

# GLEANN EOGHAINN WIND FARM

## ISLE OF SKYE

EIA SCOPING REQUEST APRIL 2016



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## 1.0 INTRODUCTION

- 1.1 This document relates to a proposal by RES Ltd (RES) for a proposed wind farm in the north-west of Skye at Gleann Eoghainn (the Site). The Site is comprised of open grazing land and moorland and is located 6km due east of the village of Dunvegan and south west of the existing Ben Aketil Wind Farm as shown on the site location plan (RES Drawing 03229D2202-01; Appendix 1).
- 1.2 A series of preliminary technical and environmental studies have informed the preliminary site layout and it is considered, based on known information to date, that the site has the potential to accommodate up to 10 wind turbines as shown by the indicative infrastructure drawing (RES Drawing 03229D2203-01; Appendix 2), although it must be recognised that the indicative site layout will likely change due to technical, environmental and commercial constraints identified through the forthcoming surveys and assessments.
- 1.3 RES intend to submit a planning application and accompanying Environmental Statement (ES) to The Highland Council (THC) for the proposed Gleann Eoghainn Wind Farm and have already committed to commission studies to assist in an Environmental Impact Assessment (EIA) under Schedule 2 of The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011<sup>1</sup> (the EIA Regulations). RES will submit a Proposal of Application Notice to THC in due course once the details of the first engagement event are fixed as it is anticipated that the installed capacity of the site will exceed 20MW.
- 1.4 Whilst the proposed development would be deemed a Schedule 2 development under the EIA Regulations, it is anticipated that EIA will be required given the potential for significant environmental effects to arise. The undertaking of an EIA will help to ensure that the likely significant environmental effects, both positive and negative, of the proposed development are assessed in a systematic way. In addition the EIA will assess the scope for reducing or mitigating any predicted significant negative effects in a way that should be clearly understood by the Council, the public and the statutory consultee organisations.
- 1.5 The specific objectives of this report are to:
  - Seek agreement on the likely significant effects associated with the proposed wind farm to ensure that all likely significant effects have been correctly included in the proposed scope of the EIA ('scoped in')
  - Seek agreement where known non-significant effects will be excluded ('scoped out')
  - Invite comment on the proposed approach to baseline data collection, prediction of environmental effects and the assessment of significance

### The Applicant

- 1.6 RES is the UK's largest independent renewable energy developer with interests in onshore wind, wave and tidal, offshore, solar, energy storage and demand-side response. A wholly owned UK company at the forefront of innovation and infrastructure development around the world, RES now employs over 1,000 people and has built over 1,000MW of wind energy assets in the UK; around 10% of the UK's total renewable energy installed capacity.
- 1.7 Since developing their first Scottish onshore wind farm in the early 1990s, RES has subsequently developed and / or constructed 11 onshore wind farms in Scotland, totalling 214MW. RES currently operates over 138MW of wind capacity across Scotland, has secured planning permission for a further 240MW now under construction or awaiting construction and has 285MW in the planning system.

<sup>1</sup> See: [http://www.legislation.gov.uk/ssi/2011/139/pdfs/ssi\\_20110139\\_en.pdf](http://www.legislation.gov.uk/ssi/2011/139/pdfs/ssi_20110139_en.pdf)

1.8 Based in Glasgow and East Kilbride, RES employs 116 staff in Scotland covering environmental, planning, technical, community engagement, legal, commercial, project management, construction, operations and administration disciplines.

### EIA Approach

1.9 EIA is the systematic assessment of the potential effects of a proposal on the environment, including effects on human activity. The outputs, in the form of an ES, are used to inform the decision making process of the consenting authority, in this case THC.

1.10 The following key stages would be followed in the EIA process:

- **Scoping:** Consultation with relevant statutory consultees and other stakeholders to obtain their views on the proposal; identify potential impacts; identify existing environmental information and to agree methods for the assessment of these impacts. Scoping will also establish the need for feedback to, and ongoing consultation with, various key consultees
- **Baseline Studies:** Identification of existing environmental conditions and sensitivities through review of existing information, monitoring and field studies and community engagement, as required
- **Design workshop(s):** Discussion of known environmental sensitivities, field survey results, technical and engineering constraints in relation to the turbine layout and modification of the layout, where necessary, to avoid or minimise environmental impacts
- **Layout Freeze:** Using the outcomes from the design workshop(s) to fix the turbine and associated infrastructure layout
- **Assessment of Effects and their Significance:** An assessment of the significance of the proposal at local, regional, national and international scales of potential impacts
- **Mitigation:** ‘Primary Mitigation’ is measures undertaken during the design of the proposal which seeks to avoid effects from the outset. ‘Secondary Mitigation’ is measures designed to reduce, remedy or compensate for any predicted significant impacts of the proposal. Other enhancement measures may also be described which seek to reduce any non-significant effects.
- **Residual Effects:** Identification and assessment of residual effects after mitigation

### Consultation

1.11 A community consultation programme will be undertaken in parallel to the EIA process to allow those with an interest in the Development to participate in the decision-making process and, where appropriate, to inform the outcome of the EIA. The submission of a Proposal of Application Notice (PoAN) and report outlining the proposed Pre Application Consultation (PAC) that will be undertaken will be submitted to THC once details of the first engagement event are fixed (likely to be mid 2016). There has already nevertheless been initial engagement with the local community in and around the Site to introduce RES and the proposals.

1.12 A formal pre-application consultation was undertaken with THC and relevant agencies in the latter half of 2015 and the pre-application consultation response included here as Appendix 3.

1.13 This Scoping request reflects the relevant parts of the consultation response with the EIA and any planning submission taking all of the advice provided within the response into account in due course.

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1.14 The bodies expected to be consulted as part of the Scoping process includes:

- The Highland Council:
  - Planning Services
  - Transport Planning
  - Environmental Health
  - Historic Environment Team
  - Landscape Officer
  - Access Officer
- Scottish Natural Heritage (SNH)
- Historic Environment Scotland (HES)
- Scottish Environment Protection Agency (SEPA)
- Scottish Water
- Highland and Islands Airports Limited (HIAL)
- Ministry of Defence (MoD)

1.15 RES will also make contact with relevant telecommunication providers and other relevant bodies (such as the NERL and the District Salmon Fishery Board) as part of the EIA process.

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## 2.0 DESCRIPTION OF THE PROPOSED DEVELOPMENT

- 2.1 The proposed wind farm site lies approximately 6km due east of the village of Dunvegan and immediately south-west of the existing Ben Aketil Wind Farm in the north west of Skye. The Site is centred on Ordnance Survey grid ref NG 315 479 and covers an area of approximately 970 Ha.
- 2.2 The Site is a common grazing site associated with the upper Feorlig crofts. The land cover is a mixture of heather and grasses with both cattle and sheep being put out onto the hill to graze by the crofters. There is a water course system within the site boundary with the Rageary Burn and Aketil Burn feeding into the Caroy Water that then drains into the Loch Caroy sea loch. There is a series of old sheilings located on the west side of the site but there are no plans to extend the wind farm development into that area.
- 2.3 There has been a number of planning application submitted in this area, including:
- 16/00117/FUL - Gleann Eoghainn Wind Farm Met Mast (Approved 03/03/16)
  - 15/03994/PREAPP - Pre-Application Advice for Gleann Eoghainn Wind Farm (Issued 23/12/15)
  - 09/00115/FULSL - 2 turbine extension to Ben Aketil Wind Farm (Approved 04/02/10)
  - 06/00088/FULSL - Borrow Pit associated with construction of Ben Aketil Wind Farm (Approved 03/10/06)
  - 05/00529/FULSL - Temporary Met Mast at Ben Aketil Wind Farm, (Approved 21/02/06)
  - 02/00275/FULSL - Ben Aketil Wind Farm (10 Turbines) (Approved 07/09/06)
  - 02/00050/ FULSL - Temporary Met Mast at Ben Aketil Wind Farm, (Approved 08/05/02)
- 2.4 The Site is considered to potentially have capacity for up to 10 wind turbines. However, this may change as a consequence of the EIA process informing the design. It is possible that, the Gleann Eoghainn Wind Farm could produce sufficient electrical energy every year to satisfy the average annual requirements of up to 19,000 homes in the UK<sup>2</sup>.
- 2.5 As currently proposed, the wind farm development (the Development) will comprise:
- Three-bladed horizontal axis wind turbines of up to 130m to blade tip, nominally rated at up to 3.5MW installed capacity
  - At each turbine, associated low to medium voltage transformers and related switchgear
  - Turbine foundations
  - Hard-standing areas for erection cranes at each turbine location
  - Up to 2 permanent, free-standing meteorological masts
  - A series of on-site tracks
  - A site access route from the main road network
  - Borrow pits (dependent on availability of stone on site)
  - A sub-station compound that includes a control building
  - A network of buried electrical cables
  - Temporary construction compounds
  - Temporary guyed meteorological masts to be used for detailed wind definition and wind farm commissioning / acceptance testing

<sup>2</sup> Based on DECC's assessment of average household consumption of 4,128 kWh pa in 2013 (see: <https://www.gov.uk/government/statistical-data-sets/regional-and-local-authority-electricity-consumption-statistics-2005-to-2011>)

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- 2.6 In addition, the Site may be suitable for an energy storage (battery) system. RES is a global leader in deploying energy storage systems and will look to work closely with the network operator to confirm if there is potential for such a system at this location. RES's energy storage systems consist of a number of permanent containers mounted on small concrete foundations. Further investigations with the network operator will define the size of the system and the required infrastructure.

### Wind Turbines

- 2.7 Confirmation of turbine positions and dimensions will be achieved through an iterative process that considers all relevant factors, including landscape and visual impacts as well as ornithological impacts. As such, it is not possible to confirm what the final turbine dimensions may be and this could involve a hub height of up to 80m and a rotor diameter of up to 100m; giving an overall tip height of up to 130m. The indicative capacity of each turbine could be up to 3.5MW. The actual installed capacity of the Site, being a factor of the final turbine selection (which would take place after any planning permission is granted) and the final layout of the array, cannot then be defined at this time but it may be that the total installed capacity from the Site is up to 35MW.

### Turbine Foundations

- 2.8 The turbines will be fixed to reinforced concrete foundations up to 20m diameter. The foundations will be formed in excavations up to 4m deep, depending upon the depth of peat on the Site, and the depth to suitable load bearing ground.
- 2.9 Prior to excavation, topsoil and existing vegetation will be lifted and stored. After completion the foundations will be backfilled with reserved excavated material and the original vegetation will be reinstated if it is considered ecologically sensitive.
- 2.10 Concrete for site construction, including turbine foundations, would either be batched on-site, with materials either being sourced on-site or brought in from off-site depending on availability, or obtained from off-site sources located as close to the Site as possible.

### Transformers

- 2.11 Turbines typically generate at 690V. In order to prevent cable losses and to minimise cable diameter, the voltage is increased to 33kV by transformers at each turbine.

### Electrical Cabling

- 2.12 The turbines would be electrically connected to the control building by means of 33kV cables. These cables would be laid underground in trenches running adjacent to the site tracks, leading to the on-site control building. These trenches would be backfilled with retained excavated material, marked with buried safety warning tape and have the original vegetation reinstated.

### Control Building

- 2.13 The electrical cables would terminate at the control building, located adjacent to the grid substation compound, comprising switchgear, control equipment and basic welfare facilities, including a toilet.

### Access and Site Tracks

- 2.14 Following on from an initial review of access options, a preferred access route to the Site is from the A863 as shown in Appendix 2 as that land is within RES's control and it is not currently predicted that it would cause unacceptable or intolerable additional environmental effects (in isolation, in combination with other access options or in comparison to other access options).

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However, alternative access routes will continue to be investigated (i.e. via existing access tracks) prior to a layout freeze and commencement of the environmental assessments.

- 2.15 The selected access route shall be subject to computer generated swept path analyses to confirm the horizontal alignment. Existing tracks on the Site itself will be utilised wherever reasonably practicable. New and upgraded tracks would be typically up to 6m wide with appropriate widening at corners and passing places dependent on site conditions. The verges of the tracks would be reinstated as appropriate after construction.

#### Borrow Pits

- 2.16 Stone will be required for various purposes, primarily track construction. A proportion of this could be won from foundation excavation and the remainder may be sourced from on-site borrow pits, if that stone is found to be suitable.

#### Crane Hardstanding Pads

- 2.17 The turbines are erected using mobile cranes. These require areas of hard standing adjacent to the turbine locations, which can support the load of the cranes on their outriggers. The pads, typically up to approximately 30m by 40m dependent on site conditions, are formed by excavating soft ground and infilling with compacted stone.

#### Construction Compound

- 2.18 A site compound would be required to contain temporary site offices and with services including sealed waste storage toilet facilities; sufficient parking for cars and construction vehicles; containerised storage facilities and a receiving area for incoming vehicles.
- 2.19 After construction, the compound would be removed and the site cleared of hard-core, with the ground re-graded to a natural profile excluding any part of this that is to be retained for an Energy Storage system.

#### Energy Storage

- 2.20 At present, the exact scope of what any Energy Storage system at this site may entail has not been identified but in order to match on-site energy generation to energy demand as well as facilitate the reduction in any possible grid constraint requirements there may be scope to include proposals to provide for such a system. This system could then provide back-up supply, offer a route for on-island generated electricity if the off-island transmission infrastructure becomes periodically unavailable and many other valuable grid services.
- 2.21 At this time, it is anticipated that a hard standing area (perhaps a retained element of the construction compound) would be required with underground supply cables connecting this to the wind farm / local grid. An array of batteries (each battery would be housed within a 12m by 2.5m steel container and each with an approximate capacity of 1MW) would be mounted on small concrete foundations within this hard-standing area.

#### Grid Connection

- 2.22 The electrical connection between the wind farm and the grid network will be subject to a separate consenting process under Section 37 of the Electricity Act 1989 or using permitted development rights / planning application if an underground cable is installed.
- 2.23 Further relevant studies and reporting would accompany any formal application. However, if sufficient detail is available, the ES for the wind farm proposal will include consideration of potential environmental effects of the indicative grid route corridor between the wind farm sub-station and the Dunvegan sub-station to the west of the Site.

### Construction Process

- 2.24 It is currently estimated that construction would take approximately 12 to 18 months from award of contract; however this would be subject to environmental and weather constraints which may extend this period. The main phases would include:
- Access route road improvements
  - Site entrance construction and excavation of first borrow pit
  - Construction/upgrade of on-site access tracks
  - Construction of temporary construction compound and hard-standings
  - Construction of turbine foundations, requiring the import of concrete and steel
  - Construction of the substation compound and control building
  - Excavation of trenches and laying of cables alongside site tracks
  - Connection of distribution cables
  - Delivery and erection of wind turbines
  - Commissioning of site equipment
  - Site demobilisation and restoration
- 2.25 Some of these activities will be carried out concurrently in order to reduce the length of the construction programme. Site restoration will be conducted as early as possible.

### Vehicle Movements During Construction

- 2.26 Vehicle movements associated with construction works will include:
- Cars and minibuses for transporting construction personnel onto the Site
  - Heavy goods vehicles (HGVs) for pre-construction delivery of site offices and construction equipment
  - HGV abnormal load vehicles for delivery of the turbine components and base rings
  - Two mobile road going cranes, used for the erection of the turbines
  - Standard HGVs for transporting electrical cable, steel reinforcement for foundations, construction plant fuel and other items and equipment
- 2.27 A traffic management plan will be agreed in consultation with Transport Scotland, THC, community councils and other stakeholders. This will address scheduling, location of passing places and diversions for abnormal loads if required.

### Operational Maintenance

- 2.28 A wind farm is typically visited up to four times a month by a small maintenance crew. There will also be a requirement for maintenance of the access tracks and substation.
- 2.29 Turbines typically have an operational life of 25-30 years and the normal operating life of the wind farm would be 25 years. At the end of this period the turbines can be removed, reconditioned or replaced, and appropriate site restoration measures implemented.

### 3.0 PLANNING AND ENERGY POLICY CONTEXT

- 3.1 The ES shall draw upon various policies relevant to the proposal against which the suitability of the proposal shall be assessed, including:
- National Planning Framework for Scotland (2014)
  - Scottish Planning Policy (2014)
  - The Scottish Government Online Advice (2013) - Onshore Wind Turbines (replacement for PAN 45)
  - Planning Advice Notes
  - Highland-wide Local Development Plan 2012, any relevant aspects of the sub-regional local plan / local development plan for the area and any relevant updated documents
  - Highland Renewable Energy Strategy & Planning Guidelines 2006
  - Highland Council's Draft Onshore Wind Energy Supplementary Guidance (September 2012) and any relevant updated document

- 3.2 Further information summarising the key aspects of the above planning policy and guidance relevant to the proposed wind farm is provided below.

#### National Planning Policy and Guidance

##### *National Planning Framework for Scotland<sup>3</sup>*

- 3.3 In March 2014, the Scottish Government released the third National Planning Framework for Scotland, setting out its spatial strategy for planning ambitions in Scotland. Whilst the framework sets out the broad context of spatial planning, it does recognise an ambition to create Scotland as a low carbon place with ambitions of achieving at least an 80% reduction in Greenhouse Gas emissions by 2050.
- 3.4 The expectation remains that Scotland will need between 14 GW and 16 GW of renewable energy capacity to meet its target of "*generating the equivalent of at least 100% of gross electricity consumption from renewables*" (paragraph 3.8). The position of the Scottish Government as set out within NPF3 (paragraph 3.23) is that "*Onshore wind will continue to make a significant contribution to diversification of energy supplies*".

##### *Scottish Planning Policy 2014<sup>4</sup>*

- 3.5 There is an expectation within SPP for the maximisation of renewable energy opportunities. It states that 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*" (paragraph 155). It is expected that this will be achieved giving due regard to "*relevant environmental, community and cumulative impact considerations*" (paragraph 155).
- 3.6 In specific reference to onshore wind farm development, SPP instructs planning authorities to support the development of wind farms in areas where the technology can operate efficiently and where the impacts on communities and the environment can be satisfactorily addressed.
- 3.7 The key national policy considerations in assessing whether a site should be developed as a Wind Farm are set out within paragraph 169 with the 19 individual criteria covering all possible effects of a wind farm development.

