Scoping Report

Knockower Community Wind Farm

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1 Introduction

1.1 Overview and Purpose of the Scoping Report

1.1.1 Community Windpower Limited (CWL) have identified an area 3.7 kilometres (km) north west of Carsphairn and 10.5 km south east of Dalmellington in Dumfries and Galloway, as a potential wind farm site. The proposed development would have a typical installed generating capacity of around 48 megawatts (MW).

1.1.2 Knockower Community Wind Farm would consist of up to 16 wind turbines, each with a typical blade tip height of 145 metres (m). In addition there will be associated infrastructure, including a substation and control room building and compound, onsite access tracks, an anemometer mast, a temporary construction and storage compound, and borrow pits.

1.1.3 As the wind farm proposal has a generating capacity of less than 50 MW, the planning application will be determined by the Local Planning Authority, Dumfries and Galloway Council, under the Town and Country Planning (Scotland) Act 1997.

1.1.4 It is anticipated that such an application will require an Environmental Impact Assessment (EIA) as stated in the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended by the Environmental Impact Assessment (Scotland) Amendment Regulations 2011), to consider the proposals potential effect on the environment and to ensure that any potential significant environmental issues of relevance to the development are assessed in a systematic way. The scoping process invites consultees to comment and raise awareness of any issues, which may require consideration during the EIA process. The information compiled during the EIA will be presented within an Environmental Statement (ES) to accompany any subsequent application for planning permission.

1.1.5 Under Regulation 10 of the Environmental Impact Assessment (Scotland) Regulations 1999 (amended in 2011) CWL wish to seek a Scoping Opinion from Dumfries and Galloway Council, which states in writing their opinion as to the information to be provided in the Environmental Statement (ES).

1.1.6 Therefore, this report constitutes a formal request for a Scoping Opinion for the Knockower Community Wind Farm proposal.

1.1.7 According to Town and Country Planning (Hierarchy of Developments) (Scotland) Regulations 2009, the proposed Knockower Community Wind Farm is likely to be classed as a “Major Development” as the total capacity of the proposed development exceeds 20 MW.

1.1.8 CWL have previously consulted a wide range of consultees in order to collate environmental information relevant to the site, to determine assessment methodologies and to determine the way in which the findings of the studies are presented in the ES. This document sets out the details of the proposed development and invites further comments from consultees.

1.2 Justification for the Development

1.2.1 The Scottish Government sets out its legislative priorities in the Programme for Government. In 2012-2013 the main aim includes accelerating economy recovery, creating jobs and achieving constitutional reform and independence for Scotland (Scottish Government,

2012). A strong emphasis is put onto developing their position as a leading centre for investments in renewables.

1.2.2 Targeted investment in renewable energy will act as a key catalyst of the Scottish economy particularly as renewable energy and low carbon technologies are two important growth sectors. Scotland is blessed with abundant energy resources and as a country Scotland is committed to taking full advantage of the opportunities that exist in transforming to a low carbon economy.

1.2.3 The Scottish Government issued the *2020 Routemap for Renewable Energy in Scotland* in 2011 which expands upon the *Renewables Action Plan 2009.* The Routemap identifies the actions which need to happen in the renewables sector in order to achieve the Scottish Government target of 100% renewable electricity by 2020.

1.2.4 The Routemap refers to the significant actions that are required to make progress towards renewable energy targets and decarbonisation through the deployment of renewable energy technologies. It makes reference to the Scottish Government's commitment to achieve a headline target of 30% of total Scottish energy use coming from renewable sources by 2020. Specific targets refer to those relating to renewable electricity demand by 2020 (now set at 100%). The Routemap sets out the framework for action in the specific area of renewable energy.

1.2.5 A second annual update to the 2020 Routemap was published in December 2013 outlining progress in the renewable sector. The *2020 Renewable Routemap for Scotland – Update 2013* states that in 2012 renewable sources accounted for 40.3% of electricity consumption, an increase of 4.1% from 2011 figures. This is a significant contribution towards the interim target of 50% renewable electricity by 2015.

1.2.6 The Climate Change (Scotland) Act 2009 sets a target of reducing emissions by 80% by 2050, including emissions from international aviation and shipping. It also sets an interim target for a 42% cut in emissions by 2020 and, in addition, requires the Government to set legally binding annual cuts in emissions from 2012.

1.2.7 The Climate Change (Scotland) Act 2009 is now the most ambitious and comprehensive piece of climate change legislation in the world, setting targets that are significantly tougher than the target set out in the UK Climate Change Act.

1.2.8 The Scottish Government wants targets to be exceeded rather than merely met, and should not be viewed as a cap on what renewables can deliver.

1.2.9 Energy from renewable sources such as wind power will play a major role in reaching such targets. Onshore wind energy is currently regarded as the most viable renewable energy source for achieving these targets in this timeframe.

1.2.10 The renewable energy generation capacity in Scotland at the end of 2012 was over 5.6 GW of installed capacity of which 3.6 GW is generated from the wind. Therefore it is apparent that there is significant further potential for wind energy development within Scotland, which will in turn help to reach the renewable electricity targets for 2020.

1.2.11 The principle of renewable energy is supported in the Dumfries and Galloway Council Structure Plan (1999), through the acknowledgement that the local potential for renewable

energy developments needs to be addressed. The Stewartry Local Plan (2006) sets out the long term vision for the development of land.

1.2.12 Knockower Community Wind Farm will be designed to comply with the relevant policies in these development plan documents, relating to design and the environment.

1.3 Community Windpower Ltd

1.3.1 Community Windpower Ltd (CWL) was formed in 2001 and is an independent, UK company who works with local communities to build wind farms that can provide economic, educational and environmental benefits for whole communities and local schools.

1.3.2 CWL believes in an open and consultative approach with local communities during the development stage of the wind farm project and prior to the submission of a planning application. By developing medium scale wind farms we are able to design sites that are sympathetic to local landscapes and can provide local generation to meet local energy needs.

1.3.3 CWL have four operational wind farms; Dalry Community Wind Farm in North Ayrshire which has a generating capacity of 18 MW and was commissioned in 2006, Aikengall Community Wind Farm in East Lothian, a 48 MW scheme which became fully operational in February 2009, Millour Hill Community Wind Farm is a six turbine (18 MW) extension to the existing Dalry Community Wind Farm and became fully operational in the summer of 2012, and Calder Water Community Wind Farm in South Lanarkshire which has a generating capacity of 39 MW which became fully operational in December 2013.

1.3.4 CWL have also received planning permission for Sneddon Law Community Wind Farm in East Ayrshire, Sanquhar Community Wind Farm in Dumfries and Galloway and Aikengall II Community Wind Farm in East Lothian which increases our portfolio to 286 MW of wind energy projects.

2 Brief Description of the Proposed Development

2.1 Site Details

2.1.1 The proposed Knockower Community Wind Farm is located within the administrative boundary of Dumfries and Galloway. The site is situated approximately 3.7 kilometres (km) north west of Carsphairn and 10.5 km south east of Dalmellington (see Figures 1 and 2). An approximate grid reference for the site centre is 251312, 594935.

2.2 Project Description

2.2.1 In brief, the development would comprise of the following:

- Installation of up to 16 wind turbines;
- Construction of ancillary infrastructure including access tracks, hard standing areas, a substation/control room building and compound, underground cabling;
- A 90m metrological mast;
- Creation of a temporary construction and storage compound;
- Temporary borrow pits to extract stone, which would be re-instated post construction.

2.2.2 It should be noted that the number of turbines and their rating may change during the iterative design process and as a result of the Scoping and EIA findings.

2.3 Land Use

2.3.1 The site lies between 260 metres (m) to 528 m Above Ordnance Datum (AOD) on land which is typically classified as 'upland' landscape character. The main land uses of the site are agricultural grazing and commercial forestry.

2.3.2 The turbines would be located within three Landscape Character Types; Rugged Granite Uplands, Upper Valley (Dales) and Foothills (Dumfries and Galloway Council, 2011).

2.3.3 There are a number of international and national designations which lie out with the development site but within 10 km of the site boundary as shown in Figure 5 and detailed below:

- Loch Doon SSSI: designated for its population of Arctic Charr (immediately west of site boundary);
- Ness Glen SSSI: designated for its natural composition of upland mixed ash woodland (approximately 4.3 km north west of the site boundary);
- Craigengillan Garden and Designated Landscape: designated for it being a rare example of a complete and unfragmented estate landscape (approximately 5km north west of the site boundary);
- Merrick Kells SPA and SSSI: designated for its varied system of blanket bog and locally scarce beetles (approximately 6.5 km south west of site boundary);
- Bogton Loch SSSI: designated for its biological content (approximately 7.5 km north west of site boundary);

- Dalmellington Moss SSSI: designated for its raised bog and floodplain wetlands (approximately 8.5 km north west of site boundary);
- Benbeoch SSSI: designated for kylite, an igneous rock akin to basalt (approximately 9.5 km north of site boundary); and
- Silver Flowe Wetland / National Nature Reserve (approximately 9.8km south of the site boundary).

2.3.4 A small area of Ancient Woodland can also be found adjacent to the east of the site boundary.

2.3.5 Figure 3 illustrates an indicative layout of the turbines within the proposed development site. However, it should be noted that this is a preliminary layout based purely on engineering and safety constraints and limited environmental data.

2.3.6 The wind farm proposal will evolve through an iterative design process particularly during the Scoping, EIA and Design stages, taking in to account environmental and technical constraints identified through baseline studies and consultations. The final proposal will be described in full detail in the Environmental Statement (ES) submitted with the planning application.

2.4 Turbines

2.4.1 The model of turbine to be used will be selected following the completion of the baseline environmental studies, ongoing transport access studies and turbine availability from suppliers. It is anticipated that the turbines will have a typical tip height of 145 m.

2.4.2 The indicative capacity of each turbine is 3 MW, and the overall generating capacity is typically 48 MW.

2.4.3 The turbines will be three bladed horizontal axis machines. The finish and colour of the turbines and blades is likely to be semi matt and pale grey in colour, in line with industry standards and SNH guidance.

