document 'Wind Energy Developments and Natura 2000'. European Commission, Brussels;
- The Water Environment and Water Services (Scotland) Act 2003 (WEWS);
- The Wildlife and Countryside Act 1981 (as amended);
- Nature Conservation (Scotland) Act 2004 (as amended);
- The Wildlife and Natural Environment (Scotland) Act 2011;
- The Protection of Badgers Act 1992;
- The Conservation (Natural Habitats &c.) Regulations 1994 (as amended) (the Habitats Regulations);
- SERAD (Scottish Executive Rural Affairs Department) 2000. Habitats and Birds Directives, Nature Conservation: Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds ('The Habitats and Birds Directives'). Revised Guidance Updating Scottish Office Circular No 6/1995;
- Policy Advice Note PAN 1/2013 - Environmental Impact Assessment (Scottish Government 2013);
- Planning Circular 3 2011;
- Nature Conservancy Council (1989). Guidelines for selection of biological SSSIs;
- IEEM (2006) Guidelines for ecological impact assessment in the UK;
- Hundt, L. (2012) Bat Surveys: Good Practice Guidelines, 2nd edition, Bat Conservation Trust;
- Natural England (2009, updated March 2014) Natural England Technical Information Note TIN 051. Bats and Onshore Wind turbines – Interim Guidance;
- SEPA (2011): Guidance Note 4 - Planning Advice on Windfarm Developments;
- Scottish Natural Heritage (2013) Planning for Development: What to consider and include in Habitat Management Plans.
- Scottish Natural Heritage (2013). Planning for development: What to consider and include in Deer Management Plans for development sites.
- Scottish Renewables, SNH, SEPA, FC (Scotland) (2013, Version 2) Good Practice During Windfarm Construction; and

Existing Conditions

Desk Based Study

7.3 The desk study will gather flora and faunal information (including relevant designated sites) from a variety of online sources and consultation with conservation organisations, such as those listed below. The following list is not exhaustive:

- Scottish Natural Heritage (SNH), including Sitelink [http://gateway.snh.gov.uk/sitelink/index.jsp];
- IUCN Red list of threatened Species [http://www.iucnredlist.org/];
- The Highland Council;
- Scottish Wildlife Trust;
- Scottish Badgers;
- Botanical Society of the British Isles (BSBI);
- Amphibian and Reptile Group (ARG) UK;
- Bat Conservation Trust; and
- Ness and Beauly Fisheries Trust.

Designated Sites

7.4 **Table 7.1** below details the designated sites located within 5km of the proposed wind farm site that have an ecological (non-ornithological) interest.

Table 7.1: Statutory Nature Conservation Designations within 5km of Cnoc an Eas Wind Farm

Distance from the site	Designated Site	Ecological Qualifying Features
0-1 km	-	-
1-5 km	Balnagrantach Site of Special Scientific Interest (SSSI)	Club sedge
	Glen Strathfarrar SSSI	Native pinewood Dragonfly assemblage Lichen assemblage Vascular plant assemblage

Field Surveys

7.5 Ecological survey work commenced in 2013 (habitat, fisheries and bat surveys) and will be completed in summer 2014 (protected species surveys). The following surveys have been/will be employed at the proposed wind farm site:

- Extended Phase 1 Habitat surveys (August 2013);
- National Vegetation Classification (NVC) habitat surveys (August 2013);
- Bats – roost surveys (June and September 2013), manual transect surveys (May to September 2013) and static surveys using anabats (May to September 2013);
- Fisheries habitat survey (October 2013); and
- Protected species (otter, water vole, badger, red squirrel, pine marten, wildcat, June 2014).

Habitats

7.6 Habitat surveys identified a survey area dominated by coniferous plantation woodland with smaller areas of semi-natural broadleaved woodland being found amongst the plantation woodland. The more open areas, within the central and northern areas of the proposed wind farm site, are predominantly a mix of wet dwarf shrub heath and acid dry dwarf shrub heath (comprising M15 *Trichophorum germanicum – Erica tetralix* wet heath, M19 *Calluna vulgaris – Eriophorum vaginatum* blanket mire, M25 *Molinia caerulea – Potentilla erecta* mire, and H9-H12 "Intermediate heath"). The areas of best quality mire are restricted to several large patches of M17 *Trichophorum germanicum – Eriophorum vaginatum* blanket mire which were recorded across the slopes of Creag Muigeil and in the very northern end of the proposed wind farm site. Grassland areas also featured more within the southern half of the site and access route consisting of improved and semi-improved acid grassland.

Bats

7.7 No bat species considered to be of high risk of interaction with wind turbines were identified during bat surveys. Transect surveys recorded the presence of two species and one genus within the survey area (common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *P. pygmaeus* and *Myotis* sp). Given the geographical location of Cnoc an Eas and habitats present the most likely Myotis species present is Natterer's bat and/or Daubenton's bat. Incidences of registrations were highest in the summer months (July and August), with reduced registrations in September. This temporal pattern of activity is considered to be typical of bats forming summer roosts. Almost no bat activity was recorded within the centre of the site; especially above 300 m in altitude. This area is predominantly comprised of open moorland with no edge habitats attractive to bats.

7.8 Static surveys recorded common pipistrelle, soprano pipistrelle and brown long-eared bat *Plecotus auritus* (one record) as well as *Myotis* spp. Those static locations on open hill ground again recorded markedly fewer registrations than those located within or adjacent to habitat considered providing better quality foraging, e.g. woodland edge. There were again fewer registrations recorded from spring months (May) compared to the summer and early autumn months. Activity levels for all species across the wind farm site are considered to represent low levels of activity, and are within the range of comparable projects.

7.9 Survey results did not confirm the presence of any bat roosts within the proposed wind farm site. However, there are up to 138 trees (depending on final layout) that require further inspection to confirm presence/absence of roosts, and surveys will be undertaken in 2014 to investigate this.

Fisheries

7.10 A habitat survey was undertaken within the proposed wind farm site in October 2013 to assess the suitability of tributaries of Loch Meiklie for salmonid fish production. Habitat quality in Allt na Dalach Moire was generally good and has the potential to support populations of salmonids. Habitat quality generally declined in the remaining transects located further upstream and in places the burn was difficult to survey. A similar pattern was observed on the unnamed tributary of Allt na Dalach Moire. Most of the section of an unnamed tributary of the Camault Burn that was within the proposed development area was difficult to access due to dense forestry but a brief visual inspection of the burn where accessible suggested that, although small in nature, it comprises of habitat suitable for the production of salmonid fish species.

Protected Species

7.11 The proposed wind farm site varies throughout in its suitability to contain protected species but does support habitats and features that could be utilised by a range of protected species, including water vole, red squirrel, pine marten and reptiles. The proposed wind farm Site contains small amounts of suitable habitat that may be utilised by otter, badger and amphibians. Surveys in summer 2014 will aim to confirm the presence and distribution of protected species.

Assessment of Effects

7.12 The assessment of potential effects on ecological interests will follow guidelines published by the Institute of Ecology and Environmental Management (IEEM, 2006) and will take into account national legislation and policy and the aims of the European Habitats Directive.

7.13 The assessment process involves the following:

- Identification of the potential effects of the proposed wind farm site;
- Incorporating potential effects into the design process as appropriate;
- Consideration of the likelihood of occurrence of potential effects where appropriate;
- Defining the Nature Conservation Value of the ecological receptors present;
- Establishing the Magnitude of the likely effect (both spatial and temporal);
- Based on the above information, a professional judgement as to whether or not the Identified effect is significant with respect to the EIA Regulations;
- If a potential effect is determined to be significant, measures to mitigate or compensate for the effect are suggested where required;
- If required, opportunities for enhancement may be considered; and
- Residual effects after mitigation, compensation or enhancement are considered.

7.14 Nature Conservation Value is defined on the basis of the geographic scale, and it is necessary to consider each receptor's conservation status, its distribution and its population trend (species) based on available historical records.