<sup>3</sup> See: <http://www.scotland.gov.uk/Resource/0045/00453683.pdf>

<sup>4</sup> See: <http://www.scotland.gov.uk/Resource/0045/00453827.pdf>

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*Scottish Government Online Advice: Onshore Wind Turbines (December 2013)*

- 3.8 In 2011 the Scottish Government initiated a series of online advice documents covering various aspects of renewable energy projects. This was intended to be a continuously updated source of advice and guidance for developers and Planning Authorities. The Onshore Wind Turbines guidance was last updated in December 2013<sup>5</sup> and this covers a variety of matters including guidance on suggested areas of focus for planning authorities and how planning authorities can best influence spatial planning for wind farms.
- 3.9 The guidance also helpfully sets out in a little more detail, the context for the consideration of individual planning application appraisal criteria. An update to the 2013 online guidance is expected to reflect the publication of a revised version of SPP in 2014.

*Planning Advice Notes*

- 3.10 Planning Advice Notes are individual documents which provide advice and guidance on technical planning matters. PANs are useful in the definition of individual roles and responsibilities of the Local Planning Authority, consulting authorities and act as a point of reference for developers and their consultants.
- 3.11 A number of Planning Advice Notes will be relevant to the development of the wind farm:
- PAN 51: Planning and Environmental Protection and Regulation (revised 2006)
  - PAN 60: Planning for Natural Heritage (2000, updated 2008)
  - PAN 68: Design Statements (2003)
  - PAN 73: Rural Diversification (2005)
  - PAN 1/2013 Environmental Impact Assessment
  - PAN 1/2011: Planning and Noise
  - PAN 2/2011: Planning and Archaeology
  - PAN 3/2010: Community Engagement

- 3.12 Each of these PANs will be taken into account, where relevant, throughout the assessments.

*Routemap for Renewable Energy for Scotland<sup>6</sup>*

- 3.13 In June 2011, the Scottish Government published its updated Routemap for Renewable Energy for Scotland, which updated and extended the Scottish Renewables Action Plan 2009.
- 3.14 The first annual update to the 2011 Routemap was published on 30 October 2012, and contains a new interim target to meet 50% of the country's energy needs from renewable sources by 2015. The headline target is to generate 100% of Scotland's electricity needs from renewables by 2020, which reflects the Scottish Government's commitment to create a sustainable and self-sufficient Scotland.

Regional and Local Planning Policy and Guidance

- 3.15 The statutory Development Plan for The Highland Council is comprised of the Highland Wide Local Development Plan (HwLDP) 2012 and certain aspects of the The West Highland and Islands Local Plan continue to remain in force (these primarily relate to housing allocations and

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<sup>5</sup>. See: <http://www.scotland.gov.uk/Resource/0044/00440315.pdf>

<sup>6</sup> See: <http://www.scotland.gov.uk/Resource/Doc/917/0118802.pdf>

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settlement boundaries). The 2012 HwLDP is supported by Interim Supplementary Guidance on Onshore Wind Energy that was approved in March 2012.

- 3.16 The Highland Council has commenced a review of the various development allocations and the existing suite of local plans will be replaced by one of three area Local Development Plans; a Call for sites exercise for the West Highland and Island Local Development Plan (WHILDP) was undertaken in early 2015<sup>7</sup>. A Main Issues Report is expected soon and a proposed WHILDP is presently programmed to be published in the second half of 2016. WHILDP will update the development allocations that are currently set through the West Highland and Islands Local Plan and will require to be read alongside the HwLDP that defines the strategic policy context for the area.
- 3.17 The HwLDP is currently under review and a Main Issues Report was published in September 2015<sup>8</sup>. At present, the HwLDP review does not appear to be suggesting a wholesale review of renewable energy policies but it will seek to update these so that they are more directly aligned with the Scottish Government's Scottish Planning Policy published in 2014 (SPP2014)<sup>9</sup>. This will include an updated Spatial Framework in line with SPP2014, a draft of which is set out within the updated draft supplementary guidance on onshore wind energy published in September 2015<sup>10</sup>.

#### *Highland-wide Local Development Plan<sup>11</sup>*

- 3.18 The Highland-wide Local Development Plan (2012) (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. HwLDP Policy 67 relates specifically to renewable energy and defines two key overarching policy expectations of a Renewable Energy Proposal:
  - *the contribution of the proposed development toward meeting renewable energy generation targets;*
  - *any positive or negative effects it is likely to have on the local and national economy.*
- 3.19 It taking into account these two key expectations, the Policy also outlines The Highland Council's further policy requirements in terms of a series of criteria against which applications will be will assessed.
- 3.20 In addition to HwLDP Policy 67, as the Site is located within an area that contains features of local / regional importance (as listed within Appendix 2 of the HwLDP), HwLDP Policy 57 is also a key consideration. Accordingly, HwLDP Policy 57 states:

*For features of local/regional importance we will allow developments if it can be satisfactorily demonstrated that they will not have an unacceptable impact on the natural environment, amenity and heritage resource.*
- 3.21 The defined features of local / regional importance include landscape, cultural heritage, natural heritage and other features of particular value to local communities.

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<sup>7</sup> See: [http://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/582/west\\_highland\\_and\\_islands\\_local\\_development\\_plan](http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/582/west_highland_and_islands_local_development_plan)

<sup>8</sup> See: [http://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/199/highland-wide\\_local\\_development\\_plan](http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan)

<sup>9</sup> See: <http://www.gov.scot/Resource/0045/00453827.pdf>

<sup>10</sup> See: [http://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/147/onshore\\_wind\\_energy\\_supplementary\\_guidance](http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/147/onshore_wind_energy_supplementary_guidance)

<sup>11</sup> See: [http://www.highland.gov.uk/downloads/file/1505/highland-wide\\_local\\_development\\_plan](http://www.highland.gov.uk/downloads/file/1505/highland-wide_local_development_plan)

3.22 In association with these policies, HwLDP Policy 61 (Landscapes) will also be relevant in that this requires development to reflect the landscape characteristics and special qualities of the landscapes within which they are located. The following HwLDP Policies will also require due consideration:

- Policy 28 - Sustainable Design
- Policy 30 - Physical Constraints
- Policy 36 - Development in the Wider Countryside
- Policy 52 - Principle of Development in Woodland
- Policy 56 - Travel
- Policy 58 - Protected Species
- Policy 59 - Other Important Species
- Policy 60 - Other Important Habitats
- Policy 63 - Water Environment
- Policy 69 - Electricity Transmission Infrastructure
- Policy 72 - Pollution

*Supplementary Guidance: Onshore Wind Energy*

3.23 The Highland Council produced supplementary guidance on wind energy in 2012: Interim Supplementary Guidance: Onshore Wind Energy (ISG)<sup>12</sup>, which supplements the HwLDP and supersedes parts of the Highland Renewable Energy Strategy & Planning Guidelines (2006). The Council has now produced a review of that guidance<sup>13</sup> and, in line with SPP2014, includes a spatial framework that identifies areas of with potential for wind farm development which will, in due course, be incorporated into a review HwLDP. The Spatial Framework identifies three categories:

- **Group 1** - Areas where wind farms will not be accepted
- **Group 2** - Areas of significant protection
- **Group 3** - Areas with potential for wind farm development

3.24 The Site is located within a Group 2 area and, on further analysis of the background mapping data, it appears that this is by virtue of the SNH Peatland Mapping information that is available. As such, it has been concluded that:

- In line with SNH's June 2015 guidance on spatial planning for windfarms<sup>14</sup> with regard to peat mapping constraints identified within spatial frameworks, "*The location of a proposal in the mapped area does not, in itself, mean that the proposal is unacceptable, or that carbon rich soils, deep peat and priority peatland habitat will be adversely affected. The quality of peatland tends to be highly variable across an application site and a detailed assessment is required to identify the actual effects of the proposal, and to inform the location of site infrastructure.*"
- There are no significant constraints on development

<sup>12</sup> See: [http://www.highland.gov.uk/downloads/file/981/onshore\\_wind\\_energy\\_interim\\_supplementary\\_guidance](http://www.highland.gov.uk/downloads/file/981/onshore_wind_energy_interim_supplementary_guidance)

<sup>13</sup> See: [http://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/147/onshore\\_wind\\_energy\\_supplementary\\_guidance](http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/147/onshore_wind_energy_supplementary_guidance)

<sup>14</sup> See: <http://www.snh.gov.uk/docs/A1663759.pdf>

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- Appropriate proposals can be supported subject to detailed consideration against identified criteria

3.25 The proposals with a turbine size as proposed would be classified as a large typology development within the guidance. The guidance offers an outline of 18 Development Plan Considerations in assessing any onshore wind energy proposals and these are:

- The Natural and Historic Environment
- The Water Environment
- Peat
- Trees and Woodland
- Landscape and Visual Effects
- Siting and design of Wind Turbines and Wind Farms
- Safety and Amenity at Sensitive Locations
- Tourism and Recreation
- Public Access
- Safety of Airport, Defence and Emergency Service Operations
- Operational Efficiency of Other Communications
- Traffic and Transport Interest
- Electricity and Gas Infrastructure
- Impacts of Other Proposed Development on Existing or Consented Windfarms
- Mitigation
- Restoration Bonds
- Repowering
- Community Renewable Energy Developments

3.26 The draft guidance also sets out a proposed approach to defining strategic capacity and Skye is identified as one of 7 locations where such an assessment will be conducted. A main conclusion from that assessment will be defining capacity for further wind energy development including setting out the likely scale of development possible and other factors that would need to be taken into consideration.

3.27 Further Technical Information on Landscape and Visual Assessments and on Noise Assessment is provided within the draft guidance. This provides a more detailed outline of expectations and requirements of the Council when proposals are presented to them.

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#### 4.0 ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

- 4.1 The following sections summaries the intended approach to EIA and the general methodology that will be used in the assessments. An assessment of alternatives and of potential cumulative effects with other proposed developments is also required as part of EIA and the approach proposed to these aspects of the EIA is described below.

##### Alternatives and the 'Do Nothing' Scenario

- 4.2 The EIA Regulations require the applicant to outline any alternatives that may have been considered in the course of the EIA and to give an indication of the main reasons for the resulting choice. Guidance does not define the meaning of alternatives, and in practice it is usually interpreted to mean alternative designs or layouts, rather than sites.
- 4.3 Consistent with this practice, it is intended, within the EIA, to describe the design process and to outline any alternative designs considered in the course of the evolution of the proposed wind farm. Consideration of alternative access options will be part of this section of the ES.
- 4.4 Guidance also advocates that EIA considers the 'do nothing' scenario, to provide context for the assessment of the proposed development. In some cases, the 'do nothing' scenario might assume development in accordance with a Development Plan; in other cases, it might assume ecological succession. In this situation, however, we are unaware of any wider development proposals or local factors which would cause the character of the Site to change in the absence of the proposed wind farm. Accordingly, we will assume that under the 'do nothing' scenario, the character of the proposed Site area will remain the same as it is today.

##### Cumulative Assessment

- 4.5 Cumulative impacts arise where the effects of one proposed development combine with the effects of another, with the result that, usually, a larger (and possibly more significant) effect might arise.
- 4.6 Cumulative effects should be considered in the case of operational and consented wind farms, as well as proposed wind farms which are the subject of undetermined applications. The cumulative assessment will, therefore, distinguish between predicted cumulative impacts arising from the proposed wind farm in combination with committed projects in the vicinity and those in combination with projects at an early stage in the planning process. This is because committed or consented proposals are less likely to change, and so impacts can be predicted with greater confidence; whereas projects at earlier stages of planning are less certain, in respect of layout or more fundamentally, simply their feasibility.
- 4.7 A baseline appraisal would identify any existing wind farms within the study area and would identify any consented (but presently unconstructed) schemes as well as any wind farms subject to currently undetermined wind farm applications. This would be agreed with both THC and other relevant stakeholders in advance of the submission of the ES and would form the basis for the cumulative assessments of the proposed development. At this time, the known potential cumulative sites are as set out within Appendix 4.

##### Determining Potentially Significant Effects

- 4.8 Where possible all technical assessments will identify and characterise potentially significant effects following a standard methodology, as informed by the EIA Regulations.
- 4.9 The potentially significant effects of the Proposal will be proportionately assessed as a function of the magnitude of the impact and the sensitivity of the receptor.

- 4.10 Numerous different approaches for assigning impact magnitude are in circulation. Due to the nature of impacts, descriptions of impact magnitude are tailored to the specific and potential impacts identified. For the purposes of assessment however, impacts will generally be classified in the following scale of magnitude:
- High
  - Medium
  - Low
  - Negligible
- 4.11 Sensitivity of the receptor will be assessed in each case with recognition of receptors' susceptibility to change and the impact on the receptor as part of the wider receptor assemblage.
- 4.12 Once the magnitude of impact and the receptor sensitivity have been identified, significance can be evaluated. The table below identifies the standardised matrix approach, which will be adopted throughout the technical assessments and when evaluating the significance of an effect.

Evaluating Effect Significance				
Receptor Sensitivity	Magnitude of Impact			
	High	Medium	Low	Negligible
High	Major	Major/moderate	Moderate	Moderate/Minor
Medium	Major/moderate	Moderate	Moderate/minor	Minor
Low	Moderate	Moderate/minor	Minor	Minor/none

- 4.13 Each individual assessment will determine what effects are significant albeit these will generally be those that are assessed as having a Major or Major / Moderate significance.

### The Environmental Statement

- 4.14 The ES would be produced in up to 5 volumes:
- Volume 1: Non-Technical Summary; available free of charge to interested parties.
  - Volume 2: Environmental Statement (main text and figures)
  - Volume 3: LVIA Figures including Wireframes and Photomontages
  - Volume 4: Technical Appendices
  - Volume 5: Confidential Information (if required)
- 4.15 A separate Planning Policy Statement will be produced to assess whether the wind farm is in accordance with the Development Plan and other material considerations, taking into account the findings of the EIA. The Planning Policy Statement will incorporate a Design and Access Statement to reflect the requirements of Regulation 13 of The Town and Country Planning (Development Management Procedures (Scotland) Regulations 2013<sup>15</sup> (the DMP Regulations). A Pre Application Consultation Report will also be prepared to confirm full compliance with

<sup>15</sup> See: <http://www.legislation.gov.uk/ssi/2013/155/introduction/made>

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Regulation 7 of the DMP Regulations and Section 35B of the Town and Country Planning (Scotland) Act 1997 (as amended).

4.16 Volume 2 of the ES will contain a series of preliminary Chapters as set out in the following paragraphs.

#### ES Introductory Chapters

- Chapter 1: Introduction - this Chapter will address:
  - The Application
  - The Applicants
  - Description of the Environmental Impact Assessment (EIA) process, methodology used and structure of the Environmental Statement (ES) together with the significant effects approach.
  - A definition of the Significance of Environmental Effects
  - Rationale and Need for the Project
  - Local, National and International Policy context for Renewable Energy
  - Contribution of the Proposal (including socio-economic contribution)
- Chapter 2: Design Development & Consultation - this Chapter will address:
  - Introduction and location of search
  - Identification of potential sites and their selection
  - Preliminary consultation and site visits
  - Commitment to progression of site
  - Details of layout evolution
- Chapter 3: Description of the Project - this Chapter will address:
  - Site Description - Location, topography and land-use, designations, wind resource etc.
  - The Proposed Development - Site layout and design evolution, land use requirements, anemometer masts, the wind turbines, substation and control building, grid connection, main road access, on site access tracks
  - Construction - Construction program, site access tracks, crane outrigger pads, foundations, temporary works, cabling, substation and control building, materials and transport, pollution control measures, workforce.
  - Reinstatement - Site access tracks, turbine bases, other areas
  - Operation and Maintenance - Operational features, transport, workforce
  - Decommissioning
  - Grid connection options

4.17 Thereafter, the key environmental effects will be considered in a series of topic specific chapters as summarised below.

#### Chapter 4: Landscape and Visual Impact Assessment

4.18 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant and a 35km radius study area around the wind farm will be considered. The following outlines the intended approach to be used within the assessment.

### *Methodology and Consultations*

- 4.19 The Landscape and Visual Impact Assessment (LVIA) is intended to establish potential significant effects on the character and fabric of the landscape, and on the visual amenity of receptors within a 35km to 40km radius of the Development. It will also consider potential cumulative effects, which are defined as defined in SNH's guidance on 'Assessing the Cumulative Impact of Wind Farms (March 2012)<sup>16</sup>.
- 4.20 The assessment will involve desk study, field work, data processing and analysis as well as interpretation using professional judgment. The Development will be analysed to identify the elements with the potential to cause significant effects on the landscape and/or visual amenity of the Site and/or surrounding area.
- 4.21 The proposed development will introduce a number of elements to the landscape which will have an effect on the landscape fabric and character of the Development area. These elements include wind turbines, anemometer mast(s), access tracks, borrow pits, a substation and compound and a control room and compound. The scale of these elements also means that they are likely to be visible from a wide area within the surroundings, with consequent potential for effects on the visual amenity and character of the adjoining landscape. The LVIA will therefore address impacts on the Development area itself and wider study area. The LVIA will consider effects on:
- landscape fabric, caused by changes to the physical form of the landscape and its elements
  - landscape character, caused by changes in the key characteristics and qualities of the landscape as a result of the Development
  - visual amenity, caused by changes in the appearance of the landscape as a result of the Development
- 4.22 Impacts on landscape fabric occur when there is physical change to components of the landscape; landform, land use or land cover. Impacts on landscape character occur when there is change to the key characteristics of any landscape and the distinct and recognisable pattern of elements which give it a particular character. Visual impacts comprise changes in elements of views and the related effects on visual amenity.
- 4.23 Key issues to be considered in the LVIA will include:
- cumulative wind farm developments on Skye and the potential implications for the capacity of the landscape to accommodate the proposed development
  - potential effects on landscape designations / sensitive landscapes such as the Special Landscape Areas
  - potential effects on landscape character of the area, its visual amenity, and tourist and recreational land uses / interests.
- 4.24 Representatives of The Highland Council (THC) and Scottish Natural Heritage (SNH) will be consulted in order to confirm the scope of the LVIA and methodology to be used in the LVIA, as well as the number and location of representative viewpoints to be included; for example, from settlements, footpaths, roads, and vantage points. These will be informed by Zones of Theoretical Visibility (ZTV).
- 4.25 The following guidelines will be considered:
- SNH (2009) Strategic Locational Guidance for On-Shore Wind Farms<sup>17</sup>

<sup>16</sup> See: <http://www.snh.gov.uk/docs/A675503.pdf>

<sup>17</sup> See: <http://www.snh.gov.uk/docs/A247182.pdf>

- Landscape Institute and the Institute of Environmental Assessment (Third Edition, 2013), Guidelines for Landscape and Visual Impact Assessment
- Countryside Agency and SNH (2002), Landscape Character Assessment Guidance for England and Scotland<sup>18</sup>, and relevant Topic Papers
- SNH (2002), Guidelines on the Environmental Impacts of Wind Farms and Small Scale Hydroelectric Schemes<sup>19</sup>
- SNH (2012), Assessing the Cumulative Impact of Onshore Wind Energy Developments<sup>20</sup>
- SNH (2014), Visual Representation of Wind Farms<sup>21</sup>
- SNH (2014), Siting and Designing Wind Farms in the Landscape<sup>22</sup>
- Landscape Institute (2011) Advice Note 01/11 Use of photography and photomontage in landscape and visual assessment<sup>23</sup>
- Scottish Planning Policy (SPP) (2014)<sup>24</sup>
- The Highland Council (2015) Visualisation Standards for Wind Energy Developments<sup>25</sup>

*Baseline*

4.26 The baseline study will identify, review and assess the following:

- the landscape character of the Site and its surroundings, including seascape and coastal character, (based on the SNH Landscape Character Assessment documentation, verified, supplemented and amended where necessary)
- a review of other wind farms that will be included in the Cumulative LVIA (CLVIA) which will identify other constructed, consented and planned wind farms within 35 km of the Site that are capable of contributing to cumulative effects

4.27 The key characteristics of each landscape character type within the study area with predicted visibility of the Development will be described, together with the nature of views and the sensitivity of each landscape character area to changes associated with wind farm development. A preliminary ZTV drawing (130m tip height) is included within Appendix 5.