2.5 Turbine Foundations

2.5.1 The turbines would be constructed on foundations comprising of concrete and steel reinforcement. These typically measure 18 m by 18 m and between 2.5-3.5 m in depth.

2.5.2 The top of the foundations are back-filled up to the turbine with topsoil and seeded to encourage re-vegetation.

2.6 Crane Hardstandings

2.6.1 Each wind turbine requires an area of hardstanding to be built adjacent to the turbine which provides a stable base for the cranes that are necessary to erect the structures. The crane hardstanding areas would be retained after construction for the use of similar plant if repairs are required during the operational phase of the development.

2.7 Substation Control Room and Compound

2.7.1 An onsite substation/control room building and compound will house switchgear and metering and will connect the wind farm to the electrical network. The substation compound will be located in an appropriately discrete part of the site.

2.7.2 The typical dimensions of a substation compound for a wind farm are approximately 30 m by 30 m with a building height of around 5 m.

2.7.3 The substation and control room buildings may be a containerised type which would be temporary and more sustainable compared to a traditionally built substation. Opportunities usually exist to provide native tree or shrub screening around the substation to minimise any visual impacts.

2.8 Temporary Construction Compound

2.8.1 During the construction phase, a secure compound would be required to store construction equipment and machinery. A hardstanding of locally won stone would be required for the base of this compound, however this would typically be removed following the completion of the construction phase and the land restored to its current state.

2.8.2 The dimensions of this compound would be approximately 150 m x 50 m.

2.9 Metrological Mast

2.9.1 A permanent meteorological mast will be located on site to monitor and record wind conditions (i.e. wind speed, direction). The exact height of the mast is unknown at this moment but is likely to have a typical height of 90 metres.

2.10 Access Route and Tracks

2.10.1 The main access to the site will utilise the A77 before turning off onto the existing A713 single carriageway road. A transport assessment will be carried out as part of the Environmental Statement to determine the finalised route.

2.10.2 Onsite access tracks will be required to link the various turbines to the site access point. The final route of the tracks will be determined once the locations of the turbines are finalised and baseline conditions are known, following the required EIA work.

2.10.3 The access tracks will be designed to avoid sensitive environmental receptors and would be made of locally won stone from the onsite borrow pits. The stone would be compacted and tracks would have a typical running width of approximately 5 m.

2.11 Grid Connection Options

2.11.1 Separate on-going studies are being carried out to establish grid connection options and suitable cable routes from the site to the Scottish Power electricity network. However it is expected that all grid connection cabling works would be underground.

2.11.2 The electrical connection between the wind farm and the grid network will be subject to a separate planning application under Section 37 of the Electricity Act 1989.

2.12 Borrow Pits

2.12.1 For the construction of new onsite access tracks, locally won stone material will be required which will be extracted from onsite borrow pits. The borrow pit areas will be stripped of surface vegetation which will be stored separately for use during reinstatement. Underlying top soil and mineral sub-soil will be removed to reveal the conglomerate material. All removed soils will be stored for use during the reinstatement. The stone material will be removed from the borrow pits using excavators and then screened into different grades of particle size. The material will then be transported to the required locations on site using dumper vehicles.

3 Environmental Impact Assessment (EIA) Process

3.1 Introduction

3.1.1 If a planning application is to be submitted, then an Environmental Impact Assessment (EIA) will be required.

3.1.2 The EIA process will be conducted in accordance with the Environmental Impact Assessment (Scotland) Regulations 1999 (as amended by the Environmental Impact Assessment (Scotland) Amendment Regulations 2009). This will help to ensure that potential significant environmental effects (both positive and negative) are assessed in a systematic way.

3.1.3 The EIA will also be undertaken in line with current Government regulations, policy and guidance, including:

- The Environmental Impact Assessment (Scotland) Regulations 1999 (as amended by the Environmental Impact Assessment (Scotland) Amended Regulations 2009);
- The Town and Country Planning (Scotland) Act 1997;
- Scottish Planning Policy (SPP) (February 2010);
- Scottish Government web-based renewables guidance (replacing PAN45 and Annexe 2);
- PAN 58 Environmental Impact Assessment (1999);
- PAN 81 Community Engagement – Planning with People (2007).

3.1.4 The EIA is an iterative process and as potential effects are identified, the design of the project is adjusted where appropriate and suitable mitigation measures proposed.

3.1.5 This section of the report provides a broad overview of the EIA process and specifically how CWL will approach the EIA for the proposed Knockower Community Wind Farm. The EIA process for the proposal can be considered as having the following stages:

- Initial site selection and feasibility studies including pre-scoping;
- Scoping process;
- Baseline studies;
- Design iteration and identification of mitigation measures;
- Assessment of environmental effects and evaluation of significance;
- Production of the Environmental Statement;
- Public Consultation.

3.2 Initial site selection and feasibility studies

3.2.1 The initial site selection stage is a crucial part of wind energy development. CWL only pursue sites where wind turbine development is technically feasible. Therefore, after considering many potential sites across the United Kingdom, CWL only develop those which are considered to be both technically feasible, environmentally acceptable and which offer a high wind resource to maximise green energy production.

3.2.2 The technical requirements of a wind farm site are as follows:

- An appropriate wind resource, minimum of 7.0 metres per second;
- Close proximity to the local distribution network or the National Grid;
- Suitable ground conditions to build foundations;
- Maximum possible separation distances between the site and local residential properties (i.e. minimum distance of 750m);
- Good road and vehicular access to the site;
- Agreements with the landowner(s);
- No interference on telecommunication links and;
- No interference on MoD/CAA radars and aviation interests.

3.2.3 Figure 4 illustrates the constraints that exist in the proposed development site. Figure 6 illustrates the aviation/technical constraints that exist within and around the development site.

3.2.4 Initial studies have demonstrated that Knockower Community Wind Farm proposal meets all of these technical requirements signifying that the area is suitable for a wind energy development.

3.3 Scoping

3.3.1 This Scoping Report however starts the formal scoping exercise. It invites consultees to comment on the EIA approach, to specify issues that need to be addressed, to supply information pertinent to the site and to recommend technical assessment methodologies where appropriate. CWL would welcome suggestions regarding any further organisations or individuals that may have an interest in providing input into the EIA.

3.3.2 The intention of this scoping exercise is to gain agreement from all key parties on how the EIA should be undertaken, including the scope of issues to be addressed and the method of assessment to be used.

3.3.3 Regulation 10 of The Environmental Impact Assessment (Scotland) Regulations 1999 (as amended by the Environmental Impact Assessment (Scotland) Amendment Regulations 2009) sets out what a scoping request shall include, which are outlined below and are addressed in this scoping report:

- A plan sufficient to identify the land;
- A brief description of the nature and purpose of the development;
- Possible effect on the environment; and
- Such other information or representations as the person making the request may wish to provide or make.

3.3.4 The information compiled during the EIA will be presented within an Environmental Statement (ES) to accompany any subsequent application for planning permission.

3.4 Baseline Studies

3.4.1 The existing (baseline) conditions of the site will be established by means of:

- Desk-based assessments of existing available data and information;
- Consultations with consultees; and
- Site-specific surveys.

3.4.2 The process will identify sensitive receptors, particularly those that are the subject of statutory or local designations. Constraints will be identified and used to inform the final development of the turbine and infrastructure layout.

3.5 Design iteration and identification of mitigation measures

3.5.1 In the EIA process, mitigation can be defined as measures proposed to prevent, reduce or remedy any potentially significant adverse effects on the environment.

3.5.2 In the case of wind energy developments, most mitigation measures are embedded within the overall design strategy, rather than 'add-on' measures to ameliorate significant environmental effects.

3.5.3 An iterative design approach will be adopted through the EIA process to determine a final layout for the turbines and associated infrastructure. Baseline environmental studies and consultation responses will inform iterations to the design of the site. Where appropriate and feasible, other mitigation proposals may be considered to further reduce impacts (e.g. vegetation screening around the substation).

3.6 Assessment of Environmental Effects and Evaluation of Significance

3.6.1 The EIA Regulations require that the ES identifies likely significant environmental effects arising from the development. It is recognised in the EIA Regulations that not all environmental effects of a development are significant. However, those which are considered to be significant, may constitute a material consideration in determination of the planning application.

3.6.2 The evaluation and determination of significant effects will be carried out using specific criteria defined in the technical chapters of the ES. Published standards and guidelines will be used as the basis for the significance criteria, where available.

3.6.3 The proposed methodologies for individual environmental topics are discussed in Section 4. However, the basic approach is the same for all topics and follows four basic steps:

- The sensitivity of the receiving environmental receptor is evaluated using defined criteria. The sensitivity of a particular receptor is a product of its rarity, vulnerability, value or protection under legislation;
- The nature of the impact is established in terms of its duration, extent, frequency, likelihood of occurrence, reversibility, and compliance with recognised standards;

- The magnitude of the impact is determined. The magnitude of change is a consideration of how much the impact alters the baseline condition;
- The significance of the effect is determined by cross referencing the sensitivity of the receptor with the magnitude of change on the receptor.

3.6.4 It should be noted that environmental effects may be positive or negative, temporary or permanent and where relevant this will be noted in the ES.

3.7 Environmental Statement

3.7.1 The output of the EIA process will be an Environmental Statement (ES). This will describe the EIA process and set out the assessment and findings. It is likely that the ES would consist of the following documents:

- Volume I: Environmental Statement;
- Volume II: Figures and Photomontages;
- Planning Statement;
- Non-Technical Summary;
- Design and Access Statement;
- Pre-Application Consultation Report.