7.15 The significance of potential effects is determined by integrating the assessments of Nature Conservation Value and Magnitude in a reasoned way.

7.16 A set of pre-defined significance criteria will be used in assessing the effects of the proposed wind farm. It requires to be established whether there will be any effects which will be sufficient to adversely affect the receptor to the extent that its conservation status deteriorates above and beyond that which would be expected should baseline conditions remain (i.e. the 'do nothing' scenario). Furthermore, these predictions will be given with a level of confidence relative to the effect being assessed where required (in line with IEEM, 2006).

7.17 An assessment of cumulative effects will be undertaken following published guidance (SNH, 2012). The spatial extent of the assessment is dependent on the ecology of the receptor but in all cases will involve consideration of the cumulative effects upon the habitat extents or species populations relevant to that receptor. For example, for water voles it may be appropriate to consider effects specific to individual catchments, should the distance between neighbouring catchments be sufficient to assume no movement of animals between them, whereas for blanket bog habitat (depending on the extent affected), the region or Natural Heritage Zone may be the relevant spatial scale

Effects on Ecology

7.18 The assessment will concentrate on the effects of construction and operation of Cnoc an Eas Wind Farm upon those ecological receptors identified during survey work and as advised by consultees. In general, effects upon the following will be assessed:

- Designated sites – effects include direct (i.e. derived from land-take) and indirect (i.e. changes caused by effects to supporting systems such as groundwater);
- Terrestrial habitats – effects include direct (i.e. derived from land-take) and indirect (i.e. changes caused by effects to supporting systems such as groundwater or overland flow);
- Aquatic habitats – effects are limited to the ecological impacts of changes in water conditions through potential pollution effects. Hydrological effects are considered in **Chapter 6**; and

- Protected species – effects considered include direct (i.e. loss of life as a result of the proposed wind farm; loss of key habitat; displacement from key habitat; barrier effects preventing movement to/from key habitats; and general disturbance) and indirect (i.e. loss/changes of/to food resources; population fragmentation; degradation of key habitat e.g. as a result of pollution). Positive effects associated with a redesign of the forest within the windfarm site will also be considered.

Approach to Mitigation

7.19 Force 9 Energy is committed to implementing measures within the conceptual design process where possible to avoid or reduce potential effects on ecology. A number of measures are therefore not considered to be mitigation as such, but will be taken into account prior to assessing the likely effects of the wind farm. As a consequence, given Force 9 Energy's commitment to implementing accepted good practice during construction and operation and the current regulatory context, many potential effects on the water environment (in line with those identified within Chapter 6: Geology, Hydrology, Hydrogeology and Peat assessment), on habitats (e.g. via a best practice pollution prevention measures) or on protected species (via a Species Protection Plan) can be avoided or reduced. Where likely significant effects on ecology due to the proposed wind farm, alone or cumulatively, are identified, measures to prevent, reduce and where possible offset these adverse effects will be proposed.

Consultation Proposals

7.20 The consultees below will be approached for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- The Highland Council;
- Scottish Natural Heritage (SNH);
- Scottish Environment Protection Agency (SEPA); and
- Forestry Commission Scotland (FCS).

Cnoc an Eas Wind Farm

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Figure 7.1: Nature Designations

- Turbine
- 10km from outer turbines
- Site Boundary
- Ancient Woodland Inventory
- National Nature Reserve
- Special Area of Conservation
- Special Protection Area
- Site of Special Scientific Interest

Map Scale @ A3:1:90,000

LUC

CB:JN EB:nunn_j LUCGLA FIG07-01-6042_003_r0_NatureDesignations 01/09/2014 Source: SNH

8 Ornithology

Introduction

8.1 The approach to the evaluation of bird interests on the proposed wind farm site and surrounding area and to the assessment of potential effects on birds is set out below.

8.2 The following legislation and guidance will be considered as part of the assessment:

- Directive 2009/147/EC on the Conservation of Wild Birds (Birds Directive);
- Directive 92/43/EEC on Conservation of Natural Habitats and of Wild Fauna and Flora (as amended) (Habitats Directive);
- The Wildlife and Countryside Act 1981 (as amended);
- The Nature Conservation (Scotland) Act 2004 (as amended);
- The Conservation (Natural Habitats &c.) Regulations 1994 (as amended) (The Habitats Regulations);
- SERAD (Scottish Executive Rural Affairs Department) 2000. Habitats and Birds Directives, Nature Conservation; Implementation in Scotland of EC Directives on the Conservation of Natural Habitats and of Wild Flora and Fauna and the Conservation of Wild Birds ('the Habitats and Birds Directives'). Revised Guidance Updating Scottish Office Circular No 6/1995;
- European Commission (27 October 2010) Natura 2000 Guidance Document 'Wind Energy Developments and Natura 2000'. European Commission, Brussels;
- The UK Biodiversity Action Plan (BAP) and superseded UK Post-2010 Biodiversity Framework;
- Eaton, M.A., Brown, A.F., Noble, D.G., Musgrove, A.J., Hearn, R.D., Aebischer, N.J., Gibbons, D.W., Evans, A. and Gregory, R.D. (2009). Birds of conservation concern 3. The population status of birds in the United Kingdom, Channel Islands and Isle of Man, British Birds 102: 296-341;
- Scottish Natural Heritage (2000) Windfarms and birds: calculating a theoretical collision risk assuming no avoidance action. SNH Guidance Note. SNH;
- Scottish Natural Heritage (2006) Assessing significance of impacts from onshore windfarms on birds out with designated areas;
- Scottish Natural Heritage (September, 2009) Environmental Statements and Annexes of Environmentally Sensitive Bird Information; Guidance for Developers, Consultants and Consultees;
- Scottish Natural Heritage (2005, revised 2010) Survey methods for use in assessing the impacts of onshore windfarms on bird communities);
- Scottish Natural Heritage (August 2013) Recommended bird survey methods to inform impact assessment of onshore wind farms.
- Scottish Natural Heritage (2011). Dealing with construction and breeding birds.
- Scottish Natural Heritage (March 2012). Assessing the Cumulative Impact of Onshore Wind Energy Developments. SNH;
- Scottish Natural Heritage (July 2013) Assessing connectivity with Special Protection Areas. SNH.

Existing Conditions

Desk Based Study

8.3 The desk study will gather ornithological information (including relevant designated sites) from a variety of online sources and consultation with conservation organisations, such as those listed below. The following list is not exhaustive:

- SNH including Site Link [http://gateway.snh.gov.uk/sitelink/] – information on designated sites;
- The Royal Society for the Protection of Birds (RSPB) Scotland;
- British Trust for Ornithology (BTO) BirdTrack website [http://blx1.bto.org/birdtrack/main/data-home.jsp];
- Highland Raptor Study Group;
- The Scottish Ornithologists' Club (SOC); and
- Forestry Commission Scotland.

Designated Sites

8.4 **Table 8.1** below details the designated sites located within 20km of the proposed wind farm site that have ornithological interests.

Table 8.1: Statutory Nature Conservation Designations within 20km of Cnoc an Eas Wind Farm

Distance from the site	Designated Site	Ornithological Qualifying Features
0-1 km	-	-
1-5 km	Glen Affric to Strathconnon Special Protection Area (SPA)	Golden eagle (breeding)
	Glen Affric SSSI	Breeding bird assemblage
	North Inverness Lochs SPA	Slavonian grebe (breeding)
	Dubh Lochs SSSI	Slavonian grebe (breeding)
5-10 km	Balnagrantach SSSI	Slavonian grebe (breeding)
	Glen Strathfarrar SSSI	Breeding bird assemblage
10-20 km	Inner Moray Firth SPA and Ramsar	Common tern (breeding) Osprey (breeding) Waterfowl assemblage (non-breeding) Oystercatcher (non-breeding) Teal (non-breeding) Bar-tailed godwit (non-breeding) Cormorant (non-breeding) Curlew (non-breeding) Goldeneye (non-breeding)

Distance from the site	Designated Site	Ornithological Qualifying Features
		Wigeon (non-breeding)
	Loch Ashie SPA	Slavonian grebe (breeding and non-breeding)
	Loch Ruthven SPA and Ramsar	Slavonian grebe (breeding)
	Loch Knockie and nearby lochs SPA	Slavonian grebe (breeding)
	Beauly Firth SSSI	Goosander (non-breeding) Greylag goose (non-breeding) Red-breasted merganser (non-breeding)

Field Surveys

8.5 Ornithological survey work commenced in September 2012 and will continue until August 2014. As the surveys commenced in 2012, the SNH guidance '*Survey methods for use in assessing the impacts of onshore windfarms on bird communities'* from 2010 will be applicable. The updated guidance (2013) will however also be used in continued survey design and in the ornithological impact assessment, where relevant.