4.28 At present, known landscape designations and features that would require to be considered as part of the LVIA includes:

- The Cuillin Hills National Scenic Area / Wild Land Area
- Trotternish National Scenic Area
- Dunvegan Castle Garden and Designed Landscape
- North West Skye Special Landscape Area / Durinish Wild Land Area
- Greshornish Special Landscape Area

<sup>18</sup> See: <http://www.snh.org.uk/wwo/sharinggoodpractice/CCI/cci/guidance/Downloads/LCAfull.pdf>

<sup>19</sup> See: <http://www.snh.org.uk/pdfs/publications/heritagemanagement/Guidelines%20Windfarms%20Hydroelectric%20Schemes.pdf>

<sup>20</sup> See: <http://www.snh.gov.uk/docs/A675503.pdf>

<sup>21</sup> See: <http://www.snh.org.uk/pdfs/publications/heritagemanagement/Visual%20representation%20of%20wind%20farms%20-%20version%202.1%20-%20December%202014.pdf>

<sup>22</sup> See: <http://www.snh.gov.uk/publications-data-and-research/publications/search-the-catalogue/publication-detail/?id=2128>

<sup>23</sup> See: <http://www.landscapeinstitute.co.uk/PDF/Contribute/LIPhotographyAdviceNote01-11.pdf>

<sup>24</sup> See: <http://www.gov.scot/Resource/0045/00453827.pdf>

<sup>25</sup> See: [http://www.highland.gov.uk/downloads/file/12880/visualisation\\_standards\\_for\\_wind\\_energy\\_developments](http://www.highland.gov.uk/downloads/file/12880/visualisation_standards_for_wind_energy_developments)

- Trotternish and Tianavaig Special Landscape Area

4.29 A final selection of LVIA viewpoints would be agreed with SNH and THC but possible viewpoint locations could include:

- Locations within designed sites (i.e. MacLeod's table within the North West Skye Special Landscape Area / Cuillin Hills NSA / Trotternish)
- Locations within key cultural heritage features (i.e. Dunvegan Castle)
- Location from the A850 north of the Site / Waternish
- Location at Balmeanach
- Location around Harlosh and Feorlig

#### *Assessment of Effects*

4.30 Landscape and visual effects will be assessed based on a comparison of visual or landscape receptor sensitivity and predicted magnitude of change.

4.31 The sensitivity of the landscape to changes is defined as high, medium or low based on professional interpretation of a combination of parameters, including:

- the value placed on the landscape
- landscape quality and condition
- existing land-use
- the pattern and scale of the landscape
- visual enclosure/openness of views, scale of views, and the distribution of visual receptors
- the scope for mitigation, which will be in character with the existing landscape
- the degree to which the particular element or characteristic contribution to the landscape character can be replaced or substituted

4.32 Landscape Sensitivity in respect of land use at each of the viewpoints will be defined by the appointed landscape consultant and discussed with SNH and THC in advance of their assessments being progressed.

4.33 Viewpoint sensitivity is defined as high, medium, or low based on an interpretation of a combination of parameters, as follows:

- location and land use at the viewpoint
- landscape character and quality in the immediate vicinity of the viewpoint
- landscape character and quality of the intervening landscape and backdrop to the Development
- frequency of use
- Whether the receptor is static or transitory

4.34 In relation to land use at the viewpoint, visual sensitivity is defined as follows:

- **High:** Users of outdoor recreational facilities including strategic recreational footpaths and locations/vantage points, cycle routes and rights of way, whose attention may be focused on the landscape; important landscape features with physical, cultural or historic attributes; principal views from residential buildings; beauty spots or picnic areas

- **Medium:** Other footpaths; secondary views from residential properties, people travelling through the landscape on roads, trains or other transport routes (with the exception of tourist who have a high sensitivity)
- **Low:** People engaged in outdoor sports or recreation (other than appreciation of the landscape), commercial buildings, and other locations where people's attention may be focused on their work or activity and persons within industrial areas

4.35 The magnitude of change arising from the proposed development at any particular viewpoint is described as High, Medium, Low or negligible based on the interpretation of a combination of largely quantifiable parameters, as follows:

- distance of the viewpoint from the Development
- duration of the predicted impact
- extent of the Development in the view, i.e. the horizontal angle subtended by the Development
- angle of view in relation to main receptor activity
- background to the Development
- extent of other built development visible, particularly vertical elements

4.36 The parameters evaluated in relation to the magnitude of cumulative change include:

- The number of existing, consented and/or proposed wind farms visible
- The distance to each of the existing, consented, and/or proposed wind farms
- The direction and elevation of each wind farm in relation to the viewpoint
- The horizontal subtended angle occupied by each wind farm (i.e. the angle between the left hand visible turbine and right hand visible turbine in each wind farm)
- The frequency and duration of cumulative visibility
- In the case of landscape character areas (LCAs) and transportation/recreational routes, the proportion of the area or route subject to cumulative views

4.37 The Magnitude of Impacts that may arise will be defined by the appointed landscape consultant and discussed with SNH and THC in advance of their assessments being progressed.

4.38 The LVIA will be produced to a standard suitable for submission as part of the ES, in accordance with the EIA Regulations and the third edition of the Guidelines for Landscape and Visual Impact Assessment (GLVIA) (Landscape Institute and Institute of Environmental Management and Assessment, 2013) together with other relevant guidance.

4.39 The LVIA will consider the landscape and visual effects on receptors identified in the agreed study area during construction, operation and de-commissioning stages of the Development. The potential impacts of construction and operational aspects of the Development, including ancillary elements (e.g. aviation lighting requirements, site infrastructure and any off-site impacts associated with access or highways improvements related to the Development) will also be assessed.

#### *Mitigation Measures, Residual Effects & Conclusions*

4.40 The outcomes of the LVIA will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on landscape and visual receptors.

## Chapter 5: Ecological Assessment (Flora and Fauna)

- 4.41 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant. The following outlines the intended approach to be used within the assessment.
- 4.42 During the initial stages of project development, ecological surveys have been conducted in and around the proposed wind turbine locations. Such surveys are time critical and a series of survey efforts over consecutive years are required but they have also been valuable to clarify whether unresolvable ecological constraints exist at this Site. Appendix 6 contains a high level summary of the survey findings to date.
- 4.43 Direct effects would include the removal of a particular natural heritage feature or asset (such as a particular habitat or a breeding, roosting or feeding location for fauna) as a result of the Development progressing. Indirect effects would include impacts on off-site breeding, feeding or roosting locations for fauna through disturbance or barrier effects arising as a result of the Development, or through a change in the off-site hydrological profile of the Site.

### *Methodology and Consultations*

- 4.44 In order to ensure compliance with industry best practice, a modified definition of significance of effects will be used in the Ecology assessment which is based on CIEEM guidance as well as SNH sharing good practice events and previous discussions with SNH and RSPB.

Evaluating Ecological Effect Significance					
Receptor Sensitivity	Magnitude of Impact				
	Very High	High	Medium	Low	Negligible
Very High	Major	Major	Major	Moderate	Minor
High	Major	Major	Moderate	Minor	Minor/none
Medium	Major/moderate	Moderate	Minor	Minor	Minor/none
Low	Moderate	Minor	Minor/none	Minor/none	Minor/none
Negligible	Minor	Minor/none	Minor/none	Minor/none	Minor/none

- 4.45 Significant effects will be those that are assessed as having a Major or Major / Moderate significance. This approach will be used in the Ecological Impact Assessments instead of the generic approach set out in Section 4 above.
- 4.46 The impacts of the proposed development on natural heritage assets will be identified and assessed to define direct and indirect effects on features. Proposals for mitigation of effects will be identified where these are deemed to be significant in EIA terms. Appropriate enhancement opportunities may also be identified in the case on effects that are deemed insignificant in EIA terms.
- 4.47 The results of the assessment will be presented in an ES chapter together with the production of relevant appendices.

### *Baseline*

- 4.48 The baseline shall be established from site surveys. Surveys employed at the Site shall be agreed with Scottish Natural Heritage and shall include:
- Extended Phase 1 habitat surveys

- Mammal and Protected Species surveys
- NVC habitat survey of Potential Ground Water Dependent Terrestrial Ecosystems (GWTDEs) and habitats listed under Annex 1 of the Habitats Directive
- Bat Surveys

4.49 Based on the results of the baseline surveys undertaken it is intended to make data requests for further information to Highland Biological Recording Group (HBRG), Scottish Badgers and the Amphibian and Reptile Conservation Trust. However, it is understood that there are no badgers, Wild Cats or Water Voles on Skye and as such, following completion of the initial baseline assessments, further consideration of these species is expected to be able to be scoped out of the EIA.

4.50 To date the following surveys have been completed:

- Preliminary desk based study using the NBN Gateway
- Extended Phase 1 Survey; habitat mapping and protected species survey

4.51 The following surveys have been commissioned to take place over the remainder of 2015 and during 2016:

- Full desk-based study
- Extended Phase 1 survey of development areas not previously surveyed
- NVC survey of development areas not previously surveyed

4.52 In respect of designated sites, potential effects on the integrity of the Ascrib, Isay and Dunvegan Special Area of Conservation (for Common Seal) will be considered. Given that the only SSSI in close proximity to the Site is a geological SSSI (An Cleireach) there will be no adverse effects likely to arise as a result of the proposed development.

#### *Assessment of Effects*

4.53 It is proposed that the Sensitivity of Receptors will be defined as follows:

- **Very High:** An internationally designated site, candidate site, or an area meeting the criteria for an international designation (e.g. Special Area of Conservation (SAC)). Large areas of priority habitat listed under Annex I of the Habitats Directive, and smaller areas of such a habitat that are essential to maintain the viability of that ecological resource. A regularly occurring, nationally significant population of any internationally important species, listed under Annex II or Annex IV of the Habitats Directive.
- **High:** A nationally designated site, or area meeting criteria for national level designations (e.g. Site of Special Scientific Interest (SSSI)). Significant extents of a priority habitat identified in the Scottish Biodiversity List, or smaller areas which are essential to maintain the viability of that ecological resource. A regularly occurring, regionally significant population of any nationally important species listed as a Scottish Biodiversity List priority species and Species listed under Schedule 1 or Schedule 5 of the Wildlife and Countryside Act or Annex II or Annex IV of the Habitats Directive.
- **Medium:** Viable areas of key semi-natural habitat identified in the Scottish Biodiversity List. A regularly occurring, locally significant population of any nationally important species listed as a Scottish Biodiversity List priority species and Species listed under Schedule 5 of the Wildlife and Countryside Act or Annex II or Annex IV of the Habitats Directive. Sites which exceed the local authority-level designations but fall short of SSSI selection guidelines, including areas of semi-natural woodland exceeding 0.25ha.

- **Low:** Areas of semi-natural ancient woodland smaller than 0.25ha. Sites of Importance for Nature Conservation or equivalent sites selected on local authority criteria. Local Nature Reserves. Other species of conservation concern, including species listed under the Local BAP (LBAP). Areas of habitat or species considered to appreciably enrich the ecological resource within the local context e.g. species-rich flushes or hedgerows.
- **Negligible:** All other species and habitats that are widespread and common and which are not present in locally, regionally or nationally important numbers or habitats which are considered to be of poor ecological value (e.g. commercial forestry).

4.54 It is proposed that the Magnitude of Impacts will be defined as follows:

- **Very High:** Total loss or very major alteration to key elements/features of the baseline (pre-development) conditions such that the post development character / composition / attributes would be fundamentally changed and may be lost from the site altogether. Guide: <20% of population/habitat remains.
- **High:** Major loss or major alteration to key elements / features of the baseline conditions such that the post development character / composition/attributes would be fundamentally changed. Guide: 20-80% of population/habitat lost.
- **Medium:** Loss or alteration to one or more key elements / features of the baseline conditions such that post development character / composition / attributes would be partially changed. Guide: 5-20% of population/habitat lost.
- **Low:** Minor shift away from baseline conditions. Change arising from the loss / alteration would be discernible but the underlying character/composition/attributes would be similar to pre-development circumstances/patterns. Guide: 1-5% of population/habitat lost.
- **Negligible:** Very slight change from baseline condition. Change barely distinguishable, approximating to the "no change" situation. Guide: < 1% population/habitat lost.

#### *Mitigation Measures, Residual Effects & Conclusions*

4.55 The outcomes of the ecological impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on ecological receptors.

#### Chapter 6: Ornithology

- 4.56 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant. The following outlines the intended approach to be used within the assessment.
- 4.57 During the initial stages of project development, ornithological surveys have been conducted in and around the proposed wind turbine locations. Such surveys are time critical and a series of survey efforts over consecutive years are required but they have also been valuable to clarify whether unresolvable ecological constraints exist at this Site. Appendix 6 contains a high level summary of the survey findings to date.
- 4.58 Direct effects would include the removal of a particular natural heritage feature or asset (such as a particular habitat or a breeding, roosting or feeding location for fauna) as a result of the Development progressing. Indirect effects would include impacts on off-site breeding, feeding or roosting locations for fauna through disturbance or barrier effects arising as a result of the Development, or through a change in the off-site hydrological profile of the Site.

### *Methodology and Consultations*

- 4.59 In order to ensure compliance with industry best practice, a modified definition of significance of effects will be used in the Ornithology assessment which is based on CIEEM guidance as well as SNH sharing good practice events and previous discussions with SNH and RSPB.

Evaluating Ornithological Effect Significance					
Receptor Sensitivity	Magnitude of Impact				
	Very High	High	Medium	Low	Negligible
Very High	Major	Major	Major	Moderate	Minor
High	Major	Major	Moderate	Minor	Minor/none
Medium	Major/moderate	Moderate	Minor	Minor	Minor/none
Low	Moderate	Minor	Minor/none	Minor/none	Minor/none
Negligible	Minor	Minor/none	Minor/none	Minor/none	Minor/none

- 4.60 Significant effects will be those that are assessed as having a Major or Major / Moderate significance. This approach will be used in the Ornithological Impact Assessments instead of the generic approach set out in Section 4 above.
- 4.61 The impacts of the proposed development on natural heritage assets will be identified and assessed to define direct and indirect effects on features. Proposals for mitigation of effects will be identified where these are deemed to be significant in EIA terms. Appropriate enhancement opportunities may also be identified in the case on effects that are deemed insignificant in EIA terms.
- 4.62 The results of the assessment will be presented in an ES chapter together with the production of relevant appendices.

### *Baseline*

- 4.63 The baseline shall be established from site surveys. Surveys employed at the Site shall be agreed with Scottish Natural Heritage and RSPB and shall include:
- Vantage Point (VP) bird surveys
  - Brown and Shepherd breeding bird surveys
  - Wintering bird surveys
- 4.64 Based on the results of the baseline surveys undertaken it is intended to make data requests for further information to Royal Society for the Protection of Birds (RSPB), Wildfowl and Wetlands Trust (WWT), Highland Raptor Study Group (HRSG), British Trust for Ornithology (BTO) and the Highland Biological Recording Group (HBRG).
- 4.65 To date the following surveys have been completed:
- Flight activity surveys
  - Breeding bird surveys
  - Breeding raptor and owl surveys
  - Wintering bird surveys

- 4.66 The following surveys have been commissioned to take place over the remainder of 2015 and during 2016:
- Further flight activity surveys (Autumn migrations, non-breeding season activity, spring migrations)
  - Further wintering bird survey
  - Black Grouse lek survey
  - Further breeding bird survey
  - Further breeding raptor and owl survey
- 4.67 It is understood that there are Golden Eagles and White Tailed Eagles in the area and it is anticipated that Collision Risk Modelling (CRM) will be undertaken for these species. Any CRM will draw from and build on the work undertaken previously in support of the Glen Ullinish Wind Farm.
- 4.68 In respect of designated sites, potential effects on the integrity of the Cuillin Hills Special Protection Area (for breeding Golden Eagle) will be considered. Given that the only SSSI in close proximity to the Site is a geological SSSI (An Cleireach) there will be no adverse effects likely to arise as a result of the proposed development.

#### *Assessment of Effects*

- 4.69 It is proposed that the Sensitivity of Receptors will be defined as follows:
- **Very High:** An internationally designated site, candidate site, or an area meeting the criteria for an international designation (e.g. Special Protection Area (SPA)). A regularly occurring, nationally significant population of any internationally important species, listed under Annex I of the Birds Directive, or regularly occurring migratory species listed under Annex II/2 of the Birds Directive connected to an SPA designated for this species.
  - **High:** A nationally designated site or area meeting criteria for national level designations (e.g. Site of Special Scientific Interest (SSSI)). A regularly occurring, regionally significant population of any nationally important species listed as a Scottish Biodiversity List priority species and Species listed under Schedule 1 of the Wildlife and Countryside Act or Annex I of the Birds Directive.
  - **Medium:** A regularly occurring, locally significant population of any nationally important species listed as a Scottish Biodiversity List priority species and species listed under Schedule 1 of the Wildlife and Countryside Act or Annex I of the Birds Directive. Sites which exceed the local authority-level designations but fall short of SSSI selection guidelines.
  - **Low:** Sites of Importance for Nature Conservation or equivalent sites selected on local authority criteria. Local Nature Reserves. Other species of conservation concern, including species included under the Birds of Conservation Concern Red List (Eaton et al. 2009) or Local BAP (LBAP). Species considered to appreciably enrich the ecological resource within the local context e.g. species-rich flushes or hedgerows.
  - **Negligible:** All other species that are widespread and common and which are not present in locally, regionally or nationally important numbers or habitats which are considered to be of poor ecological value (e.g. arable farmland).
- 4.70 It is proposed that the Magnitude of Impacts will be defined as follows:
- **Very High:** Total loss or very major alteration to key elements/features of the baseline (pre-development) conditions such that the post development character / composition /

attributes would be fundamentally changed and may be lost from the site altogether. Guide: <20% of population/habitat remains.