3.7.2 The content of Volume I: Environmental Statement is likely to consist of the following:

- Section 1: Introduction;
- Section 2: Detailed Project Description;
- Section 3: Site Selection & Evolution;
- Section 4: Policy and Planning;
- Section 5: Community Consultation and Benefits;
- Section 6: Landscape and Visual Impact Assessment (LVIA);
- Section 7: Ornithological Assessment;
- Section 8: Ecological Assessment;
- Section 9: Cultural Heritage Assessment;
- Section 10: Hydrology, Hydrogeology and Geology Assessment;
- Section 11: Noise Assessment;
- Section 12: Transport and Traffic Assessment;
- Section 13: Forestry;
- Section 14: Other Considerations (aviation, communications, shadow flicker, public safety).

3.7.3 The ES will be deposited at locations for public viewing, as agreed with the local authority. Digital copies will also be made available on CD and it is anticipated that the local authority will also upload this information onto their website via the online planning portal.

3.8 Technical Assessments

3.8.1 Technical assessments for a number of potential effects will be undertaken as part of the EIA process. Each of the technical assessments to be undertaken is outlined later in this report. Information gathering to support these technical assessments has already commenced.

3.9 Public Consultation

3.9.1 CWL is committed to consulting and working with the local community from an early stage and pride themselves on their open and transparent approach with local people. CWL aim to ensure that local communities are kept well informed and up to date as the proposal develops. This is done by providing information at public exhibitions in local village venues, information leaflets, providing information on the CWL website and by speaking and meeting with local people.

3.9.2 CWL will also be in regular contact with local councillors and Community Councils to provide them with information which they can relay to their communities. Suggestions from local communities and stakeholders for alternative consultation methods are always welcome, enabling CWL to improve and maintain regular consultation with the local host communities.

3.9.3 The first round of public consultation for Knockower Community Wind Farm will commence following the issue of a Scoping Opinions from Dumfries and Galloway Council. However, CWL will be in contact with local Community Councils within the next few weeks.

3.9.4 Public exhibitions will be held further down the development process once the number, size and exact locations of the wind turbines have been finalised. These exhibitions will provide CWL with an opportunity to display additional information about the scheme and to answer additional questions from local residents.

4 Planning Policy

4.1 Introduction

4.1.1 It is not the role of the ES to analyse planning policy but instead to identify all the relevant policy against which the various assessments will be addressed and evaluated.

4.1.2 A Planning Statement will accompany the planning application which will comprehensively cover each policy relevant to the proposal.

4.2 National Planning Policy

4.2.1 The EIA will consider a number of international and national policies relevant to each topic investigated as part of the EIA.

Scottish Planning Policy (SPP)

4.2.2 In 2008, the Scottish Government identified its commitment to combine all previous Scottish Planning Policy (SPP) and National Planning Policy Guidance (NPPG) series publications into one condensed SPP document in order to provide cleaner, more focused and consistent policy messages.

4.2.3 The SPP was published in February 2010, consolidating a series of topic specific policy statements into a single, more concise statement (Scottish Government, 2010).

4.2.4 The SPP is a non-statutory statement of Scottish Government policy on how nationally important land use planning matters should be addressed across the country. It sets out that the central purpose of the Scottish Government is increasing sustainable economic growth,

with regard to the principles of sustainable development, as outlined in the Planning etc. (Scotland) Act 2006.

4.2.5 The SPP highlights that the planning system is essential to achieving the Scottish Government's central purposes and should proactively support development that contributes to this. It acknowledges the contribution that renewable energy can make to ensuring Scotland has a secure and diverse energy supply, and supporting economic growth.

4.2.6 The need to tackle climate change is recognised as a principle challenge of sustainable economic growth. The SPP recognises that decisions made through the planning system should contribute to the reduction of greenhouse gas emissions, in line with the commitment to reduce carbon emissions by 42% by 2020 and 80% by 2050, contribute to reducing consumption and to the development of renewable energy generation opportunities.

4.2.7 The SPP contains brief statements of policy on a range of subjects. With regards to renewable energy, the SPP reiterates the Government's commitment to increasing the amount of electricity generated from renewable sources as a vital part of the response to climate change and recognises that onshore wind is likely to make the most substantial contribution toward meeting renewable energy targets.

4.2.8 It sets out that planning authorities should "*support the development of a diverse range of renewable technologies...*" and that their development plans should support development associated with the generation of energy and heat from renewable sources.

4.2.9 Development plans should provide a clear indication of areas with potential for wind farm development in particular and set out the criteria that will be considered in reaching decisions on planning applications. According to the SPP "*Planning authorities should support development of wind farms in locations where the technology can operate efficiently and environmental and cumulative impacts can be satisfactorily addressed.*"

Draft SPP

4.2.10 A review of the SPP was announced in September 2012 and a draft replacement SPP was released by the Scottish Government for consultation in April 2013, running for a period of 12 weeks (Scottish Government, 2013a).

4.2.11 Consultation responses on the draft SPP have been received and collated. Following any subsequent amendments, the proposed SPP will be submitted to Scottish Parliament.

4.2.12 The draft SPP explores material considerations more than the existing SPP, including more detail on community benefits and the distinction between this as a voluntary contribution from the developer and material considerations, such as local employment created and the improvement to public access.

4.2.13 The SPP is being reviewed at the same time as the National Planning Framework (NPF), which will provide an improved, up-to-date and robust national basis for enabling development. The reviews of the NPF and SPP are anticipated to be completed together in June 2014 (Scottish Government, 2013a).

National Planning Framework (NPF)

4.9.6 The National Planning Framework (NPF) provides a statutory framework for the long-term spatial development of Scotland as a whole. The first NPF was published in April 2004, setting out a strategy for Scotland's development to 2025, providing a national context for development plans and planning decisions, to inform wider programmes of government, public agencies and local authorities.

4.9.7 The framework confirmed the importance of renewable energy to Scotland's energy mix and highlighted the key improvements to the electricity transmission system that were needed to facilitate development. The Planning etc. (Scotland) Act 2006 amended the 1997 Act to put the Framework on a statutory footing.

4.9.8 The second National Planning Framework (NPF2), which guides Scotland's development to 2030, was published in June 2009, setting out the Government's development priorities to support their central purpose of sustainable economic growth (Scottish Government, 2009).

4.9.9 NPF2 therefore provides a strategic spatial policy context for decisions and is a material consideration in the determination of planning applications.

4.9.10 In January 2014, the Scottish Government took a further step forward in the preparation of National Planning Framework 3 (NPF3) and is subject to Parliamentary scrutiny for a 60 day period until 24th March 2014 (Scottish Government, 2013b). The Proposed NPF3 is the spatial interpretation of the Government Economic Strategy, outlining the ambition for Scotland to become a successful, sustainable, low carbon, natural, resilient and connected place.

4.3 Development Plan Policy

4.3.1 Decisions on planning applications should be made in accordance with the Development Plan unless other material considerations indicate otherwise as stated in Section 25 of the Town and Country Planning (Scotland) Act 1997 (as amended).

4.3.2 The Development Plan for this proposed development comprises of the Dumfries and Galloway Council Structure Plan (1999) and the Stewartry Local Plan (2006).

4.3.3 This development will also consider Dumfries and Galloway Council's Proposed Local Development Plan (LDP) which was published on 28th January 2013 and was open to representations until 11th March 2013. Once the LDP has been adopted (expected to be by Autumn 2014) it will replace both the Dumfries and Galloway Council Structure Plan and the Stewartry Local Plan.

4.3.4 This development will also take into consideration the Dumfries and Galloway Interim Planning Policy: Wind Energy Development and associated document Dumfries and Galloway Wind Farm Landscape Capacity Study.

4.4 Dumfries and Galloway Council Structure Plan (1999)

4.4.1 The Dumfries and Galloway Council Structure Plan (1999) incorporates changes made through the Dumfries and Galloway Council Draft Structure Plan, published on 19th May 1997. This Plan supersedes the Structure Plan approved in 1984.

4.4.2 The purpose of the Structure Plan is to indicate the general scale and location of future development in the Dumfries and Galloway Council area. This is achieved by interpreting national policies set out by the Scottish Government in National Planning Policy Guidelines and applying them at the local level.

4.4.3 The Structure Plan comprises seven main chapters:

- Introduction;
- The Strategy;
- Guiding Development;
- Caring for the Environment;
- Servicing Development;
- Servicing the Community; and
- Implementation.

4.4.4 Within these chapters, the strategic framework for managing development and land use change in the Dumfries Council area for the next 10 - 15 years is set out. However the main objectives included in the Structure Plan will only be achieved if its strategy and policies are implemented effectively in the years to come.

4.4.5 The Structure Plan provides the broad framework for the Local Plan, which contains more detailed and site specific policies. The Dumfries and Galloway Council Structure Plan therefore provides the foundations for all decisions regarding future development in Dumfries and Galloway.

4.4.6 The Structure Plan acknowledges that the profile of energy efficiency is increasing nationally, and the local potential for renewable energy requires to be addressed. The Plan encourages energy generation from renewable sources where appropriate through policies S21: Renewable Energy and S22: Wind Farm and Wind Turbine Developments.

4.4.7 CWL will further analyse these frameworks in relation to the proposed Knockower Community Wind farm as the project progresses.

4.5 The Stewartry Local Plan (2006).

4.5.1 The Stewartry Local Plan (2006) provides guidance on the location of development across the area.

4.5.2 CWL has undertaken a review of the Stewartry Local Plan (2006) and a list of the policies relevant to the proposed Knockower Community Wind Farm is presented below:

- General Policy 1 - Development Principle;
- General Policy 2 - Development Considerations;
- General Policy 7 – Siting and Design;
- General Policy 8 – Overdevelopment of sites;
- General Policy 12 – Potentially polluting development;
- General Policy 24 – Farm diversification;
- General Policy 37 – Public Rights of Way;
- General Policy 39 – Maintenance of Rights of Way and Access Routes;
- General Policy 41 – National Scenic Areas;

- General Policy 42 – Regional Scenic Areas;
- General Policy 43 – Areas of Local Environmental Importance;
- General Policy 44 – Nature Conservation Sites of International Importance;
- General Policy 45 – Nature Conservation Sites of National Importance;
- General Policy 46 – Nature Conservation Sites of Local Importance;
- General Policy 50 – Conservation Areas;
- General Policy 51 – Listed Buildings;
- General Policy 52 – Tree Preservation Orders;
- General Policy 53 – Community Environmental Improvement;
- General Policy 53a – Historic Gardens and Designed Landscapes;
- General Policy 54 – Known Archaeological Sites – Including Scheduled Monuments;
- General Policy 55 – Archaeological Sensitive Areas;
- General Policy 56 – Protecting the Quality of Groundwater;
- General Policy 58 – Flood Risk and Development;
- General Policy 65 – Traffic Management and Road Safety;
- General Policy 66 – Local Road Network;
- General Policy 71 – Road Design.