The following surveys have been/will be employed at the site:

- Flight activity (Vantage Point) surveys (September 2012 to August 2014; 2 breeding seasons and 2 non-breeding seasons within the proposed wind farm site, with a minimum of 36 hours surveyed per vantage point per season);
- Scarce Breeding Bird Surveys (2013 and 2014 breeding seasons within the proposed wind farm site and 2km buffer, following guidance in Gilbert *et al.* (1998[7]) and Hardey *et al.* (2009 and 2013[8]);
- Upland Breeding Bird Surveys (2014 breeding season within the proposed wind farm site and 500m buffer, with four survey visits (as per Calladine *et al.* 2009[9]) following the Brown & Shepherd (1993[10]) methodology);
- Winter Walkover (2012/13 and 2013/14 non-breeding seasons within the proposed wind farm site and 500m buffer); and
- Black Grouse Surveys (2014 breeding season within the proposed wind farm site and 1.5km buffer, following guidance in Gilbert *et al.* (1998)).

Ornithological Flight Activity

8.6 Five Annex 1 species (golden eagle, hen harrier, merlin, red kite and golden plover) and two further Schedule 1 species (greenshank, crossbill) were recorded within their respective survey areas during the 2013 breeding season.

[7] Gilbert, G., Gibbons, D. W. & Evans, J. 1998. Bird Monitoring Methods. RSPB, Sandy.
[8] Hardey, J., Crick, H., Wernham, C., Riley, R., Etheridge, B. and Thompson, D. (2013). Raptors: A Field Guide For Surveys And Monitoring, Third Edition. The Stationary Office.
[9] Calladine, J., Garner, G., Wernham, C. & Thiel, A. (2009) The influence of survey frequency on population estimates of moorland breeding birds. Bird Study, 56: 3, 381-388.
[10] Brown, A. F. & Shepherd, K. B. 1993. A method for censusing upland breeding waders. Bird Study, 40: 189-195.

8.7 Hen harrier and merlin both had failed nesting attempts during the 2013 breeding season: merlin within the 2km proposed wind farm site buffer and hen harrier out with the 2km proposed wind farm site buffer. Golden eagle observed during surveys have comprised of transient individuals, and potentially a newly established pair (comprising of an adult and sub-adult) that have possibly taken over a previously empty historical territory 3-5km away (they have yet to attempt to breed).

8.8 Red kite have also been recorded and these individuals are likely to be part of a new colony that has recently taken residence in the Glen Urquhart area within the past three years.

8.9 A maximum of 13 potential wader territories (for golden plover, curlew and snipe) were recorded within the survey area and two black grouse leks were recorded within the survey area with a maximum of three males displaying at each location.

8.10 Four Annex 1 species (golden eagle, golden plover, red kite and whooper swan) were observed during the 2012/2013 and 2013/2014 non breeding seasons, with a small number of greylag and pink-footed goose flights also recorded. Black grouse (up to three individuals) were observed.

Assessment of Effects

8.11 Effects on target species will be assessed in relation to the species' reference population, range and distribution. The assessment of potential effects will follow guidelines published by the Institute of Ecology and Environmental Management (IEEM, 2006) and SNH (2006) and will take into account the considerations of national legislation and policy and the aims of the European Birds Directive.

8.12 The evaluation for wider-countryside interests (interests unrelated to SPAs, but including SSSIs) involves the following process:

- identification of the potential effects of Cnoc an Eas Wind Farm;
- consideration of the likelihood of occurrence of potential effects where appropriate;
- defining the Nature Conservation Value of the bird populations present;
- establishing the population's Conservation Status;
- establishing the Magnitude of the Likely Effect (both spatial and temporal);
- based on the above information, a judgement is made as to whether or not the identified effect is significant with respect to the EIA Regulations;
- if a potential effect is determined to be significant, measures to mitigate or compensate the effect are suggested where required;
- opportunities for enhancement are considered where appropriate;
- residual effects after mitigation, compensation or enhancement are considered.

8.13 Nature Conservation Value is defined on the basis of the geographic scale, and it is necessary to consider each receptor's conservation status, its distribution and its population trend based on available historical records.

8.14 The significance of potential effects is determined by integrating the assessments of Nature Conservation Value and Magnitude in a reasoned way.

8.15 A set of pre-defined significance criteria will be used in assessing the effects of the proposed wind farm. It requires to be established whether there will be any effects which will be sufficient to adversely affect the receptor to the extent that its conservation status deteriorates above and beyond that which would be expected should baseline conditions remain (i.e. the 'do nothing' scenario). Furthermore, these predictions will be given with a level of confidence relative to the effect being assessed where required (in line with IEEM, 2006).

8.16 An assessment of cumulative effects will be undertaken following published guidance (SNH 2012). Cumulative effects on each receptor relevant to this proposed wind farm will be assessed in relation to other projects and activities subject to the EIA process within a relevant search area,

and their effects on a relevant reference population (for example at a Natural Heritage Zone level).

Effects on Birds

8.17 Taking account of the findings of the work undertaken to date, whilst still adopting a precautionary approach at this preliminary stage, potential effects on birds associated with the construction and operation of the proposed wind farm include:

- A short-term reduction in breeding or wintering bird populations due to construction disturbance (affecting breeding or foraging behaviour and causing reductions in productivity or survival);
- A long-term/permanent reduction in breeding or wintering bird populations due to the loss of habitat critical for nesting or foraging. This may arise as a consequence of direct loss of habitat under infrastructure or disturbance/displacement as a result of operational activities;
- A long-term/permanent reduction in breeding or wintering bird populations due to collision mortality (if collision risk is identified as a concern, predicted collision rates will be calculated through a combination of theoretical collision risk modelling and professional judgement);
- Cumulative effects with other projects or activities that are constructed during the same period, and / or with projects or activities which pose either a potential collision risk or loss of habitat by displacement.
- Some beneficial effects may occur for certain bird species due to the redesign of forestry after initial felling. This includes an increase in suitable woodland edge habitats for species such as black grouse or various woodland passerines.

Approach to Mitigation

8.18 Significant effects upon birds will be avoided/minimised where possible within the conceptual design process. Good practice during construction and operation of the proposed wind farm will also implemented.

8.19 Where likely significant effects on ecology are identified, measures to prevent, reduce and where possible offset these adverse effects will be proposed.

Consultation Proposals

8.20 The consultees below will be approached for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- Scottish Natural Heritage (SNH);
- The Royal Society for the Protection of Birds (RSPB) Scotland;
- Highland Council;
- The Scottish Ornithologists' Club (SOC); and
- Forestry Commission Scotland (FCS).

9 Noise and Vibration

Introduction

9.1 This chapter sets out the proposed approach to the assessment of potential noise and vibration effects associated with the proposed wind farm during construction, operation, and decommissioning.

9.2 Following the approach set out in **Chapter 2**, the assessment will be carried out in line with relevant legislation and standards, as well as the following guidance:

- Planning Advice Note PAN1/2011[11].
- Web based planning advice on Onshore wind turbines[12].
- The Technical Advice Note[13]accompanying PAN1/2011.
- ETSU-R-97[14] The Assessment and Rating of Noise from Wind Farms.
- A Good Practice Guide (GPG) to the Application of ETSU-R-97[15]
- BS 5228:2009[16] Noise control on construction and open sites, BS 5228-1 noise.