- **High:** Major loss or major alteration to key elements / features of the baseline conditions such that the post development character / composition/attributes would be fundamentally changed. Guide: 20-80% of population/habitat lost.
- **Medium:** Loss or alteration to one or more key elements / features of the baseline conditions such that post development character / composition / attributes would be partially changed. Guide: 5-20% of population/habitat lost.
- **Low:** Minor shift away from baseline conditions. Change arising from the loss / alteration would be discernible but the underlying character/composition/attributes would be similar to pre-development circumstances/patterns. Guide: 1-5% of population/habitat lost.
- **Negligible:** Very slight change from baseline condition. Change barely distinguishable, approximating to the "no change" situation. Guide: < 1% population/habitat lost.

#### *Mitigation Measures, Residual Effects & Conclusions*

4.71 The outcomes of the ornithological impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on ornithological receptors.

#### Chapter 7: Cultural Heritage

4.72 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant. The following outlines the intended approach to be used within the assessment.

4.73 The archaeology and cultural heritage assessment will be undertaken with reference to national, regional and local planning policy, legislation and guidance, and will be conducted in accordance with the Institute for Chartered Archaeologists' Code of Conduct (ClfA 2014) and Standard and Guidance for Historic Environment desk-based assessment (ClfA 2012), and the Highland Council Standards for Archaeological Work (Highland Council 2012).

#### *Methodology and Consultations*

4.74 The assessment will include a desk based assessment and if considered necessary a walk over field visit. The cultural heritage impact assessment shall include consideration of direct effects of the proposal on cultural heritage features and indirect visual effects on significant features up to 5km from the Site.

4.75 Direct effects on known (or on unknown and buried) archaeological remains relate to the possibility of disturbing, removing or destroying in situ remains and artefacts during ground works associated with the construction phase; e.g. excavations for foundations, access tracks and development of borrow pits.

4.76 Indirect effects include visual impacts upon the setting of designated assets such as Listed Buildings, Scheduled Monuments and Historic Gardens and Designed Landscapes.

4.77 All sites of cultural heritage interest within the proposed wind farm development area will be identified. This will include identification of World Heritage Sites, Scheduled Monuments, Listed Buildings, Conservation Areas, Inventory Gardens and Designed Landscapes, and Inventory Battlefields at distances up to 10 km from the outermost turbines.

- 
- 4.78 Subject to scoping responses from Historic Environment Scotland (HES) and THC's Historic Environment Team (the HCET), other assets at greater distances may be included in the setting assessment. The scope of the assessment will be agreed with HES and the HCET following their responses to this Scoping document.

*Baseline*

- 4.79 A desk-based appraisal of the proposed development area will be conducted, to identify all known cultural heritage features, designated or otherwise, within the proposed development area, and to inform the assessment of the archaeological potential of the land. The assessment will use the following sources:

- databases and archival records on recorded sites and monuments held by HES (<http://hsewsf.sedsh.gov.uk/gisdl.html>), CANMORE, the Royal Commission on the Ancient and Historical Monuments of Scotland database (RCAHMS; <http://jura.raahms.gov.uk/PASTMAP/start.jsp>), THC Historic Environment Record (HER)
- Ordnance Survey maps (principally 1st and 2nd edition), and other published historic maps held in the Map Library of the National Library of Scotland
- vertical, and where relevant oblique aerial photographs, held by RCAHMS and modern online aerial photographic imagery (GoogleTM; BingTM)
- relevant published bibliographic material and on-line historical research resources, including early descriptions of the area
- the Scottish Palaeoecological Archive Database (SPAD) (<http://www.geo.ed.ac.uk/spad/>)
- the Historic Land-use Assessment data for Scotland (HLAMAP) (<http://hla.raahms.gov.uk/>)
- other appropriate sources of information (e.g. local archives, museums, archaeological / historical societies, individuals), following advice received from consultees

- 4.80 A reconnaissance walk-over field survey will also be undertaken of the proposed wind farm area as part of the assessment.

- 4.81 An initial search on PastMap has identified, within 10 km of the Site, 1 Garden and Designed Landscape (Dunvegan Castle), 10 Scheduled Ancient Monuments (SAM) and 24 Listed Buildings. There is a grouping of Listed Buildings (including the A Listed Dunvegan Castle) and SAMs within Dunvegan itself as well as a series of Listed Buildings and SAMs (including Brochs and a Fort) further south at Bracadale. There are no designated features within the Site itself, the closest designated features being a pair of Chambered Cairns (SAM) to the immediate south of the Site on the southern side of the A863. There also appears to be, within the Site, 8 other features identified in THC's HER or the RCAHMS database that are former farmsteads or sheiling huts. A full gazetteer of sites will be generated and confirmed with THC and HES prior to the assessment being undertaken

*Assessment of Effects*

- 4.82 It is proposed that the Sensitivity of Receptors will be defined as follows:

- **High** - Assets of national importance including:
  - Scheduled Monuments, and sites proposed for scheduling
  - Undesignated archaeological sites and areas of likely national importance identified in HERs/SMRs
  - Category A Listed Buildings
  - Gardens and Designed Landscapes (Inventory sites)

- Historic Battlefields (Inventory sites)
- **Medium:** Assets of regional importance including:
  - Archaeological sites and areas of distinctive regional importance
  - Category B Listed Buildings
  - Conservation Areas
- **Low:** Assets of local importance including:
  - Category C Listed Buildings
  - Archaeological sites of local importance
  - Unlisted historic buildings and townscapes with local (vernacular) characteristics
- **Negligible:** Assets of little or no importance including:
  - Sites of former archaeological features
  - Unlisted buildings of minor historic or architectural interest
  - Poorly preserved examples of particular types of feature
  - Artefact Find-spots

4.83 It is proposed that the Magnitude of Impacts will be defined as follows:

- **High:** A fundamental change to the physical condition of a heritage asset, leading to total loss or major alteration of its character / Comprehensive change in the surroundings of an asset, such that its baseline setting is substantially or totally altered and key visual links and relationships with the surroundings are lost or substantially affected.
- **Medium:** A material change to the physical condition of a heritage asset, resulting in partial loss or some alteration of its character / An impact discernibly changing the surroundings of an asset, such that its baseline setting is partly and materially altered and key visual links and relationships with the surroundings are materially affected.
- **Low:** A slight but detectable change to the physical condition of a heritage asset, resulting in minor alteration of its character / A slight but detectable change in the surroundings of an asset, resulting in superficial alteration of its baseline setting and key visual links and relationships with the surroundings are unaffected.
- **Negligible:** A barely distinguishable change to the physical condition of a heritage asset / A very slight and barely distinguishable change in the surroundings of an asset, resulting in no obvious alteration of its baseline setting or to key visual links and relationships with the surroundings.

4.84 The impacts of the proposed development on cultural heritage assets will be assessed on the basis of their type, as follows:

- identification and assessment of direct effects on heritage assets and proposals for mitigation of effects
- assessment of potential for impacts on buried archaeological resources and proposals for mitigation of such effects
- assessment of effects on the settings of designated heritage assets

- assessment of cumulative impacts on the settings of designated heritage assets in combination with other wind farm schemes (as identified by the LVIA through consultation)
- 4.85 The results of the assessment will be presented in an ES chapter together with the production of appendices, which would include gazetteers of on-site constraints and of off-site receptors with predicted visibility of the proposed development within 10 km of the proposed wind turbines. Assessment distances will be agreed with HES and the HCET. Depending upon the outcome of the analysis of the final ZTV, and following consultation with HES and the HCET, visualisations (either wireframes or photomontages) may also be produced for key receptors to aid in assessment and representation of visual impact.

#### *Mitigation Measures, Residual Effects & Conclusions*

- 4.86 The outcomes of the cultural heritage impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on cultural heritage receptors.

#### Chapter 8: Geology, Hydrology and Hydrogeology Assessment

- 4.87 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant. The following outlines the intended approach to be used within the assessment.

#### *Methodology and Consultations*

- 4.88 Information on private water supplies will be sourced from THC. A desktop study and site visit will also be undertaken to confirm the hydrological, geological and peat characteristics of the Site.

#### *Baseline*

- 4.89 The hydrological, geological and peat characteristics will be defined along with an outline of likely significant effects.
- 4.90 Some preliminary peat probing has already been undertaken and initial results suggest peat is generally minimal across the Site although areas of deeper peat exist around the upper reaches of the Caroy River. At the design freeze stage (following on from completion of the baseline studies) a further targeted peat depth probing exercise will be undertaken at the proposed infrastructure locations across the Site.
- 4.91 In respect of designated sites, the An Cleireach SSSI (for Igneous petrology) is in close proximity to the Site but there will be no adverse effects likely to arise as a result of the proposed development.

#### *Assessment of Effects*

- 4.92 The appointed consultant will define Sensitivity of Receptors and likely Magnitude of Impacts and these will be discussed with SEPA and THC prior to the assessment being undertaken. The objective within the infrastructure design will be to minimise any disturbance to peat deposits but otherwise to ensure that the integrity of the deposits is maintained. Similarly Ground Water Dependent Terrestrial Ecosystems (GWDTE) will be given an appropriate buffer and where that is not possible the objective will be to ensure that the integrity of the GWDTE is not adversely affected. Flood risk will also be fully analysed and quantified.

### *Mitigation Measures, Residual Effects & Conclusions*

4.93 The outcomes of the hydrological impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations or through relevant construction management measures, these will be clearly identified within the ES and a view offered regarding the overall effect on receptors.

### Chapter 9: Noise Assessment

4.94 This assessment, and preparation of the ES chapter, would be undertaken by RES. The following outlines the intended approach to be used within the assessment.

#### *Methodology and Consultations*

4.95 Within Scotland, noise is defined within the planning context by 'Planning Advice Note 1/2011: Planning and Noise'. For wind turbines in Scotland the Planning Advice Note 1/2011 refers to the use of the Department of Trade and Industry's 'The Assessment and Rating of Noise from Wind Farms'. It is therefore considered that the use of ETSU-R-97, as criteria for assessment of wind farm noise fulfils the requirements of Planning Advice Note 1/2011.

4.96 The ETSU-R-97 report details that the noise restrictions engendered to a development in order to control noise must balance the environmental impacts of the Development (particularly in relation to residential amenity) with the widely recognised and policy driven benefits that would arise through the Development of renewable energy resources.

4.97 The detailed methodologies set out in ETSU-R-97 and how they are applied to the proposed wind farm will be set out in within the ES.

#### *Baseline environment*

4.98 To inform the design process, the following initial steps will be undertaken:

- identify the nearest noise sensitive properties
- identify the type and noise emission characteristics for the candidate wind turbine
- calculate the noise immission levels (noise at the receiver location) predicted as part of operation of the proposed wind turbines as a function of wind speed at the nearest sensitive properties
- determine the need for a background noise survey
- agree the acoustic assessment methodology with The Highland Council's Environmental Health Department
- assess the predicted noise immission levels according to relevant planning policy guidelines

4.99 If it is deemed necessary to undertake a background noise survey, the actual locations would be agreed with THC's Environmental Health Department. For the survey, the wind speed and direction would be recorded and, as part of the assessment, the noise data would be cross-referred with rain data measured at on-site using a rain gauge.

4.100 Acquisition of baseline data and the prediction of wind turbine noise immission levels at receptor locations will adopt what is now viewed as best practice, as set out in the Institute of Acoustics "Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise" (2013).

### ***Assessment of Effects***

4.101 Noise emissions from modern wind turbines are either mechanical (from machinery housed within the nacelle) or aerodynamic (noise from the movement of the blades through the air around the horizontal axis). Noise emissions from the mechanical equipment housed within the nacelles has been reduced significantly through technological improvements and noise insulation of the nacelle. As such the characteristic noise from wind turbines is the aerodynamic noise of the air moving over the blades.

4.102 Aerodynamic noise from the blades generally increases with wind speed but at the same time ambient background noise at a noise receptor is also likely to increase. For example, while higher wind speeds will mean a greater level of aerodynamic noise the noise of the wind itself passing through natural and built features in the landscape (trees, buildings, etc.) will generally mask noise from wind turbines. Causes of potential noise impacts to be assessed are:

- operational noise from the turbines
- construction noise due to construction plant and construction traffic.

4.103 The noise assessment will be carried out to determine construction and operational noise in relation to appropriate guidance. The operational noise assessment will take into consideration the following guidance:

- PAN 1/2011 Planning and Noise
- ETSU-R-97 The Assessment and Rating of Noise from Wind Farms
- Institute of Acoustics (2009) Acoustics Bulletin Article, Prediction and Assessment of Noise from Wind Farms; Bowdler et al, Vol. 34, No. 2
- Institute of Acoustics (2013) A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise

4.104 With regard to construction noise the following legislation and standards will be considered:

- The Control of Pollution Act 1974 (CoPA 1974)
- BS 5228: 2009 Code of Practice for Noise and Vibration Control on Construction and Open Sites

4.105 The Sensitivity of Receptors and Magnitude of Impacts will be defined and discussed with THC prior to the assessment being undertaken.

### ***Mitigation Measures, Residual Effects & Conclusions***

4.106 The outcomes of the noise impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on receptors, including the potential effects on amenity.

### **Chapter 10: Transportation and Access**

4.107 This assessment, and preparation of the ES chapter, would be undertaken by an independent consultant. The following outlines the intended approach to be used within the assessment.

### *Methodology and Consultations*

- 4.108 Confirmation of the extent of the study area is sought from THC (as local roads authority) and Transport Scotland and their agents BEAR (as trunk roads agencies). In addition, identification of data sources for use in the project is also requested.
- 4.109 With regard to abnormal load deliveries to the proposed Site, a detailed review will be undertaken for the chosen route through to the proposed site access to include assessment of existing information, site visit, swept path analysis and gradient checks at constrained locations where existing information is not available. All horizontal, vertical and weight constraints would be noted for assessment.
- 4.110 Swept path assessments of the horizontal and vertical constraints would be undertaken for the design loads where necessary. Consultation with the abnormal load officers of the consultees would be undertaken through the Electronic Service Delivery for Abnormal Loads (ESDAL) database and an overview of underground utilities would be undertaken to identify any further design risks.
- 4.111 The impact assessment will be undertaken in line with Institute of Environmental Assessment (IEA) guidelines, with a high level sensitivity and statistical review of construction phase impact and will include the following:
- A summary of relevant policy
  - A summary of the methodology adopted for the assessment
  - A description of the existing and future baseline conditions
  - An estimate of trip generation during the construction, operational and decommissioning phases of the Development
  - An assessment of the impacts that are likely to occur
  - Identification of appropriate mitigation measures
  - Provision of a preliminary site access design
  - Framework Traffic Management Plan

### *Baseline*

- 4.112 Existing conditions of the proposed access route(s) including traffic flows and recognised constraints or sensitive locations would be identified. This would be done through site investigations to examine the route and in collaboration with THC / Transport Scotland to establish road strength and safety issues such as visibility splays.
- 4.113 Traffic flow and speed data will be obtained from the relevant authorities and supplemented with new automatic traffic count surveys if scoping discussions identify a necessity for additional data to be collected. The transport assessment will cover the construction, operational and decommissioning phases of the project. The worst case scenario for traffic impact occurs during construction; the operational and decommissioning phases usually generating far fewer trips than the construction phase.

### *Assessment of Effects*

- 4.114 The number and type of construction, operation and decommissioning traffic movements would be determined. Once this is established this would be assessed against the available access routes to the proposed Site. Any traffic management measures which would be required to ensure the safety of other road users would be examined.

4.115 Any road improvements, upgrading necessary would be described and technical scale drawings would be produced.

4.116 The Sensitivity of Receptors and Magnitude of Impacts will be defined and discussed with THC prior to the assessment being undertaken.

#### *Mitigation Measures, Residual Effects & Conclusions*

4.117 The outcomes of the hydrology and hydrogeology impact assessments will be used to influence and guide the infrastructure layout to be submitted as the planning application. Where any significant adverse effects cannot be mitigated through design iterations, these will be clearly identified within the ES and a view offered regarding the overall effect on receptors.

#### Chapter 11: Summary

4.118 This chapter will set out a summary of predicted Significant Impacts and a series of conclusions on the overall environmental impact of the Proposals.

#### Other Matters

4.119 At this time, given the expectation that there will be minimal associated environmental effects, it is intended that the following issues will be addressed as necessary within succinct technical appendices that consider likely effects of:

- Air Quality
- Electromagnetic Interference
- Aviation
- Health and Safety
- Ice Throw
- Shadow Flicker

4.120 In addition, given that information on the potential grid connection is not fully available to undertake the level of assessment expected in a competent ES, this will also be addressed within a high level technical appendix.

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## 5.0 CONCLUSION

- 5.1 In conclusion, this scoping report seeks the views of the relevant consultees on the proposed EIA and the content of the ES for Gleann Eoghainn Wind Farm.
- 5.2 RES is experienced in wind farm development and seeks to work closely with consultees on this project to agree suitable solutions to potential site issues.