4.6 The Dumfries and Galloway Council proposed Local Development Plan (2013)

4.6.1 The Dumfries and Galloway Council proposed Local Development Plan (LDP) covers all of Dumfries and Galloway and guides future development and regeneration. The LDP was published on the 28th January 2013 for six weeks consultation during which representations were made. The closing date for representations was 11th March 2013. Representations are being considered and an amended draft Local Development Plan has not been issued.

4.6.2 Once the proposed LDP has been approved and adopted it will supersede the two plans mentioned above as well as the Annandale and Eskdale Local Plan (2006); the Wigtown Local Plan (2006), and the Nithsdale Local Plan (2006). It is also anticipated to be kept under review and updated and replaced every five years.

4.6.3 The main approach of this proposed LDP is that all developments should be of a sustainable nature, including the reduction of carbon and other greenhouse gas emissions. The LDP also contained specific policies on renewable energy and wind energy.

4.7 Dumfries and Galloway Interim Planning Policy: Wind Energy Development (2012)

4.7.1 This document identifies a number of areas which could be suitable for wind turbines over 50 metres in height subject to a number of considerations which are outlined in the document and which the proposed Knockower Community Wind Farm will be assessed against.

4.8 Dumfries and Galloway Wind Farm Landscape Capacity Study (2012)

4.8.1 The Dumfries and Galloway Interim Planning Policy is supported by the Dumfries and Galloway Landscape Capacity Study, which aims to identify landscape and visual sensitivities relative to the consideration and determination of proposals for wind farm developments.

5 Landscape and Visual Assessment

5.1 Introduction

5.1.1 As part of the EIA, a Landscape and Visual Impact Assessment (LVIA) will be prepared and undertaken by landscape architects who are chartered members of the Landscape Institute and have extensive experience of wind energy projects.

5.1.2 This section outlines the likely range of effects of the proposed wind farm on the landscape and visual resource and the proposed methodology for the identification, assessment and reporting of effects.

5.2 Overview of Approach and Methodology

5.2.1 It is proposed that the main objectives of the LVIA will be as follows:

- To identify, evaluate and describe the current landscape character of the site and its surroundings and also any notable individual or groups of landscape features within the site;
- To determine the sensitivity of the landscape to the type of development proposed, any values associated with it and its capacity to accommodate wind turbines;
- To identify potential visual receptors (i.e. people that would be able to see the development) and evaluate their sensitivity to the type of changes proposed;
- To identify and describe any impacts of the development in so far as they affect the landscape and/or views of it and evaluate the magnitude of change due to these impacts;
- To identify and describe mitigation measures that have been adopted to avoid, reduce and compensate for landscape and visual effects;
- To identify and assess any cumulative landscape and visual effects;
- To evaluate the level of residual landscape and visual effects; and
- To make a professional judgement about which effects, if any, are significant.

Published Guidance

5.2.2 The LVIA will be undertaken in accordance with best practice, as outlined in published guidance:

- The Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (2013) Landscape Institute and the Institute for Environmental Management and Assessment;
- Guidelines for Landscape Character Assessment, (2002) Countryside Agency and Scottish Natural Heritage (SNH);
- The Guidelines for Environmental Impact Assessment (2004) Institute for Environmental Management and Assessment.

5.2.3 Consideration will also been given to the following documents:

- Siting and Designing Wind farms in the Landscape (2009) Scottish Natural Heritage (SNH);

- Assessing the Cumulative Impact of Onshore Wind Energy Developments, (2012) Scottish Natural Heritage (SNH);
- Visual Representation of Wind farms – Good Practice Guidance, (March 2006), SNH commissioned report no. FO3 AA 308/2;
- Landscape Character Assessment Guidance for England and Scotland: Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity, (2002) The Countryside Agency and Scottish Natural Heritage;
- LI Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment, (2011) Landscape Institute;
- Dumfries and Galloway Wind Farm Landscape Capacity Study (2012).

5.2.4 It is noted that Visual Representation of Wind Farms – Good Practice Guidance is under review by SNH. If a revised version of the guidance is published in advance of the application being submitted, the LVIA will take account of this new guidance.

Distinction Between Landscape and Visual Impacts

5.2.5 In accordance with published guidance, landscape and visual impacts will be assessed separately, although the procedure for assessing each of these is closely linked. A clear distinction will be drawn between landscape and visual impacts, as described below:

- Landscape impacts relate to the effects of the proposals on the physical and other characteristics of the landscape and its resulting character and quality;
- Visual impacts relate to the effects on views experienced by visual receptors (e.g. residents, footpath users, tourists etc) and on the visual amenity experienced by those people.

Types of Impacts Considered in the LVIA

5.2.6 The LVIA will assess both the long term effects relating to the operational lifetime of the wind farm and also the short-term effects associated with its construction. Where appropriate, the LVIA will also consider any residual effects that will remain, once the wind farm has been decommissioned and removed.

5.2.7 The LVIA will not only assess the impacts associated with the turbines, but also any related impacts resulting from the anemometer mast/s, control building, underground cabling, site tracks and access roads.

5.2.8 Consideration will be given to seasonal variations in the visibility of the wind farm.

5.2.9 The LVIA will also assess cumulative effects caused by the development of the site in conjunction with other sites which are either operational, under construction, consented or the subject of a full planning application. Best practice guidelines (i.e. Assessing the Cumulative Impact of Onshore Wind Energy Developments, Scottish Natural Heritage, 2012) identifies two principle types of cumulative visual impact:

- Combined visibility – where the observer is able to see two or more developments from one viewpoint; and
- Sequential visibility – where two or more sites are not visible at one location, but would be seen as the observer moves along a linear route, for example, a road or public right of way.

5.2.10 The guidelines state that 'combined visibility' may either be 'in combination' (where two or more sites are visible from a fixed viewpoint in the same arc of view) or 'in succession' (where two or more sites are visible from a fixed viewpoint, but the observer is required to turn to see the different sites). Each of the above types of cumulative effect will be considered in the LVIA.

Study Area for the LVIA

5.2.11 It is proposed that the primary study area for the LVIA will extend up to a maximum 35 km offset radius from the outer turbines of the proposed development.

5.2.12 In terms of cumulative effects, it is proposed that the cumulative LVIA will focus on other wind farms which are either operational, under construction or consented and which have the potential to give rise to significant cumulative effects when considered in combination with the proposed Knockower Community Wind Farm. Rather than simply considering every wind farm within a set distance of the Knockower Wind Farm, it is proposed to focus the assessment on those sites which genuinely have the potential to give rise to significant cumulative effects.

Landscape Assessment Methodology

5.2.13 A baseline landscape assessment will be carried out to determine the current features and character of the landscape within and surrounding the site. The baseline landscape assessment will involve firstly a review of desk material including:

- Ordnance Survey maps at 1:250,000; 1:50,000; 1:25,000 and 1:10,000 scales;
- Aerial photographs of the site and surrounding area;
- Topography;
- Current & historical land use;
- Geology and soil maps;
- Inventory Gardens and Designed Landscapes;
- Relevant planning policy; and
- National and regional scale landscape character assessments.

5.2.14 The baseline assessment will identify the existing landscape features on the site, and in the immediate vicinity, and how these elements combine to give the area a sense of landscape character. The sensitivity and values associated with the landscape will be established.

5.2.15 Plans, sections and construction details of the proposed scheme will be used to determine the impacts of the scheme on landscape features and character.

5.2.16 The LVIA will firstly assess how the proposed development would impact directly on any landscape features and resources (e.g. removal of trees). The LVIA will then consider impacts on landscape character with reference to landscape character types/areas identified in relevant character assessments.

5.2.17 The level of effect on landscape features and character will be determined by considering in tandem the sensitivity and value of the feature or landscape character with the magnitude of impact.

Visual Assessment Methodology

5.2.18 Potential visual receptors of the scheme will be identified through interpretation of digitally generated Zones of Theoretical Visibility (ZTVs) and site work. A preliminary ZTV to blade tip showing locations where the proposed Knockower Community Wind Farm would be visible is illustrated in Figure 7.

5.2.19 The assessment of visual effects will be undertaken using viewpoint analysis as the starting point for the assessment as recommended by best practice guidelines (Visual Representation of Wind Farms – Good Practice Guidance, SNH commissioned report FO3 AA 308/2). It is acknowledged however that viewpoints are simply 'snap shots' of the view from a small number of the potential locations where the proposed wind farm would be visible. The visual assessment will therefore provide a broader discussion of visual effects on a range of visual receptors throughout the study area whilst also considering the effects on the views represented by the selected viewpoints.

5.2.20 Based on a combination of ZTV analysis and site work, we have developed a list of 11 suggested viewpoints which we consider would be appropriate for the assessment. The viewpoints will be subject to micro siting in the field in order to best illustrate the view. These are set out in Table 1 below and are illustrated in Figure 8.

5.2.21 The list of viewpoints has been selected to represent a range of views and viewer types as advised in Table 7 of Visual Representation of Wind farms – Good Practice Guidance, SNH commissioned report FO3 AA 308/2. The viewpoints cover a variety of different landscape character types and different visual receptor groups. The viewpoints are also located at a range of distances and elevations from the development to illustrate the varying magnitude of visual impacts with distance from the site.

5.2.22 CWL seek to agree with SNH, and Dumfries and Galloway Council, their approval on the list of suggested viewpoints.