9.3 The web based planning advice note on onshore wind turbines confirms that the recommendations of ETSU-R-97 "*should be followed by applicants and consultees, and used by planning authorities to assess and rate noise from wind energy developments*". Assessment of operational noise impacts will be carried out in accordance with the methodology set out in ETSU-R-97. ETSU-R-97 has become the accepted standard for such developments within the UK, and is commended in current UK planning policy.

9.4 The ETSU-R-97 recommendations provide a robust basis for assessing the noise implications of an operational wind farm and are the accepted standard for such developments within the UK. This methodology will therefore be adopted for the assessment of operational noise impact. In summary, the assessment shall:

- Specify the type and noise emission characteristics of the wind turbines proposed for the site;
- Calculate noise emission levels due to the operation of the wind turbines as a function of site wind speed at the nearest noise sensitive receptors;
- Determine if wind turbine emission levels at all nearest noise sensitive receptors can be demonstrated to meet the 35 dB lower noise limit at wind speeds up to 10 m/s,. If so the development would therefore meet with the 'simplified' ETSU-R-97 criteria and a background noise survey will not be required to be undertaken;
- If the 'simplified' ETSU-R-97 criteria cannot be met, determine the quiet day time and night time noise limits from the measured background noise levels at the nearest noise sensitive receptors, following exclusion of atypical and rainfall periods (using measured data from a rain gauge);
- Compare the calculated wind farm noise emission levels with the derived noise limits and assess in the light of relevant planning requirements.

[11] Planning Advice Note 1/2011: Planning & Noise, Scottish Government, March 2011

[12] Onshore Wind Turbines (http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/themes/renewables/Onshore).

[13] PAN1/2011 Technical Advice Note – Assessment of Noise, Scottish Government, March 2011.

[14] ETSU R 97, the Assessment and Rating of Noise from Wind Farms, Final ETSU-R-97 Report for the Department of Trade & Industry. The Working Group on Noise from Wind Turbines, 1997.

[15] A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise, M. Cand, R. Davis, C. Jordan, M. Hayes, R. Perkins, Institute of Acoustics, May 2013

[16] BS 5228 1:2009 'Code of practice for noise and vibration control on construction and open sites – Part 1: Noise'.

9.5 The recently issued Institute of Acoustics Good Practice Guide (GPG) will also be referenced, as it provides recommendations on a range of subjects relating to wind farm noise assessment including wind shear.

9.6 For detailed guidance on construction noise and its control, the Technical Advice Note[17] accompanying PAN1/2011 refers to British Standard BS 5228:2009 "Code of Practice for Noise and Vibration Control on Construction and Open Sites" as relevant when used within the planning process. BS5288:2009 contains the principal UK guidance on construction noise. In assessing the impact of construction noise and vibration, it is usual to accept that the associated works are of a temporary nature. BS 5228 advocates control of construction noise through standard environmental best practice, such as, equipment selection and restriction of working hours.

9.7 Predictions of construction noise will be made referencing typical activity emission levels and likely variations in noise levels at surrounding receiver locations, using the methodology set out in BS5228:2009. This assessment will identify if and when predicted noise levels may be above standard guideline limits, taking into account the rural character of the area and the different construction activities used throughout the construction programme. Construction noise management procedures will also be determined. Consideration will also be given to the potential impact of construction traffic on sensitive receptors in the area.

Existing Conditions

9.8 Given its rural nature, the noise environment in the surrounding area is likely to be generally characterised by 'natural' sources, such as wind disturbed vegetation and animals, with a varying contribution from local and/or distant road and agricultural/forestry operations vehicle movements in the area to some extent.

9.9 If the simplified ETSU-R-97 criteria cannot be achieved then the existing background noise in the area will be characterised over a range of wind conditions by undertaking a baseline survey, in accordance with the ETSU-R-97 methodology and good practice, at the nearest noise sensitive receptors (or at a representative sample of the nearest noise sensitive receptors). The survey locations at the time of writing are still subject to agreement with The Highland Council and subject to access being granted by land owners.

9.10 In the event that it is not possible to agree access to one or more of the noise survey locations, alternative locations will be sought that are considered to have a comparable noise climate to the planned location. The Highland Council will be informed of any changes to planned noise survey locations.

9.11 Attendance of representatives of The Highland Council is welcomed during the installation of the monitoring equipment in order to agree micro-siting of monitoring equipment. If a representative of The Highland Council is not available to attend the site during installation of the noise monitoring equipment, photographs and descriptions will be provided of each monitoring location.

9.12 Concurrent, 10 minute measurements of noise and wind speed are proposed to be carried out, in accordance with the requirements of ETSU-R-97. An approved met mast/SODAR/LIDAR is anticipated to be available within the proposed development site during the noise survey. We anticipate that the noise survey will last approximately 3 weeks, depending upon weather conditions that prevail during the survey period.

9.13 It is expected that this period will be sufficient to establish a relationship between wind speed and background noise levels and is greater than the minimum period of 1 week that is required by ETSU-R-97. If, on completing the survey, it is found that insufficient data has been collected to establish a reasonable relationship between background noise and wind speed (e.g. due to equipment failures or unrepresentative weather conditions), the monitoring equipment would be returned to the site so that further data can be obtained.

9.14 A rain gauge will also be used during the survey. This will either be located on the proposed wind farm site or at one of the noise monitoring locations. Note that we do not feel it necessary to

[17] PAN1/2011 Technical Advice Note – Assessment of Noise, Scottish Government, March 2011.

install rain gauges at all of the proposed noise monitoring locations as we feel that the identified noise sensitive receptors are in close enough proximity for rain measurements at one site to be representative of all remaining sites.

9.15 The noise limits derived according to ETSU-R-97 guidance, for each noise-sensitive receptor, apply to the total noise produced by all wind farms. Therefore potential cumulative operational noise levels, including existing, consented and proposed wind farms in the area, must be assessed relative to these limits. Notwithstanding this, no such neighbouring wind farms have been identified at this stage of the assessment and it is therefore considered unlikely that a cumulative noise impact assessment would be necessary.

Noise and Vibration Effects

9.16 The acceptable limits for wind turbine operational noise are clearly defined in the ETSU-R-97 document and these limits should not be breached. Consequently, the test applied to operational noise is whether or not the calculated wind farm noise emission levels at nearby noise sensitive properties lie below the noise limits derived in accordance with ETSU-R-97. Depending on the levels of background noise the satisfaction of the ETSU-R-97 derived limits can lead to a situation whereby, at some locations under some wind conditions and for a certain proportion of the time, the wind farm noise may be audible. However, noise levels at the properties in the vicinity of the Development will still be within levels considered acceptable under the ETSU-R-97 assessment method.

9.17 If predicted noise levels are within the ETSU-R-97 criteria, operational noise is considered acceptable; if predicted noise levels are above the ETSU-R-97 criteria, operational noise is considered unacceptable. Unacceptable noise levels are considered 'significant' in accordance with the EIA Regulations.

9.18 There is no specific guidance relating to the assessment of vibration from operational wind turbines. However, measurements of vibration on operational wind farms have shown that the levels of vibration within the wind farm site would be expected to be below the level of human perception. As such, and given the likely separating distances between proposed turbine locations and local residences, vibration generated by the operation of the proposed turbines is highly unlikely to be perceptible at nearby residential receptor locations, therefore it is proposed that vibration generated by the operation of the proposed Wind Farm is scoped out of the assessment.

9.19 During construction and decommission, noise could arise from both on-site activities, such as, the construction of on-site access tracks, turbine foundations, the control building (substation) etc., and also from the movement of construction related traffic both on-site and travelling on public roads to and from the development site.