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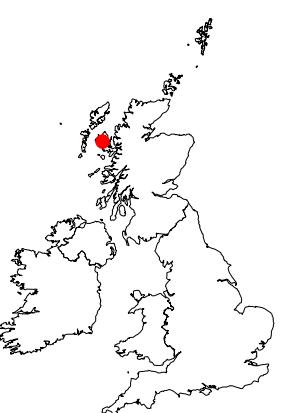
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APPENDIX 1: SITE LOCATION PLAN

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KEY

**SITE BOUNDARY (AREA = 966.5 Ha)**



SITE LOCATION – NOT TO SCALE



01	RM	NM	SM	04-09-2015	FIRST ISSUE
ISSUE	DRAWN	CHKD	APPD	DATE	REVISION NOTES
LAYOUT DWG N/A					T-LAYOUT NO. N/A

DRAWING NUMBER

03229D2202-01

COORDS OSGB 1936, DATUM, Meters

PURPOSE PRELIMINARY

SCALE 1:25,000 ORIGINAL PLOT SIZE A3

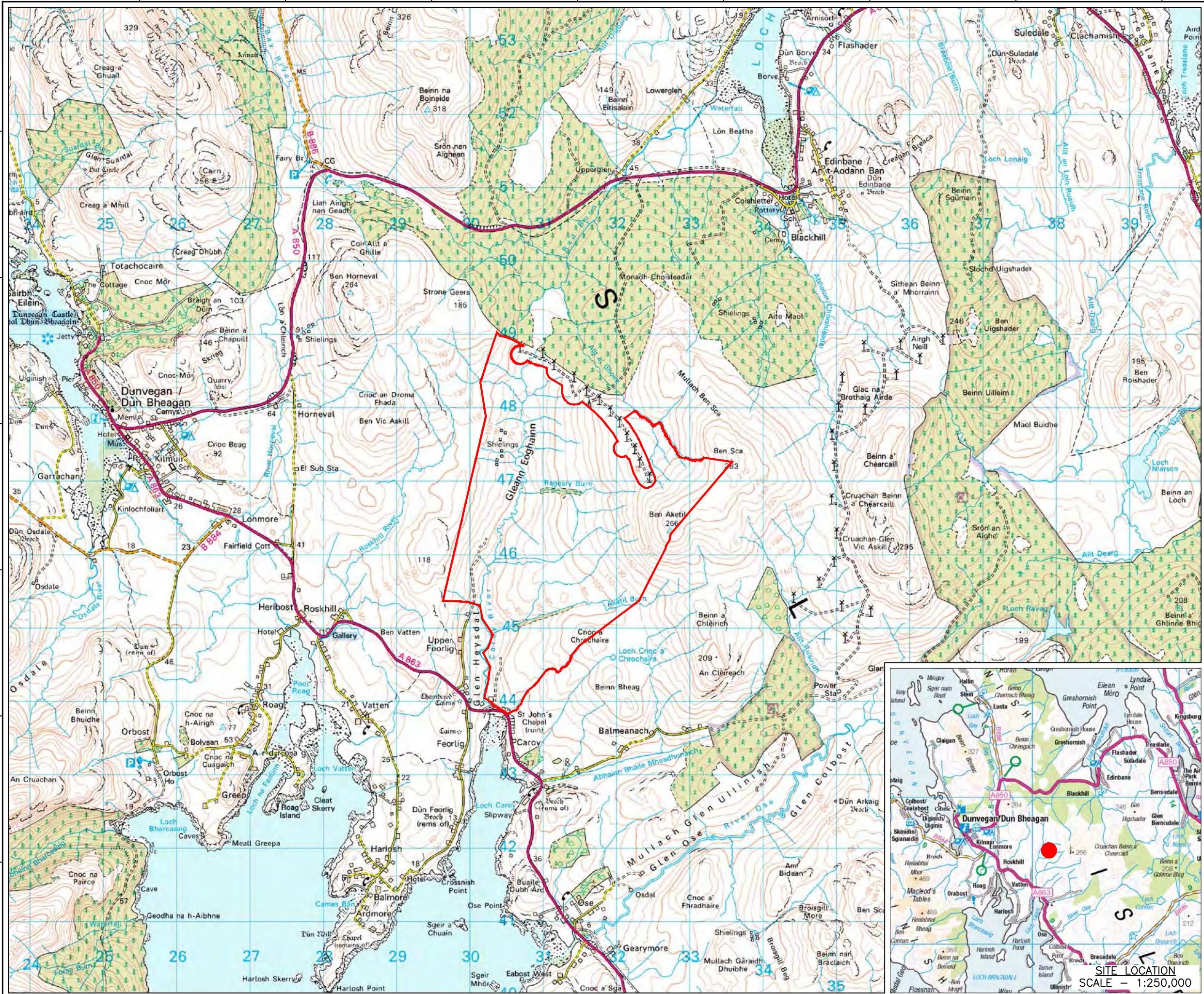
PROJECT TITLE  
**GLEANN EOGHAINN WIND FARM**

DRAWING TITLE  
**SITE BOUNDARY**

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APPENDIX 2: INDICATIVE INFRASTRUCTURE DRAWING (FEBRUARY 2016)

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## GLEANN EOGHAINN WIND FARM

### APPENDIX 2

### INDICATIVE INFRASTRUCTURE DRAWING

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2015 LICENCE NUMBER 0100031673.

- TURBINE LOCATION
- SITE BOUNDARY
- SUBSTATION LOCATION
- SITE TRACKS**
- NEW
- UPGRADE

NOTE:

THE PROPOSED TURBINE AND INFRASTRUCTURE LAYOUT SHOWN ARE INDICATIVE ONLY AND SUBJECT TO FURTHER DETAILED DESIGN.



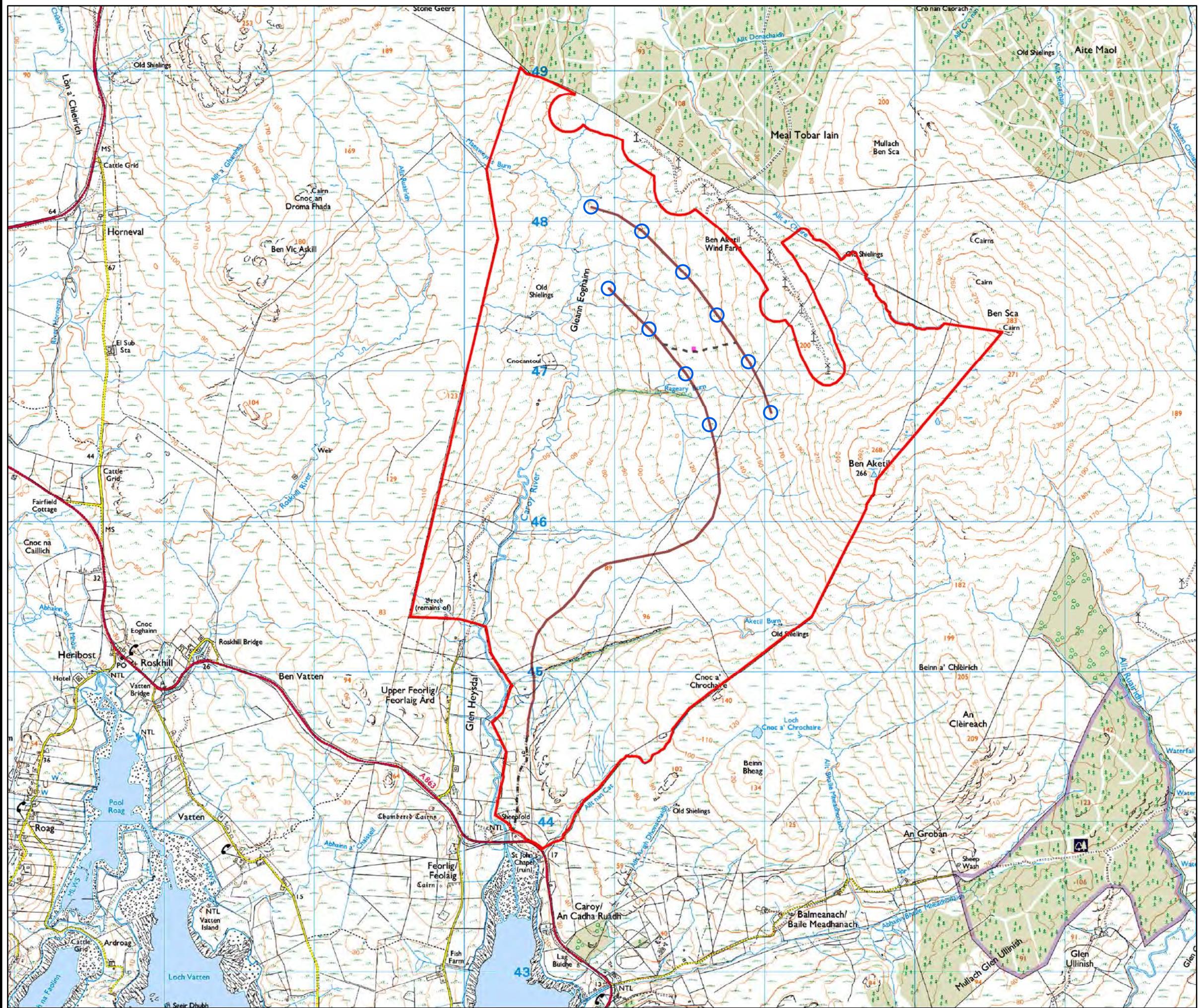
LAYOUT DWG 03229D0001-02 T-LAYOUT NO. PSC0dvg015

DRAWING NUMBER 03229D2203-01

SCALE - 1:25,000 @ A3

EIA SCOPING REQUEST 2015

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APPENDIX 3: THC PRE-APPLICATION CONSULTATION RESPONSE (23 DECEMBER 2015)

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Any advice provided under this service is given on the basis of the professional opinion of the officer(s) concerned, based on the information provided and the planning policies and site constraints prevailing at the time, and any views expressed are not intended to prejudice the Council's determination of any subsequently formal planning application.

This pre-application advice has been specifically prepared for RES Ltd as the applicant/agent for the proposed development at Land At Ben Aketil Feorlig Dunvegan Isle Of Skye.

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# Pre-Application Advice Pack

Reference No: 15/03994/PREAPP

Date Issued: 20 December 2015

Confidentiality Requested: Yes

## 1. Proposed Development

Proposed wind farm at Gleann Eoghainn Wind Farm (between 7 and 10 wind turbines) up to 125m tip height and potential combined installed capacity of up to 35MW. Associated access track and ancillary infrastructure including control building and wind farm sub-station.

## 2. Summary of Key Issues

The Highland Council is generally supportive of renewable energy projects where these can be appropriately located without significantly detrimental impacts on amenity and/or the built, cultural and natural environment.

Key issues here are likely to involve matters of location and design, ornithology and the peat environment.

The extent of additional visual influence of the development may not be significantly greater than the existing and/or consented schemes within this area. There is therefore some merit in clustering development within this part of Skye as a result. However, the success or otherwise of a scheme in this location will, to a large extent, be reliant on the design. Mirroring the Ben Aketil development may not be entirely appropriate but that is not to say that it would be unacceptable - simply that a full understanding of the design rational and/or any alternatives would need to be considered.

The cumulative effect of the development is not only restricted to visual considerations but also ornithology; in particular the effect on golden eagle and white tailed eagle. Already the predicted mortality for these species is of concern and considerable effort will need to be expended to demonstrate that development here would not push this to unacceptable levels.

SPP emphasises the importance of carbon rich soils. The proposed layout shows the majority of turbines sited on an area of 'Carbon Rich Soil, Deep Peat and Priority Peatland Habitat,' a Group 2 Area of Significant Protection in the Council's Spatial Framework. Therefore peat survey and assessment will be required to take careful consideration of how the development will avoid or mitigate impacts to the peat resource. Full consideration of this would include detail of how siting has taken into account peat disturbance and the consequence of peat excavation and storage.

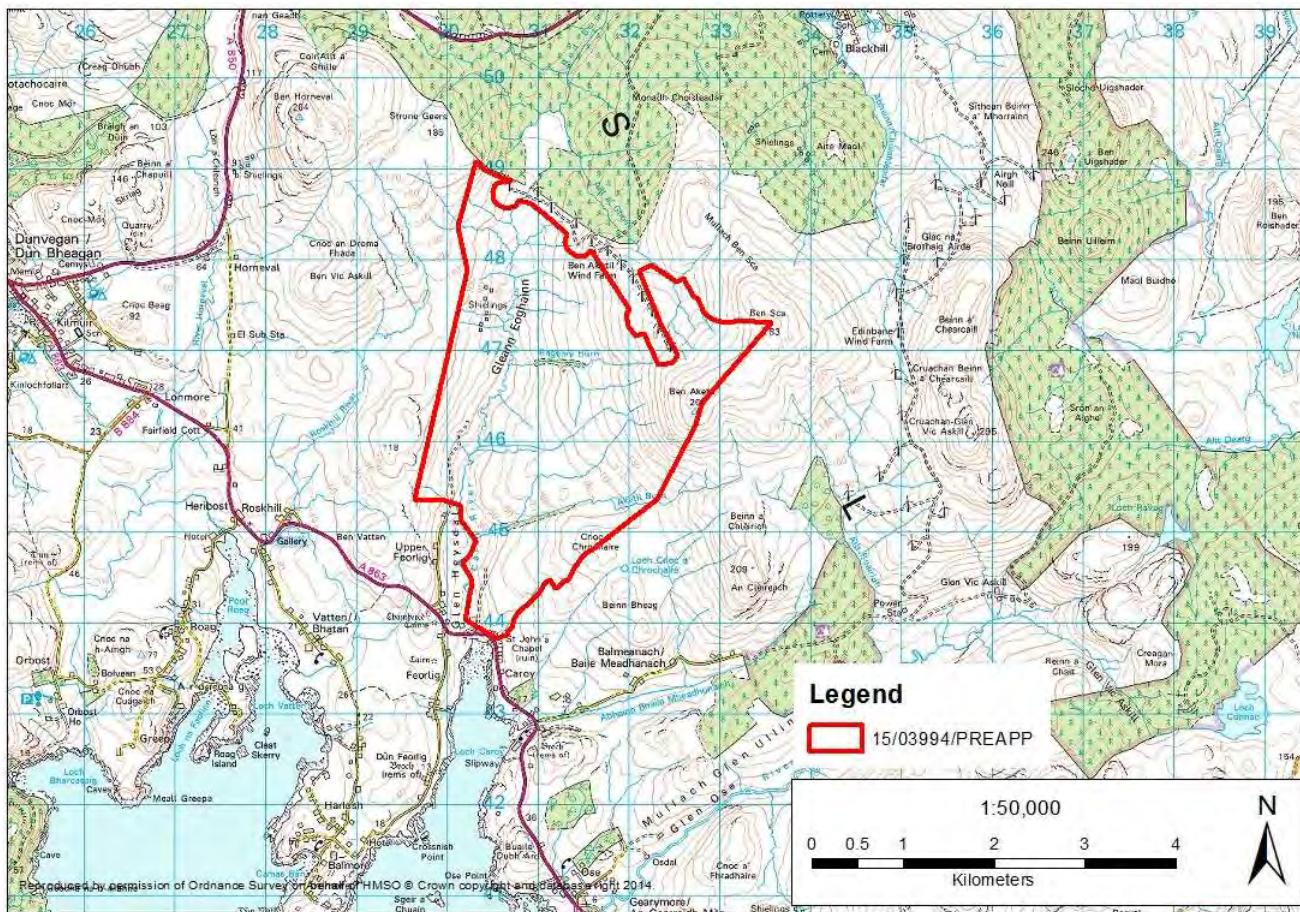
Linked to consideration of minimising impacts on the peat resource, consideration should be given to sharing existing infrastructure. The importance of this issue should not be underestimated. This issue should n

Subject to demonstrating that these effects can be managed and mitigated, development in this location may be capable of being supported.

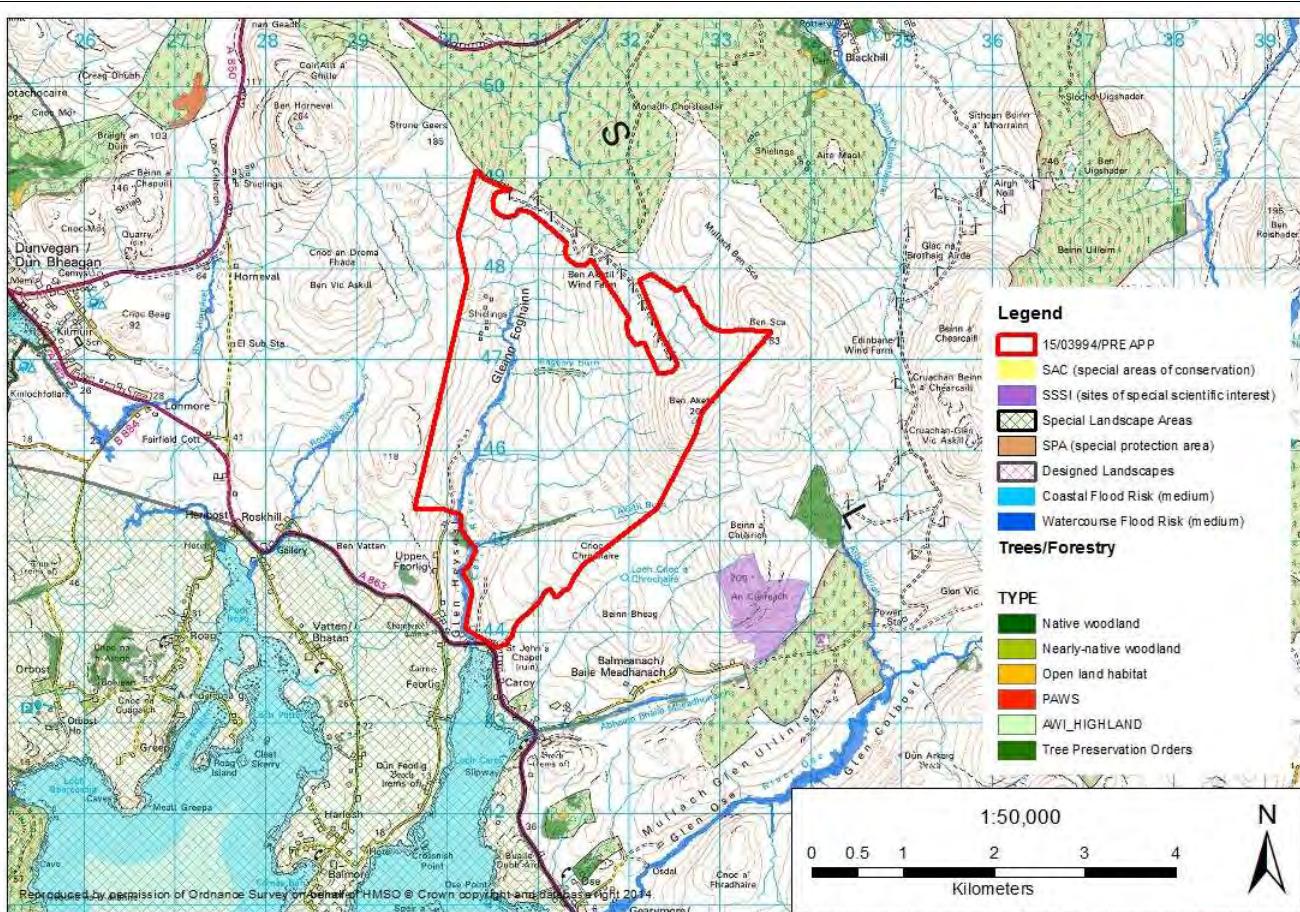
## 3. Background Information

Site area	968ha	
Land Ownership	MacLeod Estate	
Existing Land Use(s)	Agriculture	
Grid Reference	E: 130962	N: 846535