Table 1 - Selection of Viewpoints for LVIA

ID	Proposed Viewpoint	Easting	Northing	Approximate Distance to site (km)
1	Loch Doon Castle	248400	595000	1.2 km
2	Loch Doon Caravan and Camping Club Site	247535	600623	3.4 km
3	Loch Doon campsite	248867	598580	1.3 km
4	Layby along A713 North of site	251707	599846	1.1 km
5	Brockloch Tower	254279	595736	1 km
6	Peak of Corserine Hill	249787	587067	6.8 km
7	Peak of Merrick Hill	242778	585495	11.5 km
8	Carsphairn	255955	593350	3.3 km
9	Southern Uplands Way – Peak of Culmark Hill	263420	589530	12.4 km
10	Layby along A713 near Waterside	244573	608076	10.5 km
11	Balmaclellan	265519	579150	19.6 km

5.2.23 For each of the viewpoints, a wireline model will be generated to help identify the scale, arrangement and visibility of the proposed turbines. The images will be reviewed on site to assess how natural and built screening would affect visibility of the site. For viewpoints located around Knockower but within 10 - 15 km, the wireframe models will then be developed further into a photomontage to help illustrate the predicted impact of the development.

5.2.24 A selection of cumulative wireframes will also be produced which will illustrate relevant cumulative wind farm sites that are operational, under construction or consented. 360 degree cumulative wireframes will be provided for each of the viewpoints.

5.2.25 Photography for each of the viewpoints will be taken in accordance with the published SNH guidance contained in Visual Representation of Wind farms – Good Practice Guidance. Visualisations will be presented in accordance with the standards set out in the same document.

5.2.26 Each of the representative viewpoints will be visited to evaluate the sensitivity of views. In addition, the entire extent of the study area will be extensively visited to consider visibility of the development as receptors move through the landscape.

5.2.27 The viewpoints will be used as the basis for determining the effects on visual receptors within the entire study area. The sensitivity of different receptor groups will be set out in the LVIA methodology.

5.2.28 The level of effect experienced by different visual receptor groups will be determined by considering in tandem the sensitivity and view with the magnitude of impact.

Other Wind farms Sites for Inclusion in the Cumulative Landscape and Visual Impact Assessment

5.2.29 Figure 9 illustrates other wind farm developments within 35 km of the proposed Knockower development site and they are also listed in Table 2. It is proposed that these schemes will be considered in the cumulative impact assessment subject to changes between now and the submission of the application.

5.2.30 It is also proposed that for single turbines, only those which are 50m high or taller are included in the LVIA.

Table 2 - List of other known wind farms within 35 km of Knockower

Site	Blade tip height of Turbines (metres)	Number of Turbines
Installed		
Wether Hill	91	14
Windy Standard	100	36
Hare Hill	63.5	20
Hadyard Hill	110	52
Mark Hill	110	28
Arecleoch	135	60
Approved		
Sanquhar	130	12
Windy Standard Extension	100	30

Whiteside Hill	121.2	13
Blackcraig	110	23
Tralorg	100	8
Kilgallioch	146.5	96
Application		
Spango	145	14
South Kyle	149.5	50
Margree	125	25
Ulzieside	125	12
Sandy Knowe	125	30
Hare Hill Extension 2	96	39
Afton	120	27
Kype Muir	125 & 132	26
Ashmark Hill	116	7
High Cumnock	132	8
Garleffan	135	9
Burnhead	100	8
Dersalloch	115 & 125	23
Sclenteuch/Keirs Hill	149	17
Glenmount	130	19
Assel Valley	110	11
Breaker Hill	86.5	9
Corwar	126	8
Longburn	135	25
Twentyshilling Hill	125	9
Altercannoch	125	10
Penbreck	125	9
Mochrum Fell	126.5	11
Collieston Hill	141.4	18
Lethans	132 - 140	29
Linfairn	126.5	25

5.2.31 Based on analysis of the preliminary ZTV, it is apparent that the greatest potential for significant landscape and visual effects will arise along the A713 corridor between Dalmellington and Carsphairn. Other sites which would also give rise to notable landscape and visual effects will also form the principle focus of the cumulative assessment.

Significance Criteria

5.2.32 The purpose of an LVIA when produced in the context of an EIA is to identify any significant effects on landscape and visual amenity arising from the proposed development. In the Knockower LVIA, the level of effect on any given landscape or visual receptor will firstly be assessed and then a professional judgement provided as to whether the effect is significant or not.

5.2.33 Neither EC Directive 2011/12/EU nor the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 define a threshold at which an effect may be determined to be significant. In certain other environmental disciplines there are regulatory thresholds or quantative standards which help to determine the threshold of what constitutes a significant effect. However in an LVIA, any judgement about what constitutes a significant effect is

ostensibly a subjective opinion expressed by a competent and appropriately qualified professional assessor and based on professional judgement.

5.2.34 The LVIA chapter of the ES will set out the assessment criteria in detail to ensure that all judgements made in the assessment are transparent and justified.

6 Ecology and Ornithology

6.1 Guidance

6.1.1 As part of the EIA, qualified ecologists will undertake an Ecological Impact Assessment (EcIA). All ecology personnel working on the project will be members of the Institute of Ecology and Environmental Management (IEEM) and have experience of similar wind energy projects. The ecology assessment will be undertaken in accordance with best practice outlined in but not limited to the following published guidance:

- Guidelines for Ecological Impact Assessment in the United Kingdom (2006), Institute of Ecology and Environmental Management;
- Guidelines for baseline Ecological Assessment (1995), Institute of Environmental Assessment;
- Extended Phase 1 Habitat Survey: a Technique for Environmental Audit (2010), Joint Nature Conservation Committee;
- Assessing Significance of Impacts from Onshore Wind farms on Birds Outwith Designated Areas (2006), Scottish Natural Heritage;
- Bird survey methods for use in assessing the impacts of onshore wind farms on bird communities (2005), Scottish Natural Heritage;
- Wind farms & Birds: Calculating the theoretical collision risk assuming no avoidance action (2000), Scottish Natural Heritage.

6.1.2 Scottish Natural Heritage (SNH) has produced guidance on the siting of wind farm developments in Policy Statement 02/02 – Statement on Strategic Locational Guidance for Onshore Wind Farms in Respect of the Natural Heritage (June 2002, updated March 2009). Associated maps within this document (Map 5: Zone of Natural Heritage Sensitivity) illustrates that Knockower is located within Zone 2 'Moderate Sensitivity'.

6.2 Ecology Methodology

Initial Consultation

6.2.1 Online and public data sources (such as GIS layers) have been consulted to assess the sites ecological importance. The site has been identified to be of low sensitivity for bird species.

6.2.2 It is anticipated that there will be badgers in the area. Therefore, badger surveys will be carried out during the ecology surveys that are undertaken as part of the EIA for the proposed development.

6.2.3 Correspondence and consultation with RSPB and SNH will be undertaken throughout the design and development of the scheme along with other consultees in order to keep consultees fully informed of the progress and findings of all assessment work.

6.3 Habitat Survey Methodology

6.3.1 A desk-based assessment was undertaken to gather relevant information about the Knockower site within a 30 km search area. The following information was obtained:

- Information on local statutory designations such as SSSIs; and
- Information from the Local Biodiversity Action Plan.

6.3.2 An initial Phase 1 Habitat Survey will be carried out, augmented by detailed target notes of any features of ecological importance. The EcIA will also consider existing information relating to the ecological designations and protected species that may be found in the area at any time during the year, or during specific seasons.

6.3.3 An Extended Phase 1 Habitat Survey in accordance with the Joint Nature Conservation Committee (JNCC) methodology (2005) will also be conducted and will include searches for scarce or rare plants, assisted by the use of aerial photography. Following the results of the Phase 1 survey the need for additional surveys for protected or otherwise notable species will be evaluated and any additional surveys will be undertaken during appropriate times of the year using standard methodologies acceptable to SNH.

6.3.4 A National Vegetation Classification Survey (NVC) will also be carried out along the route of all access tracks, turbine bases and the locations of all infrastructure, incorporating an assessment of 'Groundwater Dependant Terrestrial Ecosystems'.

6.3.5 The results of these surveys will be used to inform a constraints plan. The principle mitigation measure adopted will be the use of buffer zones around sensitive areas of habitat, implementation of sensitive construction techniques and habitat management/restoration where appropriate. Significant impacts from the scheme will be identified using published IEEM Guidelines.

6.4 Protected Mammal Survey Methodology

6.4.1 From preliminary desk based assessments it is considered necessary to identify evidence of the following species during the field surveys:

- Badger survey within the site and its 50 m buffer;
- Otter and Water Vole;
- Bats;
- Red Squirrel;
- Other mammals.

6.5 Ornithology Survey Methodology

6.5.1 An initial assessment has been undertaken by Starling Learning to assess the bird and mammal usage of the site. This included:

- A desk top study, backed up by local knowledge, to predict what species may be present within the vicinity of the site.

6.5.2 Using the information obtained from the pre-scoping assessment, suitable methodologies would be implemented which include the following:

- Vantage Point Survey;
- Wader Survey using Brown and Shepherd methodology;
- Breeding Raptor Survey;
- Monthly Walkovers;
- Common Bird Census of the incoming access road on to the site;
- Point counts to record passerines in the plantations;
- Black Grouse survey; and
- Nocturnal surveys for owls, possibly golden plover and possibly nightjar.

6.5.3 Data from these surveys will be used to inform a constraints plan which will be used in the design and layout of the development. The objective of this is to build-in mitigation of ornithological impacts into the layout of the wind farm as it evolves. Additional mitigation for birds may include measures such as habitat management. Residual impacts will be predicted and where possible quantified using information from a review of the scientific literature and collision risk modelling.

6.5.4 This information will allow an accurate and standardised assessment of the impacts of the development on ornithological interests.

6.5.5 All survey methods will be agreed with the latest SNH guidance to quantify the use of the area by wild birds and enable a proper assessment of likely impact.