9.20 For construction noise, the significance criteria of **Table 9.1** will be referenced. They have been derived from the range of guidance values set out in BS 5228:2009 (Annex E), and other reference criteria provided by the World Health Organization (WHO) and Minerals Policy Statement 2, Annex 2: Noise.

Table 9.1: Construction Noise Significance Criteria

Significance	Condition
Substantial	Construction noise is greater than 72 dB $L_{Aeq,T}$ for any part of the construction works or exceeds 65 dB $L_{Aeq,T}$ for more than 4 weeks in any 12 month period
Moderate	Construction noise is less than or equal to 65 dB $L_{Aeq,T}$ throughout the construction period.
Slight	Construction noise is generally less than or equal to 60 dB $L_{Aeq,T}$, with periods of up to 65 dB $L_{Aeq,T}$ lasting not more than 4 weeks in any 12 month period
Negligible	Construction noise is generally less than or equal to 55 dB $L_{Aeq,T}$, with periods of up to 60 dB $L_{Aeq,T}$ lasting not more than 4 weeks in any 12 month period

9.21 The nature of works and distances involved in the construction of a wind farm are such that the risk of significant impacts relating to ground borne vibration are very low. This is true for general

construction activities as well as piling works. Occasional momentary vibration can arise when heavy vehicles pass dwellings at very short separation distances, but this is not sufficient to constitute a risk of significant impacts. Accordingly, it is proposed that the consideration of construction vibration is scoped out of the assessment.

9.22 Although there have been no other wind farm developments identified within 10km of the development site at this stage, it is acknowledged that the cumulative baseline situation could change prior to the noise assessment being undertaken. By adopting a precautionary approach, however, it is considered necessary that cumulative effects should remain scoped in to assessment until the final cumulative baseline situation has been agreed. Consultation with The Highland Council and the use of professional judgement will then determine if the assessment should include a consideration of cumulative noise effects.

9.23 Decommissioning is likely to result in less effects than those during construction of the development. As noise associated with construction will already be assessed, it is proposed that the decommissioning of the wind farm is scoped out of the assessment.

Approach to Mitigation

9.24 Mitigation of operational noise would be achieved through the design of the project, such that the relevant ETSU-R-97 noise limits can be achieved at the surrounding properties with commercially available wind turbines.

9.25 The assessment of the temporary effects of construction noise is primarily aimed at understanding the need for dedicated management measures and, if so, the types of measures that are required. In this respect, relevant working practices, traffic routes, and proposed working hours will be considered in the assessment.

Consultation Proposals

9.26 The Highland Council Noise specialist will be approached for information to inform the EIA.

10 Archaeology and Cultural Heritage

Introduction

10.1 The 'cultural heritage' of an area comprises archaeological sites, historic buildings, historic landscapes and other historic environment features, gardens and designed landscapes, historic battlefields and other sites, features or places in the landscape that have the capacity to provide information about past human activity, or which have cultural relevance due to associations with folklore or historic events. The significance of these heritage assets (as they may be referred to collectively) may also be enhanced by their 'setting' within the wider landscape.

10.2 Historic landscape is not treated as a heritage asset for the purposes of this assessment except where a defined area of landscape has been designated for its heritage interest (including Conservation Areas and areas included in the Inventory of Gardens and Designed Landscapes). It is recognised that all landscapes have an historic dimension and this will be considered as part of the assessment of Landscape Character (covered in **Chapter 5: Landscape and Visual Amenity**).

10.3 It is important to note that, although any effects on the significance of heritage assets due to change in their setting are likely to be visual in nature, the assessment of these visual effects is distinct from the superficially similar assessment of visual change in the Landscape and Visual Assessment. The assessment of effects on setting may be informed by visualisations prepared as part of the Landscape and Visual Assessment but the conclusions reached regarding visual change in the setting of a heritage asset are distinct.

10.4 Following the approach set out in **Chapter 2**, the assessment of effects on cultural heritage will be carried out in line with relevant heritage protection legislation and the following standards and guidance:

- Highland Council (2012) Interim Supplementary Guidance: Onshore Wind Energy;
- Historic Scotland (2009) Guidance on the Scoping of Windfarm Proposals: Assessment of Impact on the Setting of Historic Environment Resources;
- Historic Scotland (2010) Managing Change in the Historic Environment Guidance Notes - Setting; and
- The Institute for Archaeologists (2009) Standard and Guidance for Archaeological Desk-Based Assessment.

Existing Conditions

10.5 The study area for the identification and assessment of potential direct physical effects will comprise the area within the application site boundary and a 1 km wide buffer beyond it. This area is currently largely covered by conifer plantations and the area was previously uncultivated moorland.

10.6 The Highland Council HER and RCAHMS both record the same three heritage assets within the proposed wind farm site. All three are records of buildings on the late 19th century 1st Edition of the Ordnance Survey County Series 6 Inch map. They comprise a farmstead, occupied at that time but now deserted, and two unroofed buildings. All three assets are of limited extent and would be readily avoided by any chosen wind farm infrastructure layout. However, this low number of on-site heritage assets is probably misleading and reflects an absence of recent systematic archaeological survey at Cnoc an Eas.

10.7 Glen Urquhart was systematically surveyed by archaeologists from RCAHMS in 1997 but Cnoc an Eas was already tree-covered by this time and therefore not accessible to the surveyors. The

mapped distribution of recorded sites on the RCAHMS PASTMAP website shows a scatter of recorded sites on the north side of Glen Urquhart to the west and east of Cnoc an Eas. Recorded sites extend up to c.350mOD and comprise a mix of later prehistoric settlement and funerary sites and post-medieval settlement. It is likely that a similar range and density of sites is present within the lower altitude southern and western parts of the proposed wind farm site.

10.8 The study area for the identification and assessment of potential effects on the settings of heritage assets will include an area up to 5 km from the proposed wind turbines, although selected sensitive assets at greater distances will also be considered. The study will be limited to designated assets which, in the present case, only include examples of Scheduled Monuments and Listed Buildings.

10.9 There are two Scheduled Monuments and eleven Listed Buildings within 5 km of the wind farm site (see **Figure 10.1**) all clustered along Glen Urquhart and Strath Glass.

10.10 The closer of the two Scheduled Monuments is Achratagan hut circle and cairns, located c.1.5 km to the east of Cnoc an Eas on open moorland. This Scheduled Monument is an example of the type of later prehistoric (probably Bronze Age) settlement that is recorded on the higher slopes above Glen Urquhart and in similar marginal locations in landscapes throughout the Highlands.

10.11 The second Scheduled Monument in the study area is an Early Bronze Age Clava-type chambered cairn (or passage grave) at Corrimony, 3 km south-west of the wind farm site. This asset has been a Property in Care, open to the public since it was excavated in the 1950s. Corrimony is one of the best preserved and most accessible monuments of its type, second only to the two passage graves at the type-site of Balnuaran of Clava.

10.12 One other Scheduled Monument is likely to merit consideration in the assessment; this is Urquhart Castle, 10 km to the east of the proposed wind farm site. Urquhart Castle is a Property in Care and, in terms of visitor numbers, one of the most popular castles in Scotland. The castle on its rocky crag above Loch Ness can be counted as one of the iconic views of medieval castles in Scotland, combining substantial stone ruins with a dramatic landscape setting.

10.13 There are eleven Listed Buildings in the 5 km study area, ten in Glen Urquhart and one in Strath Glass. The A Listed Corrimony Grange Barn in Glen Urquhart is a late seventeenth or early eighteenth century barn notable for being the finest timber cruck-framed building in Scotland. There are four examples of Category B Listed 18/19th century country houses at Glassburn, Old Corrimony, Shewglie and Kilmartin Hall. A fifth asset can be usefully added to this list of houses; this is the Category B Listed 18th century garden pavilion associated with the now demolished Lochletter House. This is a small stone building on a prominent knoll in the garden that was designed to offer views out into the surrounding landscape from the windows of the pavilion.