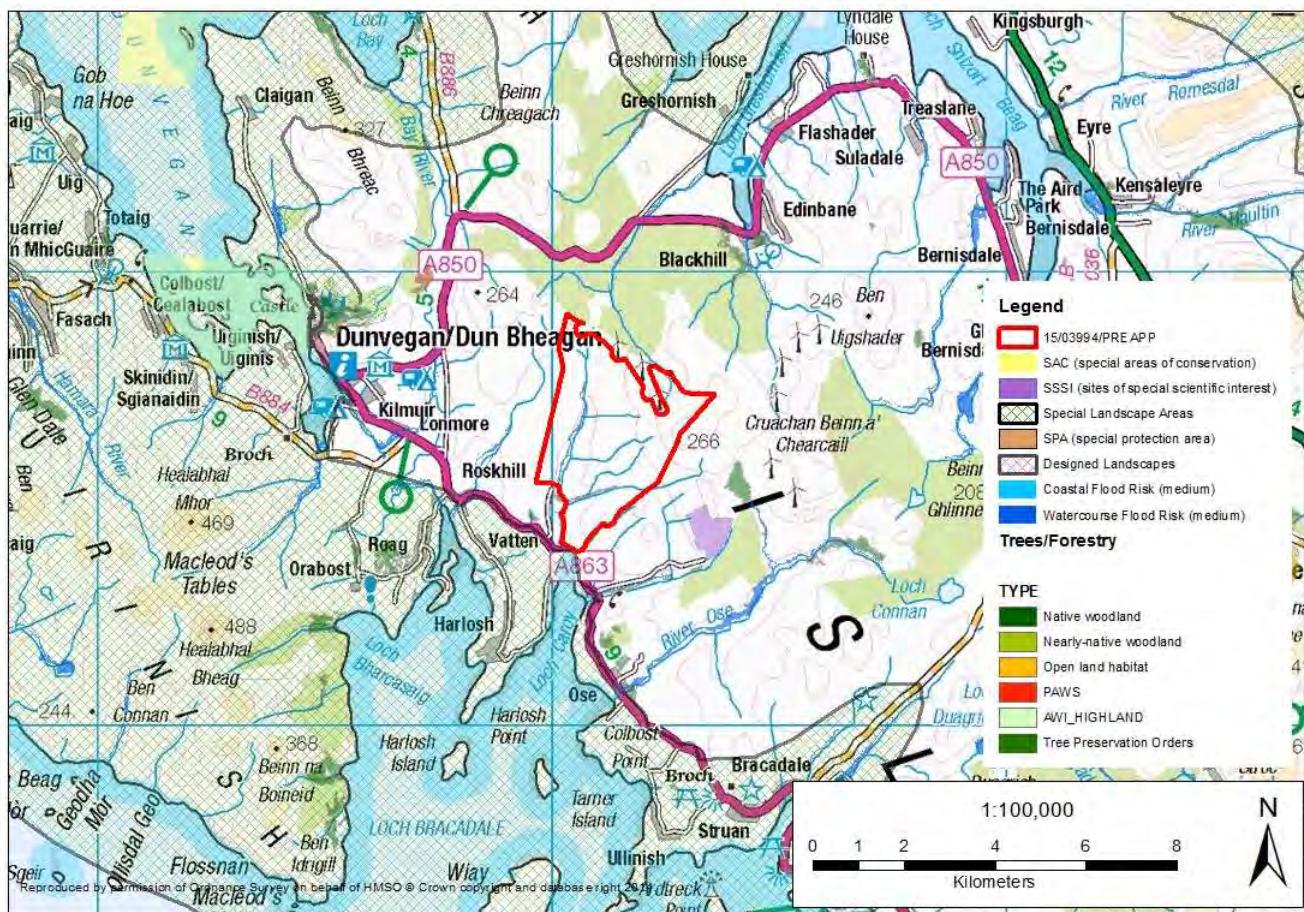
#### 4. Location © Crown Copyright. All Rights Reserved. 100023369 2013



#### 5. Constraints © Crown Copyright. All Rights Reserved. 100023369 2013

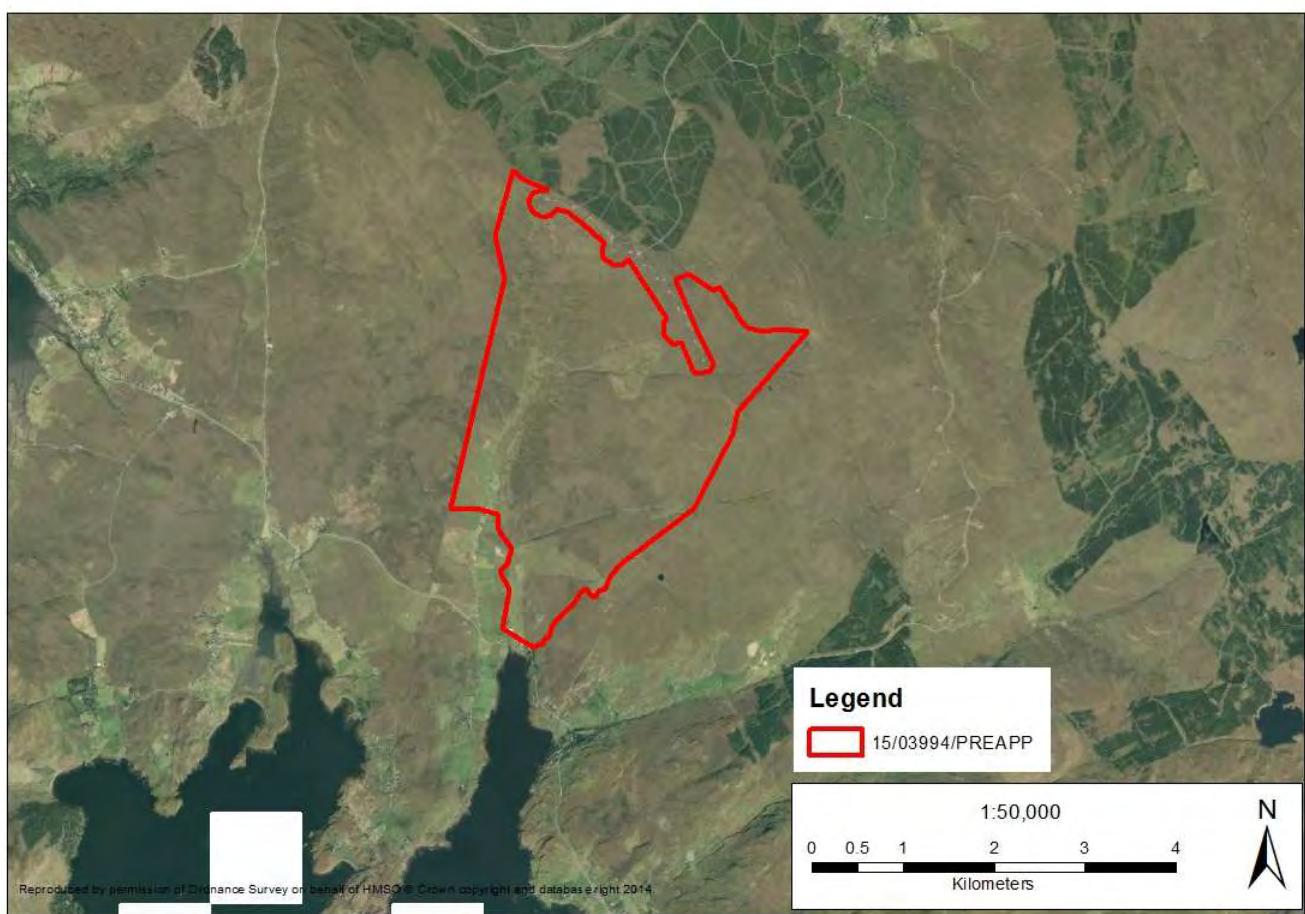


## Large Scale



## Small Scale

### 6. Photographs of site



## **7. Development Plan Designation and Planning Policy Appraisal**

### **Response from Policy, Carrie Pratt**

#### **Policy Overview**

The Development Plan comprises the Highland-wide Local Development Plan (HwLDP) (2012) and the West Highland and Islands Local Plan (WHILP) (as continued in force, 2012). The WHILP general policies were replaced by the HwLDP general policies. These plans are both currently under review. Together with the existing development plan, material considerations will include (but are not limited to) The Highland Renewable Energy Strategy & Planning Guidelines and the Draft Supplementary Guidance Onshore Wind Energy, (which was approved by PDI Committee on 19 August 2015) now holding statutory weight as a material consideration in decision making.

#### **Highland-wide Local Development Plan (adopted 2012)**

The [Highland-wide Local Development Plan \(HwLDP\)](#) (2012) sets out the general policies for the Highland Council area. The most important policies relating to this proposal include:

Policy 67 Renewable Energy Developments – This policy notes the Council's support in principle for renewable energy developments in Highland. This support, however, is subject to clearly addressing a number of important issues and other criteria. The Council must, on balance with other considerations, be satisfied that the development is located, sited and designed in a way which will not be significantly detrimental to a number of considerations as set out in the Policy. This includes both individual impacts and cumulative impacts with other renewable energy developments. Offshore wind energy development should also be taken into consideration when assessing the landscape/seascape and visual impact, for the proposed development, this will be a particularly relevant aspect in the case of this proposal.

Applicants are encouraged to regularly check what permissions and proposals are within the planning system as they move forward with their own proposals to help inform the cumulative impact assessment. A starting point for this is the Council's [Renewable Energy webpage](#), where lists and maps of wind energy applications can be found.

It is recommended that any supporting information submitted with your application should highlight potential impacts on radio and other operational telecommunications networks and offer appropriate mitigation to ensure no net detriment to existing services.

Policy 57 Natural, Built and Cultural Heritage – This policy considers impacts on natural, built and cultural heritage designations and features. These are split into three categories including international, national, and local/regional importance, relevant features in this category include: The Cuillin Hills (NSA); Ascrib, Isay and Dunvegan Special Area of Conservation (SAC); Cuillins Special Protection Area (SPA); and An Cleireach Sites of Special Scientific Interest (SSSI). Landscape designations and features are afforded protection through Policy 57 but for clarity these are referred to below in the discussion of landscape policy. The Constraints Maps (included within this response) show key features and designations in proximity to your proposal.

Policy 61 Landscape – This policy sets out specific requirements for new developments to reflect the landscape characteristics and special qualities identified by SNH in the [Landscape Character Assessments](#) covering the proposed site. The LCAs provide a relatively broad description of landscape character and should form the basis of further more detailed landscape and visual assessment work.

The North West Skye Special Landscape Area (SLA) lies within the immediate vicinity of the site, adjacent to its southern boundary. Attention should therefore be paid to the key landscape and visual characteristics and sensitivity to change sections in the [Assessment of Highland Special Landscape Area Citations](#).

You have indicated your initial intention to access the site from the A863 trunk road. This factor has potential to affect this key transport corridor and may impact part of a key view along this key tourist route to the North of Skye. If this proposal is taken forward and the layout, design or siting is amended it is recommended that the applicant has further discussions with the Council and SNH regarding any potential changes to the landscape impacts. This may require revisions to the Zone of Theoretical Visibility (ZTV) study which will form part of the Landscape and Visual Impact Assessment.

Visualisations should be provided that accord with the council's [Visualisation Standards for Wind Energy](#)

Developments. Assessments should cover impacts of any tracks; borrow pits; control buildings; power lines, and other elements associated with the development where they are not covered under a separate application. It should be noted that the Council has a strong preference in favour of transformers housed within tower structures and advises against use of external transformer cabins. It should also be noted that external lighting and advertisement on turbines is not supported. The use of aviation safety lighting should be justified and kept to a minimum, with infra red lighting preferred unless particular circumstances require otherwise.

Some of the other key HwLDP policies which should be taken into consideration include (but are not limited to):

- Policy 28 – Sustainable Design
- Policy 30 – Physical Constraints
- Policy 31 – Developer Contributions
- Policy 36 – Development in the Wider Countryside
- Policy 52- Principle of Development in Woodland
- Policy 56 – Travel
- Policy 58 – Protected Species
- Policy 59 – Other Important Species
- Policy 60 – Other Important Habitats
- Policy 63 – Water Environment
- Policy 69 – Electricity Transmission Infrastructure
- Policy 72 – Pollution

The review of Highland-wide Local Development Plan (HwLDP) is underway, with the Main Issues Report currently published for an extended consultation period ending 29 January 2016. The Proposed Plan document is scheduled to be approved by PDI Committee in August 2016. If and when approved it will become a material consideration for development management purposes. If applicants wish to proceed to application stage the updated policies within this emerging plan should be considered alongside any application. You may wish to follow the Council's progress on the [Highland-wide Local Development Plan webpage](#).

### **West Highland & Islands Local Plan (adopted 2010)**

The site is within the boundary of the West Highland and Islands Local Plan (2010) (WHILP). Following adoption of the HwLDP, only certain parts of the Local Plans continue in force as part of the Development Plan. Please refer to Appendix 7 Retention Schedule of the HwLDP which explains this further and identifies the parts of the Local Plan that continue in force – principally the identification of Settlement Development Areas (SDA's) and the allocation of specific sites for development. However, it is anticipated that the content of the WHILP remaining in force will be unlikely to be relevant to the determination of a planning application for the windfarm outlined; other than identifying the areas designated as SDA's. The proposed site lies approx. 2km from the Feorlig SDA.

The preparation of the West Highland and Islands Local Development Plan (WHILDP) is currently underway, with a Main Issues Report presently programmed to be published in Spring 2016. The Proposed Plan document is scheduled to be approved by Area Committee's in Spring 2017. If and when approved it will become a material consideration for development management purposes. This emerging plan will update the development allocations and SDAs. Through this review and preparation of the Main Issues Report and officers initial views (unless Area Committee direct otherwise) it is anticipated that Feorlig will no longer be classified as an SDA. You may wish to follow the Council's progress on the [West Highland and Islands Local Development Plan webpage](#).

### **Draft Onshore Wind Energy Supplementary Guidance (September 2015)**

Following the decisions of PDI Committee on 19 August 2015, the Draft Onshore Wind Energy Supplementary Guidance (Draft SG) will now be referred to, where relevant, as a material consideration in development management. For this proposal the Draft SG is a key document you should refer to in preparing your application, in particular the new Spatial Framework prepared in accordance with SPP (2014), pending its inclusion in a revised HwLDP. It should be noted that several pieces of ongoing work for the Draft SG continue, including further public consultation and work to identify strategic capacity. Skye has been identified as a strategic study area. This study is due to be undertaken within the next 6 months and undergo public consultation within Spring/Summer 2016. Given the timing of your application (if you decide to proceed), this work may be relevant as it emerges in the final SG. You may wish to follow the Council's

progress on the [onshore wind webpage](#). A key element of this ongoing work is examining the strategic pattern of wind energy development in Highland, with a strong preference for future development to follow a space and cluster approach. With the caveat that further analysis is still required for your area, this proposal would introduce development in an existing cluster which we would support in principle; lying adjacent to the Ben Aketil Wind Farm, Edinbane Wind Farm and the proposed Glen Ullinish Wind Farm.

The Draft SG summarises the new **Spatial Framework** that groups areas into three categories:

Group 1: Areas where windfarms will not be acceptable

Group 2: Areas of significant protection

Group 3: Areas with potential for wind farm development

For this proposal the Spatial Framework highlights the following key sensitivities that must be taken into account in the preparation of any planning application:

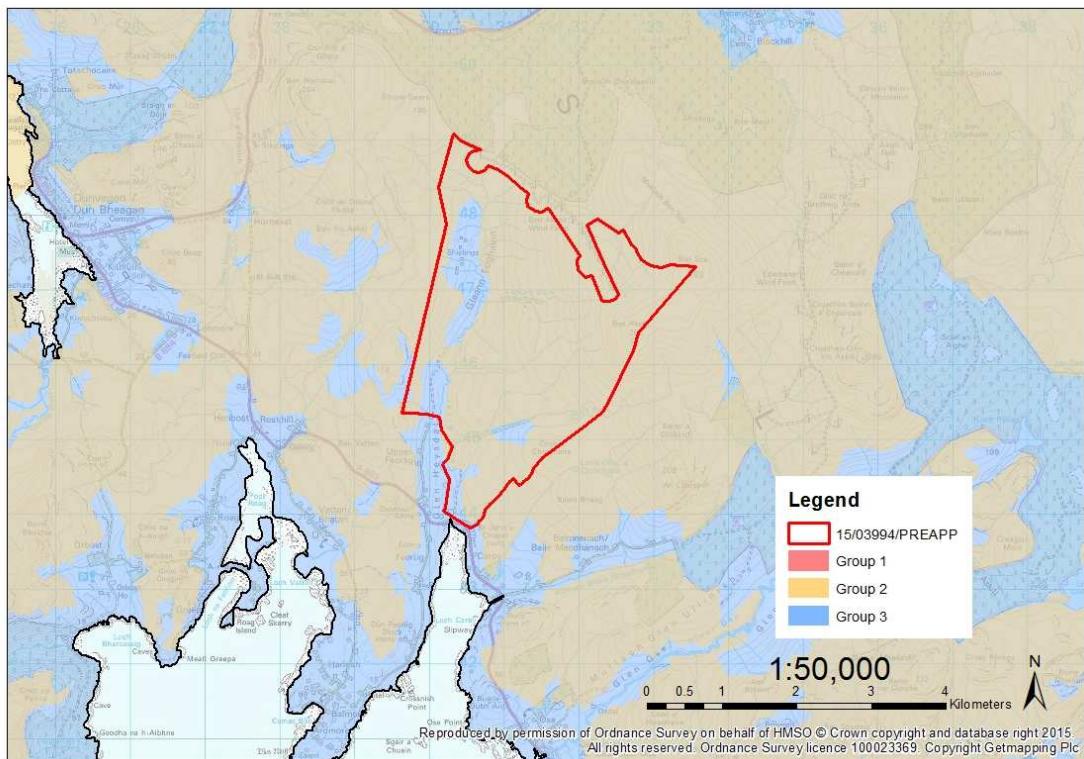
- The current proposed layout shows the majority of turbines sited on an area of **Carbon Rich Soil, Deep Peat and Priority Peatland Habitat, a Group 2 Area of Significant Protection** in the Spatial Framework. Therefore peat survey and assessment will be required to take careful consideration of how the development will avoid or mitigate impacts to the peat resource.
- The proximity and relationship of the site to surrounding Group 2 designations nearby such as the An Cleireach SSSI and the Dunvegan Castle Designed Landscape. Therefore amongst other things a landscape and visual assessment will be required.
- Wild Land Areas of Duirinish (approx. 10km to the West) and Cuillin (approx. 20km to the South) are Group 2 Areas of Significant Protection. Therefore a wild land assessment will be required.
- The proposed site boundary lies within approx. 2km from the indicative siting of turbines. This is in compliance with the community separation distance of 2km from any SDA's and must be considered in finalised siting proposals. The Draft SG not only considers this distance to apply to not only SDA's but also to all residential property, as being particularly sensitive to wind energy development. Therefore assessment must be undertaken to clearly demonstrate how potential impacts on amenity have been avoided or mitigated. The Council Tax point's map (included within this response) identifies where all residential properties are likely to exist.
- The SDA of the settlement Upper Feorlig lies within the proposed site boundary and approx. 2km from indicative siting of turbines. Whilst the site is just outwith this community separation distance of 2km from settlement development areas the Spatial Framework the Council considers all residential property to be particularly sensitive to wind energy development. Please see attached Council Tax points map indicating where all residential properties are likely to exist. Assessment must be undertaken to clearly demonstrate how potential impacts on amenity have been avoided or mitigated.