Existing Ecological Conditions

6.5.6 The proposed development site is not within any statutory or non-statutory designations for nature conservation.

6.5.7 Designated sites for nature conservation interest within 10km of the development site are stated on page 4 of this scoping report:

6.5.8 It may be necessary to provide a Confidential Annex of Environmentally Sensitive Information, detailing nest locations or other sensitive information related to protected species.

6.5.9 The following species are known to be present within the 10km squares (NS40, NS50, NX49, and NX59):

- Otter *Lutra lutra;*
- Badger *Meles meles;*
- Red squirrel *Sciurus vulgaris*;
- Common pipistrelle *Pipistrellus pipistrellus*;
- Soprano pipistrelle *Pipistrellus pygmaeus;*
- Natterer's bat *Myotis nattereri.*

Reptiles/Amphibians

6.5.10 If required, a baseline survey of the species and number of reptiles and amphibians present may be undertaken, with particular focus on specially protected and vulnerable species, and those potentially affected by the development.

Fish

6.5.11 There are various water bodies draining the site including the Lamloch Burn, the Green Burn, Polmeadow Burn, Polcorroch Burn, Polrobin Burn and the Garryhorn Burn. The SEPA salmonid fisheries map indicates that Carsphairn Lane is a Salmonid River. The site is also adjacent to the Loch Doon Reservoir. The NBN Gateway indicates that the following are present within the 10km squares:

- Brown Trout *Salmo trutta;*
- Atlantic Salmon *Salmo salar;*
- Brook Lamprey *Lampetra planeri;*
- Arctic Charr *Salvelinus alpines;*
- Freshwater Pearl Mussels *Margaritifera Margaritifera.*

6.5.12 The NBN Gateway indicates presence within the 10km squares and consequently fisheries surveys are anticipated to be required.

7 Noise

7.1 Guidance

7.1.1 As part of the Environmental Impact Assessment, an assessment of noise impacts will be undertaken including a survey of the ambient noise in the vicinity of the wind farm development at Knockower. The results will be assessed against guidelines available for wind energy developments, including:

- Planning Advice Note 1/2011 (web-based planning guidance);
- PAN 56: Planning and Noise, 1999 (superseded guidance);
- PAN 45: Renewable Energy Technologies, 2002 (superseded guidance);
- ETSU-R-97 The Assessment and Rating of Noise from Wind farms and the latest Onshore wind energy planning conditions guidance note (Renewables Advisory Board and BERR); and
- A Good Practice Guide to the application of ETSU-R-97 for the assessment and rating of wind turbine noise (Institute of Acoustics, May 2013) and such supplementary guidance notes as may be available at the date of the assessment.

7.2 Assessment Methodology

7.2.1 The assessment of noise impacts will be undertaken by a qualified acoustician. The assessment will include the following:

- Identification of nearest noise sensitive receptors;
- Survey of background noise levels at each receptor, in parallel with wind speed measurement;
- Agreement of noise limits for each property with the Environmental Health Department at the local authority;
- Prediction of noise immission levels at each receptor;
- Comparison of predicted levels with agreed noise limits; and
- Identification of mitigation measures where necessary.

7.2.2 All baseline noise measurements will be correlated with simultaneous wind speed measurements averaged over ten-minute periods at the proposed wind farm site. This will enable a comparison to be made between actual operating noise levels from the turbines and the noise levels that would otherwise be experienced at dwellings.

7.2.3 If it is predicted that the noise from the wind farm may potentially exceed agreed noise criteria at sensitive receptors during the construction, operation or decommissioning phases then a range of mitigation measures will be considered and evaluated.

7.2.4 Potential mitigation for construction and decommissioning periods include the limitation of construction hours, modification of construction techniques, etc. Measures to mitigate the impact of operational noise include the modification of the layout design, modification of the turbine type, and the use of noise reduction technology by turbine software control.

8 Cultural Heritage

8.1 Guidance

8.1.1 As part of the EIA, the cultural heritage resource located in and around the area of the proposed Knockower Community Wind Farm will be evaluated.

8.1.2 The archaeological assessment will be conducted in accordance with, and taking account of the following legislation, policies, standards and guidance (amongst others):

- Scottish Historic Environment Policy: Scotland's Historic Environment (2011) Historic Scotland;
- Managing Change in the Historic Environment Guidance Notes (2010) Historic Scotland;
- Managing Change in the Historic Environment (2010) Historic Scotland;
- Scottish Planning Policy (2010), The Scottish Government;
- Standard and Guidance for Archaeological Desk-Based Assessment (2009), The Institute for Field Archaeologists;
- Code of Conduct (2010),The Institute for Archaeologists;
- Dumfries and Galloway Council Structure Plan (1999);
- The Stewartry Local Plan (2006).

8.2 Preliminary Baseline data

8.2.1 An initial review of archaeology data from the Royal Commission of Ancient & Historic Monuments in Scotland (RCAHMS) indicates that there is archaeological evidence within the vicinity of the development site.

8.2.2 No protected sites (i.e. Scheduled Monuments, category A Listed Buildings or Gardens or Designated Landscapes) have been identified within the proposed development site; however a number of protected sites are located within the vicinity of the search area (5km) and they will be considered in terms of the potential impact on their setting. These protected sites are:

Scheduled Monuments

- Woodhead lead mines and smelter, Carsphairn (Index No. 5184) located approximately 500 m south east of the site boundary;
- Loch Doon Castle, original site & remains of, 570m NE of Craigmalloch (Index No. 8619) located approximately 1 km south west of the site boundary; and
- Donald's Isle, Loch Doon, settlement 750m SSW of Lamdoughty Farm (Index No. 8616) located 500 m west of the site boundary.

Category A Listed Buildings

- Loch Doon Castle (HB No. 18795)) located approximately 1 km south west of the site boundary; and
- Craigengillan Stable Block (HB No. 18794) located approximately 4.9 km north west of the site boundary.

Garden and Designated Landscapes

- Craigengillan Garden and Designated Landscape located approximately 4.5 km north west of the site boundary.

8.2.3 The proposal will contain an appropriate assessment of the development in relation to the sites and their settings.

8.3 Assessment Methodology

8.3.1 For the purposes of this assessment, Cultural Heritage interests will be deemed to include both above ground (the built heritage) and below ground remains. The assessment will consider both the potential direct and indirect effects upon the following Cultural Heritage interests:

- Archaeology - above and below ground, designated or not. Consideration will be given to the potential for currently unknown (buried) archaeological remains to exist within the site;
- Listed Buildings, Conservation Areas, Inventory Gardens and Designated Landscapes, Inventory Battlefields, and hedgerows.

8.3.2 The potential for direct effects from construction, operation and decommissioning will be assessed, and appropriate mitigation recommended. The aim would be to avoid any direct impacts through the early identification of archaeological interests on the site and iterations to the site layout.

8.3.3 Any indirect effects are likely to consist of changes to the setting of historic features and so the identification of such features will be made against a ZTV.

8.3.4 To consider direct and indirect effects, data will be gathered from the following sources:

- West of Scotland Sites and Monuments Record (WoSAS);
- Royal Commission on the Ancient and Historic Monuments (RCHAMS) - (PASTMAP and Canmore services);
- National Monuments Record of Scotland (NMRS) and Historic Landscape Characterisation Areas;
- Historic Scotland;

- Local libraries and archives as appropriate; and
- Historical mapping and aerial photography.

8.4 Walkover Survey

8.4.1 Depending on the results of the desk-based assessment, a walkover survey may be carried out if deemed necessary due to the archaeological resource of the site. If required, this fieldwork will be conducted to:

- Assess and validate the documentary data collected;
- Identify the extent and condition of any visible archaeological monuments;
- Determine whether previously unrecorded historic features are visible; and
- Provide an indication of the suitability of any further survey techniques.

8.4.2 Written descriptions and photographic records will be made of all sites located within the study area. Data from the desk-based assessment and field surveys will identify the need for any site evaluation work.

8.4.3 The results of the surveys will inform a constraints plan which will be used in the final design and layout of the development. The objective of this is to build-in mitigation of archaeological impacts into the layout of the wind farm.

8.5 Impact Assessment and Mitigation

8.5.1 The assessment will be supported by presentation of the data in assessment tables, with a gazetteer and location plan. The assessment will detail direct and indirect impacts within the site and search area. The detailed data gathered will be provided in the Environmental Statement. Any cultural heritage receptors identified on site would be taken into account in the iterative layout design process.

8.5.2 Where significant effects on heritage assets are identified, measures to prevent and reduce, these adverse effects will be proposed, such as:

- Micro-siting of development components from sensitive locations;
- Fencing around sites/features during the construction phase to provide protection;
- A watching brief implemented during the construction activities, particularly during ground disturbance works.

9 Access and Traffic

9.1 Guidance

9.1.1 The Traffic Assessment will be conducted in accordance with and taking account of, the following policies and guidance (amongst others):

- Scottish Planning Policy (2010);
- Guidelines for Traffic Impact Assessment (1994) Institution of Highways and Transportation;
- Guidelines for the Environmental Assessment of Road Traffic (1993), Institute of Environmental Assessment;

- Transport Assessment & Implementation (2005) Scottish Government;
- PAN 75: Planning for Transport, Scottish Government.

9.2 Methodology

9.2.1 An assessment will be undertaken of the potential increase in local road traffic as a result of the construction, operation and de-commissioning of the proposed development.

9.2.2 The assessment will consider:

- Suitable routes for construction traffic accessing the site;
- The requirements for modifications to the existing public road infrastructure in order to accommodate the delivery of turbine components;
- The number of vehicle movements arising as a result of the proposal;
- The potential environmental effects which may arise as a result of construction traffic passing through local towns and villages; and
- Potential conflicts between construction traffic and the interests of other users of the local public road network.

9.2.3 Abnormal load studies will be undertaken to determine the least disruptive route to site for the delivery of turbine components. Potential pinch-points identified will be investigated further by means of swept path analysis. This will enable the extent of any necessary geometric modification to be identified.