10.14 The other six Listed Buildings in Glen Urquhart (all Category B) include examples of bridges, a burial ground, vernacular buildings and a 19th century church.

Effects on Cultural Heritage

10.15 Potential effects on the cultural heritage resource include:

- physical disturbance of known or hitherto undiscovered assets within the application site, and
- effects on the settings of assets in the surrounding area, including cumulative effects.

10.16 The construction and decommissioning phases of the proposed development have the potential to harm heritage assets within the application site through physical damage to their fabric, but may also lead to their protection and enhancement.

10.17 During its operational phase, the wind farm may adversely affect heritage assets through changes in their settings. All of these effects will be temporary and will be reversed on decommissioning of the wind farm.

10.18 Setting effects due to a wind farm would generally be visual in nature and, in this case, it is considered that other possible factors such as noise or construction traffic movement will not be relevant to the assessment as they will not give rise to significant effects.

10.19 Cumulative effects on the settings of assets might arise from the operation of the proposed wind farm in combination with other wind farm developments. On the basis of the initial desk-based work undertaken, and the current distribution of wind farm developments (as illustrated in Figure 5.4), it is the professional judgement of the EIA team that no adverse cumulative effects on heritage assets would result. However, the cumulative baseline may change prior to the submission of a planning application and this issue will be re-assessed at that time.

Approach to Mitigation

10.20 Policy seeks to preserve heritage assets *in situ* and in an appropriate setting, so the objective of this development will be to avoid all harm to assets, if possible. Policy also recognises that some harm may be unavoidable but affords a higher level of protection to more important assets.

10.21 Where adverse effects on cultural heritage are identified, measures to prevent, reduce or, where unavoidable, offset these effects will be proposed. Measures which may be adopted include:

- modification to the design of the wind farm to prevent or reduce harmful visual change in the setting of sensitive heritage assets;
- the micro-siting of site components away from sensitive locations to prevent damage;
- the fencing off or marking out of assets in proximity to working areas to prevent accidental damage during construction;
- post-felling surveys of areas currently obscured by tree cover to detect heritage assets not previously identified;
- monitoring of construction works in areas of archaeological potential to detect currently unidentified sub-surface features; and
- survey, excavation and recoding of features directly affected by the proposed wind farm that cannot be avoided.

10.22 A working protocol would be implemented should unrecorded archaeological features be discovered during construction works and all archaeological fieldwork would be conducted in line with a written scheme of investigation agreed with the local authority archaeologist.

Consultation Proposals

10.23 The consultees below will be approached for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- Historic Scotland;
- Highland Council's Historic Environment Team; and
- Locally-based heritage groups (if relevant).

Cnoc an Eas Wind Farm

FORCE 9 ENERGY

Figure 10.1: Designated Cultural Heritage Receptors within 10km of Cnoc an Eas

- Turbine
- 5km from Outer Turbines
- 10km from Outer Turbines
- Site Boundary
- Listed Building - Category A
- Listed Building - Category B
- Scheduled Monument

Map Scale @ A3: 1:90,000

LUC

CB:JN EB:nunn_j LUCGLA FIG10-01-6042_005_r0_CulturalHeritage 22/09/2014

Source: Historic Scotland

11 Access, Traffic and Transport

Introduction

11.1 This assessment will identify the preferred route(s) for access to the site and will consider the potential effects of traffic generated during construction and operation of the proposed wind farm, including identification of possible measures to minimise any disruption to the public (trunk and local) road network.

11.2 It is not anticipated that a formal 'Transport Assessment' (TA) will be required as TAs are not generally considered necessary for temporary construction works, and the likely traffic movements associated with the operation of the wind farm are likely to be insufficient for consideration in a TA.

11.3 Following the approach set out in **Chapter 2**, the assessment of traffic and transport related effects will be carried out in line with relevant legislation and standards, as well as the following guidance:

- Scottish Executive (now Scottish Government) (2005) Transport Assessment & Implementation: A Guide;
- Scottish Executive (now Scottish Government) (2005) PAN 75: Planning for Transport;
- Institution of Highways and Transportation (1994) Guidelines for Traffic Impact Assessment;
- Institute of Environmental Assessment (now the Institute of Environmental Management and Assessment) (1993) Guidelines for the Environmental Assessment of Road Traffic.
- Highways Agency/Scottish Government (2010) The Design Manual for Roads and Bridges, Volume 11, Environmental Assessment;

Existing Conditions

11.4 The study area for the traffic and transport assessment will effectively be the public road network in the vicinity of the site which will be used during construction and operation of the wind farm. The geographical extent of this will be defined through professional judgment. The main strategic roads in the area are the A831, A833 and A82;

- The A831 runs from East − West from Drumnadrochit to Cannich, this road is assumed to be the tie in point for the site access point;
- The A833 travels North − South to the west of Drumnadrochit, connecting to the A831 and Beauly;
- The A82 is a trunk road and therefore considered the major road of the three. It runs from Inverness to Fort William and onto Glasgow along the west side of Loch Lomond connecting to the A831 at Drumnadrochit.

11.5 An access study will be undertaken to examine potential site access routes for abnormal loads and Heavy Goods Vehicles (HGVs) and to determine the location and details of potential alignment constraints. The findings of this access study will be discussed with the relevant roads authorities (Transport Scotland and Highland Council).

11.6 If available, traffic count data will be sourced from Transport Scotland and the local roads authority, as appropriate, to further inform the assessment.

Effects on Traffic and Transport

11.7 IEMA guidance advises that assessments are undertaken when there is an estimated increase of over 30% on baseline traffic flows, or the percentage of HGVs is projected to increase by over 30%. Increases of this order can represent a significant change in environmental conditions. In areas with sensitive receptors (including schools and hospitals), increases of greater than 10% of baseline total and HGV flows may be considered significant.

11.8 One sensitive receptor, Balnain Primary School, has been identified in the area (approximately 2km east of the proposed site entrance and in close proximity to the A831). Should predicted traffic flows and/or HGV movements exceed the 10% threshold described above, further detailed assessment will be undertaken as part of a Traffic Impact Assessment (TIA). Where necessary, mitigation in the form of a Traffic Management Plan (TMP) will be proposed. This might include, for example, restrictions on HGV movements at school drop-off and pick-up times.

11.9 As such, the traffic and transport chapter of the ES will consider the following:

- effects of construction traffic on existing traffic flows and the public road network (which will be quantified through comparison of existing traffic flows and vehicle composition with the forecast construction phase site traffic generation);
- cumulative effects of construction traffic upon traffic flows (the combined effect of traffic generated during the construction phase of the proposed wind farm and other relevant developments).

11.10 On the basis of the work undertaken to date, professional judgement and experience from other similar projects, it is considered likely that the following can be scoped out:

- the effect of operational and maintenance vehicles on existing traffic flows and the local road network.

Approach to Mitigation

11.11 Force 9 Energy is committed to implementing accepted good practice during construction and operation of the proposed wind farm, thereby ensuring that many potential traffic and transport related effects can be avoided or reduced.

11.12 Where significant effects are identified, measures to prevent, reduce, and where possible offset, these adverse effects will be proposed. Measures likely to be utilised include:

- instructing abnormal loads, HGVs, and site personnel as appropriate, to use only the approved access routes to the site at agreed times;
- no parking of construction plant, equipment and vehicles off-site on public roads;

Consultation Proposals

11.13 The consultees below will be approached for information to inform the EIA. These consultees may also be contacted by The Highland Council regarding the scope of the EIA:

- Transport Scotland;
- Highland Council TEC Services/Roads Department.

12 Socio-Economics

Introduction

12.1 The proposed approach for the assessment of potential social and economic effects is set out below. This will include a consideration of recreational activity within the vicinity of the site, local tourism activity, employment generation and any indirect economic effects arising from the proposed wind farm.

12.2 Following the approach set out in **Chapter 2**, the assessment of social and economic effects will be carried out in line with relevant legislation and standards, as well as the following guidance:

- PAN 73 (2005) Rural Diversification;
- Scottish Executive (now Scottish Government) (2002) Output Income and Employment Multipliers Scotland;
- The Scottish Outdoor Access Code.