Other constraints:

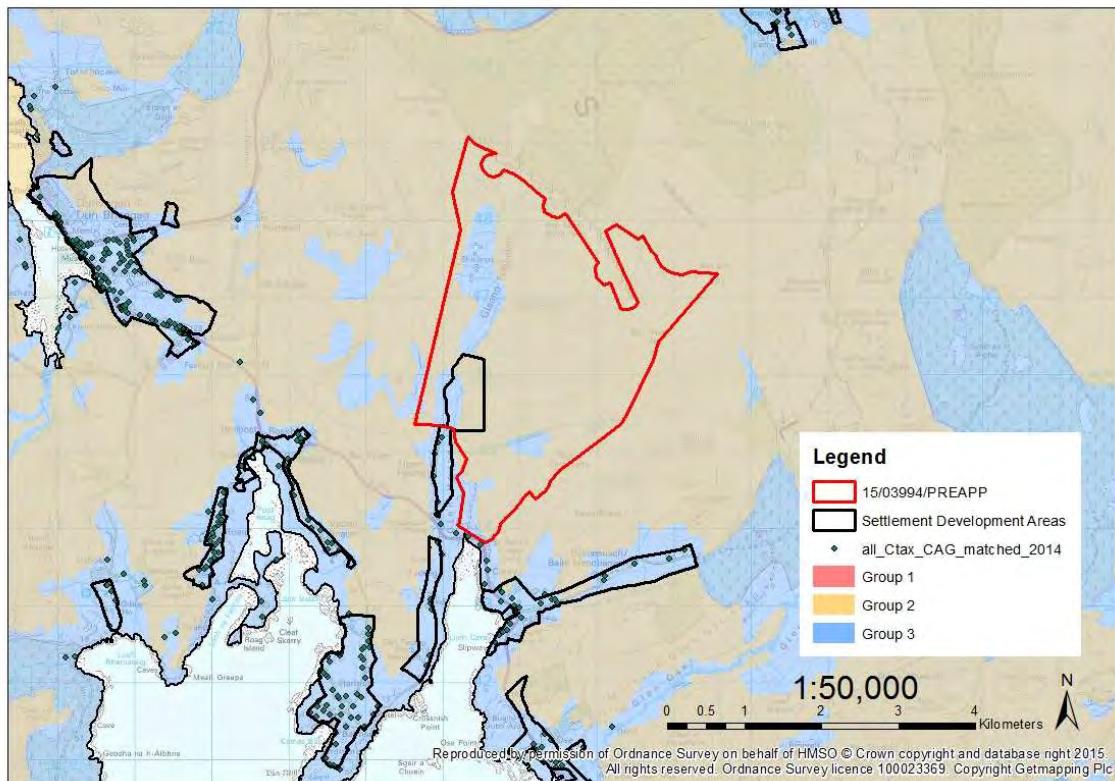
- The proximity and relationship of the site to surrounding landscape designations in the immediate vicinity including: the North West Skye SLA (which lies to the immediate southern boundary of the site) and Greshornish SLA (which lies approx. 5km to the North West of the site). This factor has potential to affect views and impinge upon special landscape qualities from the key transport corridor and gateway approach to the North of Skye. It is therefore fundamental that landscape impacts are fully assessed through detailed landscape and visual impact assessment. The Draft SG states that all proposals must have regard to SLAs and their citations in any siting and design considerations. The [Assessment of Highland Special Landscape Areas](#) contains citations for all SLAs within the Highland area.
- The site lies directly adjacent to the coastal flood risk area to south with fluvial flood risks area within the boundary of the site, due to the presence of watercourses. Native woodland interests also exist within the site
- These factors may restrict the scope for development and should be appropriately assessed to determine the siting of turbines and other infrastructure.

Indicative access proposals suggest access from a new track from the South (leading off the A863 trunk road). Such a proposal would not be in line with the Council's preference to utilise existing access tracks from the North. The Draft SG states that developers are urged to consider adequate mitigation of any adverse effects which may include additional environmental health problems in relation to the access road's close proximity to residential properties, interference with watercourses and landscaping and siting issues. The cumulative effects of these indicative proposals should therefore be extensively considered as part of

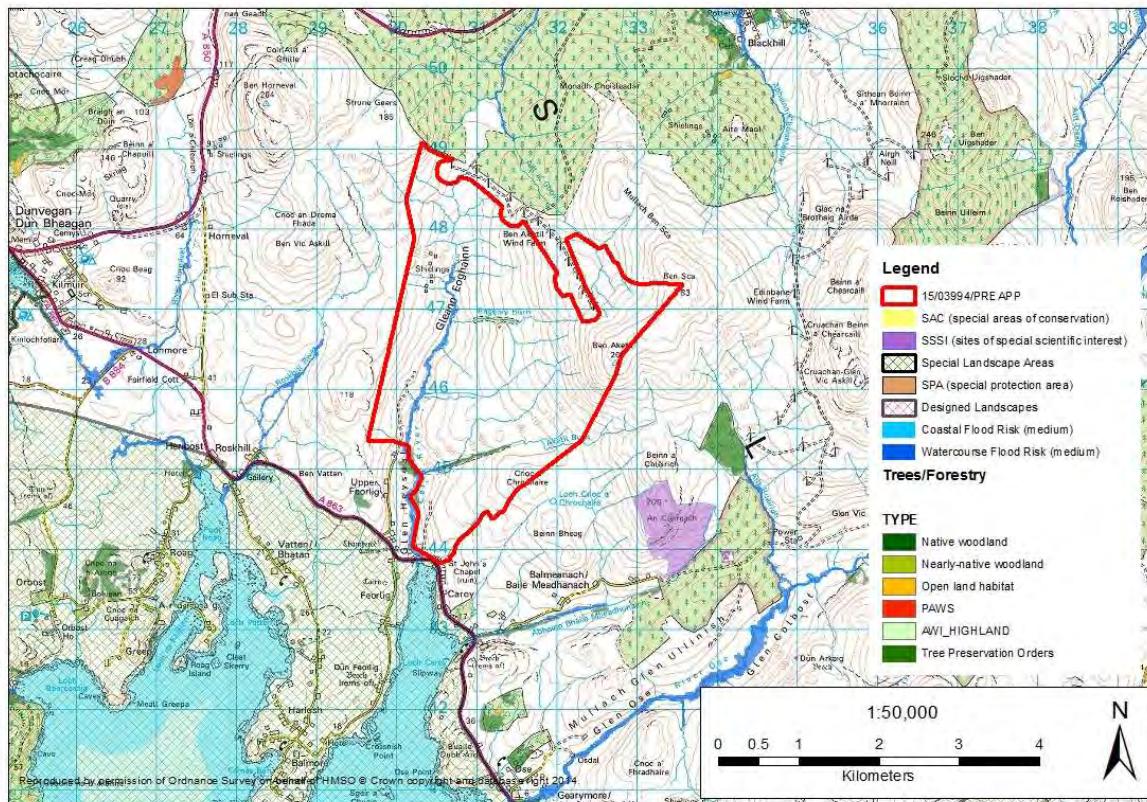
any planning application.



Map highlighting the spatial framework with proposed site boundary in red (1:50000)



Map highlighting the spatial framework with proposed site boundary in red, SDA's in black and Council tax points in green (1:50000)



Map highlighting the proposed site boundary in red, with constraints (1:50000)

Key Points	Assessments to be carried out and/or submitted with application
<ul style="list-style-type: none"> <li>The site lies within a sensitive landscape designated as a Group 2 Area of Significant Protection, as an area of carbon rich soils, deep peat and peatland habitat.</li> <li>The site lies within a highly sensitive landscape setting, with close proximity to SLAs and Areas of Wild Land. The site lies within close proximity to the existing Feorlig SDA and residential properties.</li> <li>Proposed access may ultimately restrict scope for development in terms of environmental health issues, flooding and landscape impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Peat Assessment</li> <li>Landscape and Visual Assessment.</li> </ul>

## 8. Sustainability

The [Council's Sustainable Design Guide: Supplementary Guidance](#) provides advice and guidance on a range of sustainability topics, including design, building materials and minimising environmental impacts of development.

It would be anticipated that the ES would cover matters of sustainability, including carbon balance calculations etc.

## **9. Natural Heritage**

### **Impact on Natural Environment, Liz McLaughlan, Scottish Natural Heritage**

We appreciate the early opportunity to discuss this potential development and should the applicant decide to proceed with this proposal we would welcome continuing dialogue with the developers and Highland Council. We will also provide formal scoping advice when required.

#### **Key Issues**

- Impacts on golden eagle and white tailed eagle:

##### Golden Eagle (GE)

These birds are known to be in the area due to previous survey work undertaken as part of the surrounding wind farm applications. The site for this proposal is not part of a GE territory that we know of so birds recorded here are likely to be adults from adjacent territories or non-territorial juveniles/non-breeders.

##### White tailed eagle (WTE)

These birds are likely to be sighted regularly due to breeding pairs located to the north and south of the proposed site. However, the proposed site is not thought to be a key part of either home range. There is also a known roost for young birds located nearby.

Flight activity data for both species should be used to inform the final layout (e.g. if the birds use one part of ridge for lift/hunting that area should be left free of turbines). This kind of mitigation by design should be incorporated into the ES.

Viewsheds for both Edinbane and Ben Aketil wind farms include parts of the proposed development area. Reference should be made to latest post-construction monitoring reports for these wind farms to provide context and an extended dataset on usage of the area by these species. In particular the Edinbane Wind Farm Ornithological Monitoring 2007-14 report, dated Jan 2015. This will help with predictions of likely changes in range use and the duration of any eagle displacement, based on previous experience.

Collision risk modelling is likely to be required for both GE and WTE but will depend on usage. Depending on collision risk, a population viability assessment may also be required for both species. One was produced for Glen Ullinish wind farm which looked at population trends and additional sources of mortality (especially cumulative collision risk) in order to predict how the regional and national populations would be affected.

If population modelling is required it should follow the principles laid out by Paul Haworth and Alan Fielding in 2012 for Glen Ullinish wind farm which models the effect of the predicted additional mortality on the WTE population. The 2012 model would need to be updated with more recent data on population size, productivity and survival rates.

- Impacts on other Annex 1 bird species – hen harrier and merlin are also known to breed in the area. Long eared and short eared owls are thought to be present in the forestry during the winter (RSPB pers. comm.).

Bob MacMillan has monitored hen harrier in the north Skye plantations for a number of years and contributed to the Edinbane and Ben Aketil wind farm Post Construction Monitoring. He should be contacted for knowledge on regularly used nesting areas via his website: <http://www.skyebirds.com/contact-us>.

- Landscape and visual impacts

Cumulative landscape and visual impacts are likely to be key given existing constructed (Ben Aketil and Edinbane) and consented wind farms (Ullinish).

Impacts on the Trotternish National Scenic Area (NSA); The Cuillin Hills NSA, North West Skye Special Landscape Area should also be included in the ES. The viewpoints used for Ben Aketil wind farm and Glen Ullinish wind farm should be used as a starting point for this proposal (e.g. Oronsay, Ose, Idrigill Point; Macleods Tables; North of Ben Aketil, Meall na Suiramach on Trotternish Ridge; Cuillins).

A wild land assessment for impacts on Duirinish Wild Land Area (WLA) and Cuillin WLA should also be included.

- Impacts on peat, peatland habitats and carbon-rich soils - The development site includes these areas, the importance of which has been identified in the recently published SPP. An assessment of the impact of this proposal on this resource should be made and the ES should contain details of any mitigation measures which have been incorporated to ensure the protection of the carbon rich soils, deep peat and priority peatland habitats. Further guidance on these aspects is being developed by us and will be available on our website in due course. In addition an assessment of the impacts should be made using a carbon calculator details of which can be found on Scottish Government website at <http://www.scotland.gov.uk/Topics/Business-Industry/Energy/Energy-sources/19185/17852-1/CSavings>. We also expect the applicant to carry out a peat depth survey and peat stability assessment to determine the location of infrastructure, the risk to habitats and species, and for this information to be presented in the ES.

Habitats associated with deep peat are located at the north-west end of the northern turbine string and close to start of access track. These areas should be avoided.

- Consideration should be given to the proliferation of access tracks in the area and opportunities for minimising the number and lengths of tracks should be explored.

**In addition to addressing the above the applicant will also need to:**

- Undertake protected species surveys – otter, bats, pine marten. Surveys need to include the development site itself (including site tracks), a suitable buffer zone and possibly the access route if any alterations/ upgrades are required to roads bridges etc.
- Undertake bird survey work in accordance with our guidance.
- Undertake a habitat survey of the development site (including the access tracks) and appropriate buffer zone to NVC standard.
- Provide a deer management plan which addresses the direct and indirect, positive and negative impacts associated with any change in deer management (including any possible impacts on designated sites due to displacement) as a result of the construction and operation of this proposal.

The results of the above will be critical to any subsequent advice we give and the position we will take should this proposal progress to a formal application.

Key Points	Assessments to be carried out and/or submitted with application
Landscape and visual impacts	<p>Guidance for undertaking Landscape and Visual Impact Assessment and cumulative impact assessments (including the newly revised visualisation standards required) can be found at: <a href="http://www.snh.gov.uk/planning-and-development/renewable-energy/onshore-wind/landscape-impacts-guidance/">http://www.snh.gov.uk/planning-and-development/renewable-energy/onshore-wind/landscape-impacts-guidance/</a></p> <p>We have also produced a map which shows the visual influence of built development, although not all the current consented wind farms are represented on this map it is a useful reference: <a href="http://www.snh.gov.uk/docs/B551051.pdf">http://www.snh.gov.uk/docs/B551051.pdf</a></p>
Wild land assessment	<p>Guidance on assessing any potential impacts on wild land can be found at: <a href="http://www.snh.gov.uk/docs/B464997.pdf">http://www.snh.gov.uk/docs/B464997.pdf</a></p>

<p>Designated sites - We agree with the pre-application report that Ascibs, Isay and Dunvegan SAC (common seals) and An Cleireach SSSI (Geology) can be scoped out.</p> <p>Protected species - There are no records of badgers, wildcat or water vole on Skye. Otters – Surveys carried out for Ben Aketil will provide useful background and set an up to date survey in context. The Ben Aketil survey suggested that otters (esp. dog otters) move over watershed between Loch Bracadale and Loch Greshornish.</p> <p>Impacts on birds</p> <p>Deer Management Plans</p>	<p>Information regarding the status and qualifying features of the site can be found at: <a href="http://www.snh.org.uk/snhi/">http://www.snh.org.uk/snhi/</a> and information on assessing the connectivity distances for SPA's can be found at: <a href="http://www.snh.gov.uk/docs/A994842.pdf">http://www.snh.gov.uk/docs/A994842.pdf</a></p> <p>Surveys of European and nationally protected species and proposals for mitigation/enhancement. Further information on methods etc can be found on our website at: <a href="http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/">http://www.snh.gov.uk/planning-and-development/advice-for-planners-and-developers/</a></p> <p>Bird survey work guidance can be found at: <a href="http://www.snh.gov.uk/planning-and-development/renewable-energy/onshore-wind/windfarm-impacts-on-birds-guidance/">http://www.snh.gov.uk/planning-and-development/renewable-energy/onshore-wind/windfarm-impacts-on-birds-guidance/</a></p> <p>For information on what to consider and include in Deer Management Plans for development sites <a href="http://www.snh.gov.uk/docs/A1022324.pdf">http://www.snh.gov.uk/docs/A1022324.pdf</a></p>
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#### ***Impact on Landscape, Anne Cowling, Landscape Officer***

I welcome the recognition in the Draft Scoping Request that the Landscape Baseline Study will 'supplement and amend' the SNH LCA work 'as necessary', but would emphasise that the interaction of landscape character types, and their local expression will be essential to understanding the site and any impacts arising from development.

SNH Landscape Character Assessment will provide useful information and guidance on individual LCTs, but will not in itself give a comprehensive picture of the way that local landscape characters interact in a given location. The challenge of the Landscape Impact Assessment is to understand both that interaction and the way that changes people's experience of the landscape in that context. What we are seeking is an understanding of the effects on this location in the round, rather than just its constituent parts.

In addition the applicants should be aware that SNH are in the process of revising the LCAs in this area including revisions to boundaries as well as descriptions of Key Characteristics etc. The applicants should engage with SNH as to whether the revised descriptions and mapping are available for use.

The landscape and visual resource is complex, as is the cumulative wind energy development context. It will be essential that the LVIA work for this application pulls together all the separate assessments and judgement of impact, landscape, visual, cumulative to give a full understanding of the effects that this development would have in this place.