9.2.4 The assessment will consider the significance of the projected traffic increase against recognised thresholds of significance.

9.2.5 Options for access routes to and within the site will be investigated and developed through an iterative process, depending on the proposed site layout and taking into account environmental matters.

10 Hydrology, Hydrogeology and Geology

10.1 Preliminary Environmental Baseline

10.1.1 This section sets out the proposed scope of the assessment for evaluating the potential impact on hydrology, hydrogeology and geology during the construction and operation of the proposed Knockower Community Wind Farm. The assessment will be undertaken during the EIA and design phase of the project so that any major potential impacts can be minimised or removed. The present site will be assumed to represent the baseline environment.

10.1.2 The EIA will seek to assess the risk of pollution to watercourses and flood risk within or near the site of the proposed wind farm as a result of the works, and to provide appropriate mitigation measures if required.

10.1.3 There are just one small standing body of water found within the proposed development site (just south of the Lamloch property); and there are a number of Burns that flow through the site in a south easterly direction before draining into the Carsphairn Lane which leads to the Water of Deugh; approximately 6.5 km south east of the site.

10.1.4 The Water of Deugh flows north to south for approximately 10 km before joining the Water of Ken.

10.1.5 Loch Doon is found on the western edge of the site. The River Doon issues from its northern end, while the loch itself receives waters from Loch Enoch.

10.2 Guidance

10.2.1 The Hydrology, Hydrogeology and Geology assessment will be conducted in accordance with, and taking account of the following legislation, policies, standards and guidance (amongst others):

- Scottish Planning Policy (SPP) 2010;
- The Water Framework Directive (2000/60/EC);
- The Water Environment and Water Services (Scotland) Act 2003;
- The Water Environment (Controlled Activities) (Scotland) Regulations 2011;
- SEPA Pollution Prevention Guidance Notes (PPG);
- SEPA Regulatory Position Statement – Developments on Peat (2010);
- SEPA Guidelines for Water Pollution Prevention from Civil Engineering Contracts and 'Special Requirements';
- SEPA Technical Flood Risk Guidance for Stakeholders (2010);
- PAN 51: Planning, Environmental Protection and Regulation (Scottish Government, revised 2006);
- PAN 69: Planning and Building Standards Advice on Flooding (2004); and
- Scottish Executive: River Crossings and Migratory Fish: Design Guidance.

10.3 Methodology

10.3.1 The methodology for this chapter involves a desk-based assessment of public data and consultation with various bodies including Scottish Water, SEPA and Scottish Natural Heritage. Information collected will include river flow and water quality data; details of any surface or groundwater abstractions, discharges, and rainfall data. Site visits will be carried out to verify this information and to gain a good understanding of the hydrological and hydrogeological conditions on site. During this first phase, CWL will identify:

- Climatic data;
- Water features across the site including wetlands areas and natural springs;
- Any water supply sources (either springs, boreholes and wells) including private water supplies;
- Historical land use and potential sites of land contamination;
- Surface water quality data;
- Discharge consents;
- Flooding and flood risk information;
- Rainfall data;
- Presence and depth of peat;
- Local geology;
- Local soils and their condition.

10.3.2 Surface water catchments will be mapped and an assessment of the potential impact the works could have on surface and ground water quality and flows made. An assessment will be made for the construction, operation and decommissioning phases and mitigation recommendations clearly identified. A flood risk assessment will also be undertaken.

10.3.3 Mitigation recommendations will have an emphasis on the protection of the catchment, watercourses and their tributaries and any private water supplies. The protection of the hydrological and hydrogeological resources and pollution prevention will be a key consideration, particularly during site preparation and construction.

11 Telecommunications and Aviation

11.1 Preliminary Environmental Baseline

11.1.1 Based on the indicative wind farm layout included in this Scoping Report, early consultation has taken place with a range of aviation consultees and telecommunication operators.

11.1.2 Aviation mapping from GIS data sources has also been consulted as illustrated in Figure 6.

11.1.3 CWL has received responses from Defence Estates (MoD) and the Civil Aviation Authority (CAA) on the most recent proposal; however, this was based on an earlier proposal. The comments received are outlined below:

Consultee	Comment
MoD	Showed concerns about proposal as the turbines are located in a low flying area.
CAA	The development may affect Glasgow Prestwick Airport and further consultation must be undertaken.
NATS	No response received.

11.1.4 With regards to consultation with telecommunication operators, it has been confirmed by OFCOM that there are no communication links within the vicinity of the Knockower site. Therefore, there are no links which could be impacted by the proposed wind farm development. However, further consultation will be undertaken to ensure this is still the case.

11.2 Guidance

11.2.1 The following guidance documents will be taken into account in this assessment:

- Civil Aviation Authority, CAP 168: Licensing of Aerodromes, April 2011;
- Civil Aviation Authority, Safety Regulation Group, CAP 738: Safeguarding of Aerodromes, December 2006;
- Civil Aviation Authority, Safety Regulation Group, CAP 670: Air Traffic Services Safety Requirements, Part B, Section 4, June 2013;
- Civil Aviation Authority, Safety Regulation Group, CAP 764: CAA Policy and Guidelines on Wind Turbines, January 2012;
- National Air Traffic Services safeguarding maps available on the RenewableUK website;

- Planning Circular 2 2003: The Town and Country Planning (Safeguarded Aerodromes, Technical Sites and Military Explosives Storage Areas) (Scotland) Direction 2003.

11.3 Methodology

11.3.1 Consultation will continue with CAA, MoD and NATS to ensure the proposed development does not interfere with the military or civil aviation communication systems.

11.3.2 If inappropriately sited, wind turbines have the potential to interfere with local telecommunications. To ensure the wind farm does not cause problems with local communication networks, consultation with OFCOM and any relevant telecommunication operators will continue to be carried out to ensure the turbines do not cause any interference.

12 Socio-economic and Community Benefits and Other Considerations

12.1 Socio-Economic

12.1.1 An assessment of the socio–economic implications of the proposal will be carried out in terms of job creation and financial investment into the local community. The baseline will be established and the impact of the proposal will be assessed and if necessary, steps provided to mitigate for any potential negative impacts. Actions will also be carried out to promote the benefits and positive impacts of the development.

12.2 Tourism

12.2.1 The proposed development will be assessed in terms of its impact on the local tourism industry. Documents which will be reviewed including the relevant national and regional tourism strategies, together with visitor statistics for the area. Tourist attractions will be identified, together with any future tourism proposals in the area. A number of studies, exploring the impacts of wind farm developments on the tourism industry have been completed over recent years and these documents will also be reviewed as part of the assessment.

12.3 Community Benefits

12.3.1 CWL will provide Community Benefit Funding based on £5,000 per megawatt. Based on the current proposal of 48 MW, this is equivalent to £240,000 each year the wind farm is operational, totalling £6 million over the 25 year lifetime of the development.

12.3.2 This will be delivered through the Dumfries and Galloway wind farm Community Benefits Framework.

12.3.3 In addition to this annual funding CWL will continue to engage with local schools in the area surrounding the proposed Knockower Community Wind Farm, by offering educational presentations throughout the design, construction and operational phases of the proposed development. These educational presentations will also be made available to other community groups in the area such as after school clubs, and local adult groups.

12.3.4 Once the community consultation has begun for the proposed Knockower Community Wind Farm, CWL may offer a more distinct community benefit package depending upon the local communities' needs. For example, CWL may incorporate community-ownership in the scheme to provide host communities with the opportunity to 'own' a turbine in the scheme and share out the profits of that turbine as recommended in the Scottish Governments draft 'Good Practice Principles for Community Benefits from Onshore Renewable Energy Developments'.

13 Shadow Flicker

13.1.1 The phenomenon known as 'Shadow flicker' only occurs in very specific circumstances, for instance when the sun passes behind the rotors of a wind turbine and casts a shadow over neighbouring properties. As the blades rotate the shadow flickers on and off and the effect occurs inside buildings where the flicker appears through a narrow window opening. The likelihood and duration of the effect depends upon:

- Direction of the property relative to the turbine(s) - In the UK only properties within 130 degrees either side of north (relative to the turbines) can be affected as turbines do not cast long shadows on their southern side. Properties also need to have narrow windows facing in the direction of the turbines;
- Distance from turbine(s) – The further the observer is from the turbine the less pronounced the effect would be. Flicker effects have been proven to only occur within ten rotor diameters of a turbine.

13.1.2 Further points to take into consideration for shadow flicker to occur include:

- Turbine height and rotor diameter;
- Time of year and day;
- Weather conditions (i.e. cloudy days reduce the likelihood of shadow flicker occurring);
- Wind Speed and wind direction – The wind speed at each turbine would need to be greater than 4m/s in order for the blades to rotate. In addition the shape of the shadow will be determined by the position of the sun relative to the blades (which will be rotated to face into the wind).

13.1.3 A shadow flicker assessment will be carried out as part of the EIA.

14 Scoping Response

14.1 Response to the Scoping Report

14.1.1 This Scoping Report has been submitted to Dumfries and Galloway Council in support of CWL's request for a Scoping Opinion under Regulation 7 of the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2000.

14.1.2 The response provided would inform the detailed methodology required for each component of the EIA. Continued consultation with all statutory consultees and key stakeholders will also ensure that adopted methodology is both appropriate and robust.

14.1.3 In forming a formal Scoping Opinion Dumfries and Galloway Council would seek the views of a range of consultees. CWL would welcome a copy of all such responses to be sent to the address overleaf:

Community Windpower Limited
1st Floor
2 Parklands Way
Maxim Business Park
Eurocentral
Motherwell
ML1 4WR
info@communitywindpower.co.uk

14.1.4 All comments and correspondence relating to the proposed scheme should state 'Knockower Community Wind Farm' as the reference.

15 Conclusion

15.1.1 Knockower Community Wind Farm has the potential to make a valuable contribution, to renewable energy generation in Dumfries and Galloway and Scotland, especially since the Scottish Government has an ambition to generate the equivalent of 100% of Scotland's gross annual electricity consumption from renewable sources by 2020.