Existing Conditions

12.3 The study area for the assessment will comprise the site and immediate surrounding area in relation to potential direct effects on recreation, and the wider Highland Council area in relation to potential social and economic effects and effects on tourism.

12.4 There are currently no formal recreational activities undertaken on the site. Drumnadrochit is the closest sizeable settlement to the site and is approximately 8.5km to the east. Drumnadrochit is a popular base location for exploring Loch Ness and the surrounding area.

12.5 There are a number of scattered dwellings surrounding the site most of which are located directly to the south and south-east. There are also several local businesses in the vicinity of the site, including, Bearnock Country Centre Cottages and Log cabins, Bearnock Country Centre Loch Ness Hostel, Bearnock Lodge, The Steading Bar, The Steading Country Inn and Glenurquhart House Hotel.

12.6 There is a network of core paths to the south of the site, the closest being core path IN02.04 (1.5km track from Shenval to Corrimony). This core path lies approximately 1.2km south-west of the site. Core path IN02.04 links with core paths IN02.02 (4.7 km track from Forestry Commission Car Park east of Lochletter to Shenval), IN02.03 (8.4 km track from Forestry Commission Car Park east of Lochletter to Shenval) and IN13.01 (7.1 track from Drumnadrochit to Balnain). These paths are located within Shewglie Wood, Lochletter Wood and Delshangie Wood, alongside a number of other forestry tracks. It is understood that these core paths and tracks are used for walking, running, cycling and horse riding. No Rights of Way (RoWs) have been identified within, or in the vicinity of, the site at this stage.

12.7 There are several recreational trails in the wider area. The Great Glen Way long distance trail passes by the western side of Loch Ness and is approximately 7.5km east of the site at its closest point. This trail stretches for 127km, linking the main centres of Fort William and the regional capital of Inverness. In addition, The Caledonia Way (National Cycle Network Route 78) is a long distance cycle route between Inverness and Cambeltown and passes along the east side of Loch Ness, utilizing a section of General Wade's Military Road. This cycle route corresponds with The Great Glen Way at Fort Augustus, and is 8.5km east of the site at its closest point. The South Loch Ness Trail is a relatively new trail and was officially launched in August 2011. The trail stretches for approximately 28 miles between Loch Tarff near Fort Augustus to Torbreck on the edge of Inverness via Whitebridge, Foyers, Inverfarigaig and Dores, and runs adjacent to The Caledonia Way. In addition, the 95km Great Glen Canoe Trail, which opened in 2010, follows the

Caledonian Canal from Corpach (Fort William) in the West to Clachnaharry (Inverness), by means of Loch Lochy and Loch Ness.

12.8 There are several hills surrounding to the north of the site including the rocky summits of Carn Mòr (456m AOD), Carn an t-Slamain (444m AOD), Carn na Feuchrain (453m AOD) and Creag nan Calman (437m AOD), and the summits of Carn Macsna (525m), Carn na h-Imrich (543m), Suidhe Gurmain (578m) to the south of the site. Loch Meiklie and the River Enrick are to the south of the site.

12.9 Local visitor attractions include Corrimony Chambered Cairn, Corrimony Falls and Corrimony RSPB Nature Reserve which lie to the south-west of the site. Key tourist attractions within the wider area include the Loch Ness Monster Exhibition Centre (7.8km south-east of site), and Urquhart Castle (10.5km south-east of site).

12.10 To obtain more detailed information on existing conditions, a desk based review and analysis of available information and data-sets will be undertaken to further inform the assessment including:

- The Highland-wide Local Development Plan 2012;
- Inverness Local Plan 2012;
- the Highland Council Core Paths Plan, adopted 2011;
- tourism statistics (from VisitScotland and specific tourist attractions in the area);
- census and population information (from 'scrol' Scotland's Census Results OnLine and any relevant local authority publications);
- tourist and visitor guides, leaflets and information.

Social and Economic Effects

12.11 Taking account of the findings of the work undertaken to date, whilst still adopting a precautionary approach at this preliminary stage, potential effects associated with the construction and/or operation of the proposed wind farm include:

- effects of noise, dust, and traffic movements on recreational amenity during construction;
- positive effects on the local economy through provision of employment and skills/training opportunities and associated indirect economic benefits such as spend by the workforce including accommodation requirements in the local area;
- direct effects during construction and operation on informal outdoor access including Rights of Way and known local footpaths within and near to the site;
- effects of visibility of the wind farm on recreational amenity during construction and operation;
- indirect effects on tourism in the wider study area during construction and operation.

12.12 On the basis of the professional judgement of the EIA team and experience from other similar projects, it is considered likely that the following effects can be scoped out:

- disruption of services such as electricity, gas and water during construction and operation; and
- direct effects on formal recreational activities during construction and operation.

Approach to Mitigation

12.13 Force 9 Energy is committed to implementing accepted good practice during construction and operation of the proposed wind farm, thereby ensuring that many potential adverse social and economic effects can be avoided or reduced.

12.14 Where potentially significant social and economic effects are identified, measures to prevent, reduce, and where possible offset, these adverse effects will be proposed. Measures likely to be implemented include:

- adoption of an agreed Construction Code to minimise temporary disturbance to residential properties, recreational users, and existing land uses;
- signage and/or temporary footpath diversions if required (in accordance with The Scottish Outdoor Access Code).
- Measures to seek to secure any identified benefits, such as the use of local construction workers, will also be implemented.

Consultation Proposals

12.15 The organisations below will be consulted for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- Highland Council Access Officer
- VisitScotland;
- Local Community Councils;
- Scottish Natural Heritage (SNH);
- The Scottish Rights of Way and Access Society (ScotWays);
- Local recreational and tourism groups (TBC).

13 Other Considerations

Introduction

13.1 In addition to the assessments outlined above, the ES will include:

- an assessment of the potential effects of the wind farm on aviation, defence, and telecommunication interests;
- consideration of potential effects associated with shadow flicker; and
- a carbon balance calculation.

Aviation, Defence and Telecommunications

13.2 Wind turbines produce electromagnetic radiation which can potentially cause interference to telecommunication system signals such as terrestrial fixed microwave links, terrestrial radio telemetry links and television broadcasts. Furthermore, wind turbines can affect navigation and surveillance systems (including RADAR) and other equipment and the use of aerodromes.

13.3 An assessment of civil and military aviation, defence and telecommunication issues will be undertaken by appropriate specialists based largely on consultation with the relevant authorities including the following[18] :

- Inverness Airport;
- any civil airfields which may be affected by the site;
- the Joint Radio Company (JRC);
- the BBC and Arqiva;
- the UK Office of Communications (Ofcom) (Scotland) and relevant telecommunication operators identified by Ofcom;
- British Telecom; and
- Atkins Global.

13.4 As effects relate to the location of the turbines and their design and only occur during the operational phase of the wind farm due to the movement of the turbine blades, it is proposed to scope out construction effects on aviation, defence and telecommunication.

Shadow Flicker

13.5 Under certain combinations of geographical position, time of day, and time of year, the sun may pass behind a turbine and cast a shadow over neighbouring properties. When the blades rotate, the shadow flicks on and off, which is known as 'shadow flicker'. Shadow flicker only has the potential to significantly affect receptors (i.e. residential properties) within a distance of ten times the length of the turbine rotor diameter and within a 130 degree angle either side of north. If required, a 'zone' assessment based on these parameters would be undertaken to identify any areas within the site where shadow flicker may be a potential issue and in particular, to highlight any properties which could be affected.

[18] As of 24th December 2010, the Civil Aviation Authority (CAA) no longer processes pre-planning enquiries and will therefore not be consulted as part of Scoping.