15.1.2 All the likely issues of the proposed Knockower Community Wind Farm, which have been outlined within this scoping report, will be fully identified and assessed during the EIA.

Reference List

Dumfries and Galloway Council (2011) 'Dumfries and Galloway Wind Farm Landscape Capacity Study' (Online) Available at: http://www.dumgal.gov.uk/CHttpHandler.ashx?id=9116&p=0 [Accessed: 25th March 2014].

Scottish Government (2009) 'National Planning Framework for Scotland 2 (NPF2)' (Online) Available at: http://www.scotland.gov.uk/Publications/2009/07/02105627/0 [Accessed: 25th March 2014].

Scottish Government (2010a) 'Scottish Planning Policy (SPP)' (Online) Available at: http://www.scotland.gov.uk/publications/2010/02/03132605/12 [Accessed: 25th March 2014].

Scottish Government (2012) 'Working for Scotland: The Government's Programme for Scotland 2012-2013' (Online) Available at: http://www.scotland.gov.uk/Publications/2012/09/8987 [Accessed: 25th March 2014].

Scottish Government (2013a) 'Draft Scottish Planning Policy' (Online) Available at: http://www.scotland.gov.uk/Publications/2013/04/1027, [Accessed: 25th March 2014].

Scottish Government (2013b) 'Scotland's Third National Planning Framework Main Issues Report and Draft Framework' (Online). Available at: http://www.scotland.gov.uk/Publications/2013/04/2377/downloads [Accessed: 25th March 2014].

098 Knockower

Legend

- Site Location

Notes: N/A
Revisions: N/A

0 2,500 5,000 10,000 m

Scale: 1:250,000 @ A3

N

Figure 1 - Regional Location

Date: 10/03/2014	Ref: 098-140310-7045	
Produced: JS	Reviewed: JP	Approved: GC

community windpower
Godscroft Lane
Frodsham - WA6 6XU
t: 01928 734544 f: 01928 734790
e: info@communitywindpower.co.uk w: www.communitywindpower.co.uk

098 Knockower

Legend

Site Boundary

Notes: N/A
Revisions: N/A

0 500 1,000 2,000 m

Scale: 1:50,000 @ A3

N

Figure 2 - Site Location

Date: 210/03/2014 Ref: 098-140310-7046
Produced: JS Reviewed: JP Approved: GC

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098 Knockower

Legend

- Site Boundary
- Wind Turbine

Notes: N/A
Revisions: N/A

0 250 500 1,000 m

Scale: 1:25,000 @ A3

N

Figure 3 - Indicative Site Layout

Date: 10/03/2014	Ref: 098-140310-7047	
Produced: JS	Reviewed: JP	Approved: GC

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098 Knockower

Legend

- Site Boundary
- Wind Turbine
- Residential Buffer (750 m)
- Watercourse Buffer (50 m)
- Road Buffer (150 m)
- SSSI
- Ancient Woodland
- Scheduled Monuments
- Listed Buildings

Notes:
- Under SNH Zones of Natural Heritage Sensitivity the area is classed as 2: Moderately Sensitive.
- The site boundary area is of low RSPB sensitivity.
- The Woodhead Lead Mines and Smelter, a Scheduled Monument, borders the South East boundary of the site.

Revisions: N/A

0 250 500 1,000 m

Scale: 1:25,000 @ A3

N

Figure 4 - Constraints

Date: 10/03/2014 Ref: 098-140310-7048

Produced: JS Reviewed: JP Approved: GC

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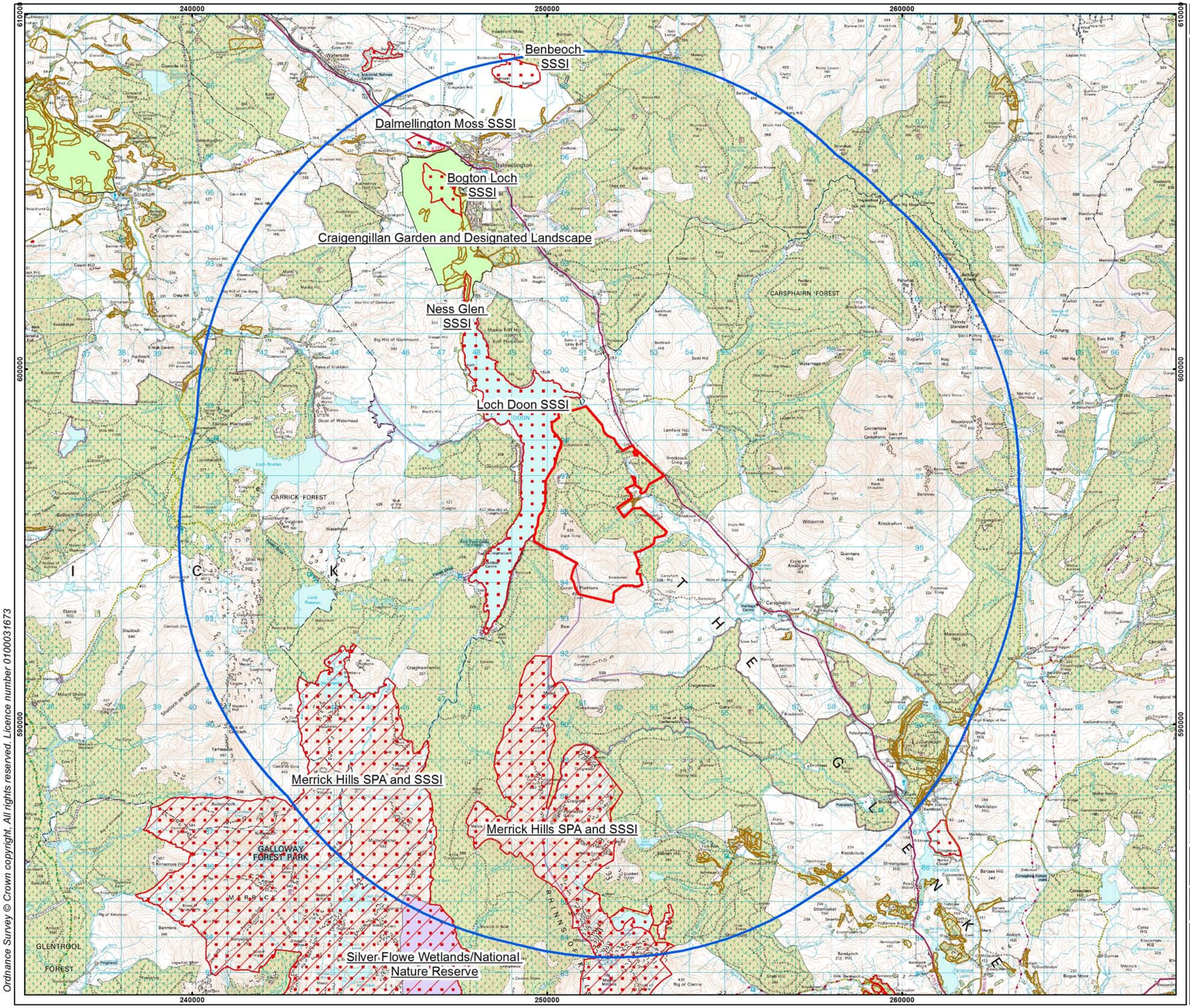

098 Knockower

Legend

- Site Boundary
- 10 km Buffer
- SSSI
- Wetlands of International Importance
- Gardens and Designed Landscapes
- Ancient Woodland

Notes: N/A
Revisions: N/A

0 1,250 2,500 5,000 m

Scale: 1:100,000 @ A3

N

Figure 5 - Environmental Constraints within 10 km

Date: 25/03/2014	Ref: 098-140325-7053	
Produced: JS	Reviewed: JP	Approved: GC

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098 Knockower

Legend

- Site Boundary
- Wind Turbine
- NATS Primary Surveillance Radar (80m)
- NATS Primary Surveillance Radar (100m)
- NATS Primary Surveillance Radar (120m)
- NATS Primary Surveillance Radar (140m)
- Navigation Aids Consultation Zone

Notes:
Radar information acquired from National Air Traffic Services database.

- The Prestwick Aerodrome Buffer is situated to the North West of the site.
- The entire area depicted in this plan is considered High Priority by the MOD for low flying.

Revisions: N/A

0 250 500 1,000 m

Scale: 1:25,000 @ A3

N

Figure 6 - Aviation Technical Constraints

Date: 10/03/2014 Ref: 098-140310-7049

Produced: JS Reviewed: JP Approved: GC

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098 Knockower

Legend

- Site Centre
- 10 km Buffer
- 20 km Buffer
- 35 km Buffer

Number of Turbines Theoretically Visible

- 1 - 4
- 5 - 8
- 9 - 12
- 13 - 16

Notes:
Tip height 145 m
Revisions: N/A

0 3,750 7,500 15,000 m

Scale: 1:300,000 @ A3

N

Figure 7 - ZTV to Tip Height (145 m)

Date: 10/03/2014	Ref: 098-140310-7050	
Produced: CM	Reviewed: JP	Approved: GC

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098 Knockower

Legend

- Site Boundary
- Viewpoint

Notes: N/A
Revisions: N/A

0 1,250 2,500 5,000 m

Scale: 1:150,000 @ A3

N

Figure 8 - Viewpoints

Date: 31/03/2014	Ref: 098-140311-7052	
Produced: CM	Reviewed: CP	Approved: GC

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098 Knockower

Legend

- Site Boundary
- 10 km Buffer
- 35 km Buffer

STATUS

- Installed
- Approved
- Application
- Scoping
- Refused

Notes: N/A
Revisions: N/A

0 3,750 7,500 15,000 m

Scale: 1:300,000 @ A3

N

Figure 9 - Other Wind Farms within a 35 km radius

Date: 07/03/14	Ref: 098-140307-7044	
Produced: JS	Reviewed:	Approved:

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