Carbon Balance

13.6 A carbon balance assessment for the proposed wind farm will be carried out using guidance produced by Aberdeen University and the Macaulay Land Use Research Institute[19] . The main aims of the calculation are: to quantify sources of carbon emissions associated with the site (i.e. from construction, operation and transportation of materials, as well as loss of peat/forestry as relevant); to quantify the carbon emissions which will be saved by constructing the wind farm; and to calculate the length of time for the project to become a 'net avoider', rather than a 'net emitter' of carbon dioxide emissions. The length of time is termed the 'payback time'.

[19] Calculating carbon savings from wind farms on Scottish peat lands - A New Approach (2008 and amendments).

14 Forestry

Introduction

14.1 This chapter sets out the proposed approach to the appraisal of forestry in relation to construction and operation of the proposed wind farm. The appraisal will identify the baseline information relating to the existing woodlands within and immediately adjacent to the proposed site. It will then identify areas of forest to be felled during the construction and operation of the development, outline the proposed management practices, harvesting operations & transportation of timber products from the forest to market. The chapter will identify the likely restocking proposals and future land management (Forest Design Plan).

14.2 The appraisal will be carried out in accordance with current legislation, guidance and industry best practice, including:

- Forestry Commission (2011): The UK Forest Standard: The Government's Approach to Sustainable Forest Management;
- Scottish Executive (2006): The Scottish Forestry Strategy;
- Forestry Commission (2011): Forest & Water Guidelines (Fifth Edition);
- Forestry Commission Scotland (2009): The Scottish Government's Policy on Control of Woodland Removal; and
- UKWAS (2012): United Kingdom Woodland Assurance Standard (Third Edition 3.1).

Existing Conditions

14.3 The proposed Cnoc an Eas development is located within Kilmartin Forest, the majority of which is planted as commercial coniferous woodland. There are also areas of semi-natural native woodland, some of which remain largely semi-natural, and some of which have been under planted with non-native species. The full baseline conditions of the site will be reviewed via a combination of desk study and field surveys, which will consider the planting year, existing species, yield class, stand structures, and any existing felling and restocking proposals.

Desk-Based Study

14.4 The desk study will gather any available information from the current long-term forest design management plans and the landowner, as well as obtaining further information regarding forest practice and past management. The landowner has crop data for the forest which will be analysed with reference to the best practice and guidance documents.

Field Surveys

14.5 Site inspection surveys will be performed to verify the baseline data and to update any changes as a result of current forestry activities. During visits to the property, the species, height, condition, yield potential and current management regimes will be considered while updating historical information.

Effects on Forestry

14.6 The potential effects on forestry, associated with the construction and operation of the proposed wind farm, include:

- The scale of felling and restocking coupes;
- Extended fallow periods;
- Conversion of commercial forest to native woodland;
- Permanent removal forestry areas and associated compensatory planting effects;
- Tree debris, arising out with standard harvesting operations, remaining on site;
- Timber transportation;
- Increased risk of wind throw;
- Ground disturbance as a result of forest operations;
- Disturbance of ground by machinery; and
- Water availability to catchment increased.

Effects Scoped Out

14.7 Indirect effects on landscape, visual amenity, ecology, ornithology, hydrology, change of land use (including removal of forestry), economic aspects, and noise associated with tree felling and timber extraction are scoped out of the forestry appraisal, and will be considered in the appropriate technical chapters. The Forestry appraisal itself will form a technical appendix to the Scheme Description chapter of the Environmental Statement.

Approach to Mitigation

14.8 Force 9 Energy is committed to implementing accepted good practice during design, construction and operation of the proposed wind farm, thereby ensuring that any potential effects on forestry can be avoided or greatly reduced.

14.9 Forests are continually undergoing change due to regulatory controlled felling and restructuring, therefore many of the plans discussed are not mitigation per se, but are an integral part of forest design and management. The restructuring of Kilmartin Forest will form an integral part of the design and operation of the proposed wind farm.

14.10 However, should there be any mitigation required after the appraisal; this will be discussed with Forestry Commission Scotland and other relevant statutory consultees prior to submission of application. Measures which may be included as mitigation include:

- Aligning felling coupes with wind firm boundaries to minimise the risk of wind throw;
- Staggered felling coupes within felling phases;
- Extending fallow periods to maximise restocking of the productive forestry resource;
- Restocking species choices to support wider Habitat Management Plans;
- Operational planning to minimise machine movements;
- Adherence to Forestry Commission's Forest & Water Guidelines;
- Compensatory planting.

Consultation Proposals

14.11 The organisations below will be approached for information to inform the EIA. The consultees may also be contacted by the Scottish Government regarding the scope of the EIA:

- Forestry Commission Scotland;
- Scottish Environment Protection Agency; and
- Scottish Natural Heritage

14.12 Forestry Commission Scotland (Highland Conservancy) will be consulted throughout the development of the technical appendix to ensure the proposals are appropriate and compliant with industry best practice and guidance policies including the Scottish Forestry Standard (2006) & the Scottish Governments Control of Woodland Removal Policy (2009).

Appendix 1

List of Consultees

The organisations below (in chapter order) will be contacted for information to inform the EIA. A number of these consultees may also be contacted by the Highland Council regarding the scope of the EIA:

- Highland Council:
  - Landscape Architect;
  - Historic Environment Team
  - Access Officers;
  - Biodiversity Officers;
  - Environmental Health Officer/Noise Specialist;
  - Conservation Officers;
  - Roads Department.
- Cairngorms National Park Authority (CNPA);
- Scottish Natural Heritage (SNH);
- The Scottish Environment Protection Agency (SEPA);
- Scottish Water;
- The Scottish Government Internal Teams (Ecology, Research and GIS Unit; the Protected Species Team and Marine Scotland);
- The Scottish Wildlife Trust;
- Scottish Badgers;
- Forestry Commission Scotland
- The Amphibian and Reptile Group (ARG) UK;
- The Association of Salmon Fishery Boards;
- Ness District Salmon Fishery Board/Ness and Beauly Fisheries Trust
- Highland Raptor Study Group
- The Royal Society for the Protection of Birds (RSPB);
- The Scottish Ornithologists' Club (SOC)
- Historic Scotland;
- Locally based heritage groups (if relevant);
- Transport Scotland;
- VisitScotland
- Local recreational and tourism groups (as appropriate)
- The Scottish Rights of Way and Access Society (ScotWays);
- The British Horse Society;
- Local recreational and tourism groups (as appropriate).
- Strathglass Community Council
- Glenurquhart Community Council
- Fort Augustus and Glen Moriston Community Council

- Kiltarlity Community Council
- Inverness West Community Council
- Dores and Essich Community Council
- Stratherrick and Foyers Community Council
- Inverness Airport
- Any civil airfields which may be affected by the site
- The Joint Radio Company (JRC)
- The BBC and Arquiva
- The UK Office of Communications (Ofcom) (Scotland) and relevant telecommunication operators identified by Ofcom
- British Telecom (BT)
- Atkins Global

Appendix 2

Proposed Outline Content of Cnoc an Eas Wind Farm Environmental Statement (ES)

PREFACE

NON TECHNICAL SUMMARY

1. INTRODUCTION

Background to the Development

Legislative Requirements for EIA

Responsibilities for the ES

Structure of the ES

2. APPROACH TO THE EIA

Introduction

The EIA Process

Scope of the ES

3. SITE SELECTION AND DESIGN STRATEGY

Introduction

Rationale for the Development

Do-nothing Scenario

Site Selection in Scotland

4. SCHEME DESCRIPTION

Introduction

Site Description

Description of the Surrounding Area

Development Description

Operational Details

5. PLANNING POLICY CONTEXT

Introduction

Planning Policy Context

Overview of Relevant Policies

6-14. TECHNICAL CHAPTERS

Landscape and Visual Amenity; Noise, Geology, Hydrology Hydrogeology and Peat; Ecology, Ornithology, Archaeology and Cultural Heritage; Access, Traffic and Transport; Socio-Economics, Other Issues.)

Introduction

Assessment Methodology

Planning Context