- Visual impact Baseline work should include the identification of receptor classes along with a characterisation of each class's existing experience of their visual environment. This should recognise such variations as, for example local residents moving around neighbourhoods daily, commuting to work places and other facilities, in contrast to the single, or short intense period of journeys likely to be experienced by holidaymakers.
- The LVIA should clearly describe the value attached to visual receptor classes and their susceptibility to the development.
- In addition to establishing and describing the *changes* which would result from the development, the LVIA must clearly explain the nature of the resulting effects on individual Landscape and Visual Receptors. For Landscape assessment this should include perceptual aspect, where appropriate, as well as purely physical. For Visual Impact it should recognise changes to the experience of the area, rather than purely changes in the composition of individual views.
- The LVIA should avoid any confusion of Receptors with viewpoint locations.
- Assessment of Cumulative impacts should aid a clear understanding of how the development would fit into the development matrix of the area and how the landscape, and people's perception of the

area may be affected. As per the examples in SNH Guidance ASSESSING THE CUMULATIVE IMPACT OF ONSHORE WIND ENERGY DEVELOPMENTS March 2012, this should go beyond description of physical changes to include perceptual/experiential effects and to consider the thresholds of severity of effects.

- As discussed at the pre-application meeting, a particular concern with the development will be the degree to which it changes perception of the existing presence of Ben Aketil, Edinbane and Glen Ullinish. This will include consideration of elements such as visibility of access tracks which may appear associated with the older developments and the fundamental change to the presently realised concept at Ben Aketil. Underlines the fact that Cumulative Impacts are much more complex than assessing the number of developments/turbines visible.

### Viewpoints

It is the opinion of Highland Council that Representative Viewpoints and related Visualisations are tools in the process of the description and illustration of impacts which occur across a wider area. Emphasis in the Visual Impact Assessment should be on identification and description of the nature and extent of effects, with viewpoints being selected which can be used to describe and illustrate this impact.

Where Highland Council suggest the use of Representative Viewpoints, this is based on an anticipation of likely effect based on available information and should be treated as such.

The Highland Council may also require the use of specific:

- Valued Viewpoints, which may be promoted viewpoints within the landscape, specific local visitor attractions or otherwise distinguished. Any such viewpoints will have been selected with the aim of ensuring that their valued qualities are protected.
- Legacy Viewpoints, specific locations which have been included in LVIA for previous developments and for which a certain amount of baseline information is already available. These will be nominated where there is a perceived likelihood of significant cumulative impacts, but assessment of impacts arising from combination of the current proposal with existing development should not be restricted to these locations.

Key Points	Assessments to be carried out and/or submitted with application
<ul style="list-style-type: none"> <li>Importance of the potential for this development to change perceptions of the existing.</li> <li>Nature, sensitivity and sphere of activity of Visual Receptors.</li> <li>Currency of Landscape Character Assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Landscape Impact Assessment</li> <li>Visual Impact Assessment</li> </ul>

## 10. Design

The Design Quality and Place Making policy (policy 29) in the HwLDP requires new development to be designed to make a positive contribution to the architectural and visual quality of the area. Furthermore development proposals must demonstrate sensitivity and respect towards the local distinctiveness of the landscape, architecture, design and layouts of their proposals.

### Design and Access Statement

The Design and Access Statement should outline the design principles and concepts that have been applied to the development and:

- explain the policy or approach adopted as to design and how any policies relating to design in the development plan have been taken into account.
- describe the steps taken to appraise the context of the development and demonstrates how the design of the development takes that context into account in relation to its proposed use.

- (iii) state what, if any, consultation has been undertaken on issues relating to the design principles and concepts that have been applied to the development; and what account has been taken of the outcome of any such consultation.

Further advice on the preparation of design statements is contained in the Council's advice note on [Design and Access Statements](#) and Scottish Government [Planning Advice Note 68](#).

This should form a separate document to the ES but could form part of the planning statement.

Key Points	Assessments to be carried out and/or submitted with application
Design and Access Statement required Seek to design out significant impacts on peatland resource	Design and Access Statement

## 11. Amenity

### **Contaminated Land, Nicola MacKenzie, Contaminated Land Team**

Having reviewed the information available I can confirm I have NO COMMENT in terms of land contamination issues.

### **Noise Impacts, Robin Fraser, Environmental Health**

#### **Operational Noise**

The applicant will be required to submit a noise assessment with regard to the operational phase of the development. The assessment should be carried out in accordance with ETSU-R-97 "The Assessment and Rating of Noise from Wind Farms" and the associated Good Practice Guide published by the Institute of Acoustics. However, it should be noted that there are some areas of the guidance which are not prescriptive and some matters are open to interpretation and discussion. It is recommended that the developer engages with the Council's Environmental Health Officer at an early stage to discuss any such issues.

The noise assessment should demonstrate that noise levels arising from the wind farm will meet either a simplified standard of 35dB LA90 at wind speeds up to 10m/s or a composite standard of 35dB LA90 (daytime) and 38dB LA90 (night time) or up to 5dB above background noise levels at up to 12m/s. It is recognised that ETSU suggests a lower night time limit of 43dB LA90 however, due to the very low background levels in many parts of the Highlands, this is unlikely to be acceptable.

Where there is a potential cumulative impact from more than one development the above limits should be applied to the cumulative level. Where an existing development has limits higher than suggested above, the applicant should agree appropriate limits with the Council's Environmental Health Officer.

#### **Cumulative Noise**

The noise assessment must take into account the potential cumulative effect from any other existing or consented or, in some cases, proposed wind turbine developments. Where applications run concurrently, developers and consultants are advised to consider adopting a joint approach with regard to noise assessments. The noise assessment must take into account predicted and consented levels from such developments. The good practice guide offers guidance on how to deal with cumulative issues.

In this case, it is likely that only the existing Ben Aketil development will need to be considered as part of a cumulative assessment but the application should confirm that no other wind farms would have an impact.

#### **Background Noise Measurements**

Background noise surveys should be undertaken in accordance with ETSU-R-97 and the Good Practice Guide. It is recommended that monitoring locations be agreed with the Council's Environmental Health Officer however, it is unlikely that they will be able to attend the installation of equipment. Where possible, sites must avoid other noise sources such as boiler flues, wind chimes, squeaking gate, rustling leaves etc. Otherwise, the results may not be valid for any other property. It is advised that the developer consults the Council's Environmental Health Officer at an early stage to discuss the proposed methodology and locations.

## **Construction Noise**

Planning conditions are not used to control the impact of construction noise as similar powers are available to the Local Authority under Section 60 of the Control of Pollution Act 1974. However, where there is potential for disturbance from construction noise the application will need to include a noise assessment.

A construction noise assessment will be required in the following circumstances: -

- Where it is proposed to undertake work which is audible at the curtilage of any noise sensitive receptor, out with the hours Mon-Fri 8am to 7pm; Sat 8am to 1pm

OR

- Where noise levels during the above periods are likely to exceed 75dB(A) for short term works or 55dB(A) for long term works. Both measurements to be taken as a 1hr LAeq at the curtilage of any noise sensitive receptor. (Generally, long term work is taken to be more than 6 months)

If an assessment is submitted it should be carried out in accordance with BS 5228-1:2009 "Code of practice for noise and vibration control on construction and open sites – Part 1: Noise". Details of any mitigation measures should be provided including proposed hours of operation.

Regardless of whether a construction noise assessment is required, it is expected that the developer/contractor will employ the best practicable means to reduce the impact of noise from construction activities. Attention should be given to construction traffic and the use of tonal reversing alarms.

## **Private Water Supplies**

Highland Council holds records of some private water supplies however this database is not exhaustive and some individual supplies may be missing. The applicant can request what information is available but will also require to carry out an investigation to identify any private water supplies, including pipework, which may be adversely affected by the development and to submit details of the measures proposed to prevent contamination or physical disruption.

## **Dust**

Where houses are in close proximity to any construction area or access track, the applicant should assess the potential of dust arising from construction or traffic and should submit a scheme for the suppression of dust.

Key Points	Assessments to be carried out and/or submitted with application
<ul style="list-style-type: none"><li>• Noise</li><li>• Private water supplies</li><li>• Dust</li></ul>	<ul style="list-style-type: none"><li>• Assessment of noise from wind turbines</li><li>• Assessment of noise from construction activities</li><li>• Investigation into private water supplies</li><li>• Assessment of potential of dust nuisance</li></ul>

## **12. Transport and Wider Access**

### **Impact on the Trunk Road Network, Transport Scotland**

No response received.

### **Traffic and Transportation Impacts on Local Road Network, Fred McIntosh, Transport Planning Team**

#### **Proposed Development**

I am generally satisfied with the applicant's intended methodology to consider transportation and access related to the development as set out in Chapter 10 of the submitted draft EIA; however, I would confirm the following.

## **Impact of the Development**

Transport Planning's interest will relate largely to the impact of the development on the local road network.

The impacts of development traffic may include; impact on road carriageway, verges and associated structures; and impact on road users and adjacent communities.

## **Transport Assessment**

A Transport Assessment (TA) or a section on traffic and transport within the Environmental Assessment for the project will be required. The TA should identify all Council maintained roads likely to be affected by the various stages of the development and consider in detail the impact of development traffic on these roads. Where necessary, the TA should consider and propose measures necessary to mitigate the impact of the development.

Use of on-site borrow pits and the establishment of an on-site concrete batching plant could help reduce impact on the road network.

Cumulative impact with any other developments in progress or committed, including other renewable energy projects, should be considered in the TA.

Within the TA justification for the chosen Port of Entry and the preferred route for AIL's shall be clearly demonstrated. This shall include details of alternative routes that have been considered and an explanation as to why these routes were discounted in favour of the preferred route. A detailed review of the preferred route, to include swept path assessment and consideration of any structures along the route, shall be undertaken. A trial run to demonstrate the suitability of the route may also be required.

Early consultation with the Council's Structures Section is recommended with regard to affected Council maintained structures.

The proposed route for general construction traffic should also be identified and reviewed within the TA, if this is to be different to the preferred route for AIL's.

The applicant has indicated that the effects of traffic, transport and access will be considered with reference to the Institute of Environmental Assessment (IEMA) guidance; however, the TA should also take account of the current Transport Scotland document, Transport Assessment Guidance.

Prior to preparation of the TA, the applicant shall undertake a detailed scoping exercise in consultation with the Council's Transport Planning team and Transport Scotland.

The attached guidance document provides further information on the required content of the TA.

## **Construction Traffic Management Plan**

A Construction Traffic Management Plan (CTMP) to help control and reduce the impact of construction traffic will be required prior to the commencement of development. A Framework CTMP should be included in the planning submission and consultation with stakeholders, including local community representatives, will be necessary regarding the detailed content and implementation of the CTMP.

## **Mitigation**

Mitigation required may include; new or improved infrastructure, road safety measures and traffic management. Traffic management shall include measures to ensure that development traffic adheres to approved routes.

The proposed use of local borrow pits in order to help reduce the impact of construction traffic on the local road network is welcomed. On-site concrete batching should similarly be considered.

## **Access onto the public road**

The proposals for access onto the A863 should be shown on dimensioned drawings and include details of geometry, construction and drainage as well as the required visibility splays, all in accordance with the Highland Council's Roads and Transport Guidelines for New Developments.

## **Section 96 Agreement**

Notwithstanding the above requirements, there will remain a risk of damage to Council maintained roads from development related traffic. In order to protect the interests of the Council, as roads authority, a suitable agreement relating to Section 96 of the Roads (Scotland) Act and appropriate planning legislation will therefore be required. The agreement shall include the provision of an appropriate Road Bond or similar security.

## Flooding and Drainage

The Council's Flood Team should be consulted with regard to potential flooding and drainage issues associated with the development.

## Grid Connection Works

Should related grid connection and/or substation works be likely to impact on any of the local roads forming the access routes to the site, it would be desirable to consider the impact of these works and the mitigation required in conjunction with the proposed wind farm.

Useful contacts:

Structures - David Mackenzie, Chief Structural Engineer

[david.gc.mackenzie@highland.gov.uk](mailto:david.gc.mackenzie@highland.gov.uk) Tel. (01349) 886751

Traffic Data - Greg Otreba, Senior Technician

[grzegorz.Otreba@highland.gov.uk](mailto:grzegorz.Otreba@highland.gov.uk) Tel. (01463) 252947

Accident Data - Hugh Logan, Senior Engineer

[Hugh.Logan@highland.gov.uk](mailto:Hugh.Logan@highland.gov.uk) Tel. (01463) 252927

Key Points	Assessments to be carried out and/or submitted with application
<ul style="list-style-type: none"><li>Impact on local road network and travelling public.</li><li>Scoping agreement with Highland Council and Transport Scotland.</li></ul>	<ul style="list-style-type: none"><li>Transport Assessment</li></ul>

## Transport Statement/Assessment Methodology for Public Roads for which Highland Council is the Roads Authority

1. Identify all public roads affected by the development. In addition to transportation of all abnormal loads & vehicles (delivery of components) this should also include routes to be used by local suppliers and staff. It is expected that the developer submits a preferred access route for the development. All other access route options should be provided, having been investigated in order to establish their feasibility. This should clearly identify the pros and cons of all the route options and therefore provide a logical selection process to arrive at a preferred route.
2. Establish current condition of the roads. This work which should be undertaken by a consulting engineer acceptable to the Council and will involve an engineering appraisal of the routes including the following:
  - Assessment of structural strength of carriageway including construction depths and road formation where this is likely to be significant in respect of proposed impacts, including non-destructive testing and sampling as required.
  - Road surface condition and profile
  - Assessment of structures and any weight restrictions
  - Road widths, vertical and horizontal alignment and provision of passing places
  - Details of adjacent communities
3. Determine the traffic generation and distribution of the proposals throughout the construction and operation periods to provide accurate data resulting from the proposed development including
  - Nos. of light and heavy vehicles including staff travel
  - Abnormal loads
  - Duration of works
4. Current traffic flows including use by public transport services, school buses, refuse vehicles, commercial users, pedestrians, cyclists and equestrians.
5. Impacts of proposed traffic including
  - Impacts on carriageway, structures, verges etc.
  - Impacts on other road users
  - Impacts on adjacent communities
  - Swept path and gradient analysis where it is envisaged that transportation of traffic could be problematic
  - Provision of Trial Runs to be carried out in order to prove the route is achievable and/or to establish the extent of works required to facilitate transportation
6. Cumulative impacts with other developments in progress and committed developments including other Renewable Energy projects.
7. Proposed mitigation measures to address impacts identified in 5 above, including
  - Carriageway strengthening

- Strengthening of bridges and culverts
- Carriageway widening and/or edge strengthening
- Provision of passing places
- Road safety measures
- Traffic management including measures to be taken to ensure that development traffic does not use routes other than the approved routes.

## 8 Details of residual effects.

The above information is not exhaustive and should be used as a guide to submitting all relevant information in relation to roads, traffic and transportation matters arising from the development proposals, which should be in the form of a Transport Statement/Assessment forming part of the Environmental Statement submission.

### **Impacts on Public Access, Donald Kennedy, Access Officer**

There are no rights of way, core paths or significant wider network paths within the development, however any proposed suspension of access rights during the construction phase should be for the minimum area and durations and for reasons of health and safety.

The proposed site track would cross an existing access track from Upper Feorlig road end to Ben Atekil Wind Farm. This would create potentially a more significant network of recreational access including a circular route.

Alternatively, if the access route to the proposed site is from the Ben Atikel windfarm access,, a circular path route around this development should form part of the access proposals. Consideration should therefore be given to adequate car parking provision and gates that allow access for all, including mobility scooter users who, following access audit site visits to existing windfarm tracks on Skye, have found them to be among the best in terms of path surface, gradient and unhindered views of the surrounding landscapes.

Consideration should be given to the turbines being located on spurs of the main access track by a distance greater than the 'fall over' distance of the turbines.

With regard to recreational access in surrounding areas, viewpoints from which visual sensitivity should be considered are:

- Macleod's Tables - NG2208 4451 or NG2250 4229
- Idrigill Point – NG 2483 3636

North West section of The Black Cuillin Ridge

## **13. Water environment, construction impacts and control**

### **Impacts on the Water Environment, Cerian Baldwin, SEPA**

We welcome pre-application engagement, but please be aware that our advice at this stage is based on emerging proposals and we cannot rule out potential further information requests as the project develops. Similarly, our advice is given without prejudice to our formal planning response, or any decision made on elements of the proposal regulated by us, which may take into account factors not considered at the pre-application or planning stage.

Our advice is divided into two sections, site specific comments and a generic appendix applicable to all windfarm developments. The site specific section should help the developer focus the scope of the assessment whereas the generic appendix provides the detailed survey requirements where applicable.

### **1 Site specific comments**

The proposal should utilise the existing windfarm access road to Ben Aketil to avoid unnecessary significant environmental effects on peatland, watercourses and Groundwater Dependant Terrestrial Ecosystems.

Our preference is for rock to be sourced from local quarries or existing borrow pits with Ben Aketil windfarm to avoid the significant environmental effects caused by the creation of new borrow pits.

Much of the site is on peat, we would expect the application to be supported by a full site specific Peat

## Management Plan.

It is clear that much of the site is likely to be peatland and/or wetland, we suggest you may wish to go straight to carrying out NVC survey without carrying out Phase 1 and SNIFFER assessments."

As long as watercourse crossings are designed to accommodate the 1 in 200 year and other infrastructure is located well away from watercourses we do not foresee a need for detailed information on flood risk to be provided.

Unless any tree felling is proposed then Section 6 of our generic appendix does not apply. Please confirm with the planning submission that no felling is proposed.

During the meeting it was noted that some survey work has already been undertaken. We would welcome the opportunity to comment on any draft assessment before design freeze so that we can flag up any issues whilst design proposals are fluid and thus issues easier to resolve.

## 2 Regulatory requirements

Any proposed engineering works within the water environment will require authorisation under The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended). Any management of surplus peat or soils may require an exemption under The Waste Management Licensing (Scotland) Regulations 2011. Any proposed crushing or screening will require a permit under The Pollution Prevention and Control (Scotland) Regulations 2012.

Details of regulatory requirements and good practice advice for the applicant can be found on the [\*\*Regulations section\*\*](#) of our website. If you are unable to find the advice you need for a specific regulatory matter, please contact a member of the operations team in your local SEPA office at Carr's Corner Industrial Estate, Lochybridge, Fort William PH33 6TL Tel: 01397 704426.

## Appendix: Detailed generic scoping requirements for windfarm developments 4 December 2015

This appendix sets out our generic scoping information requirements. There may be opportunities to scope out some of the issues below depending on site specific conditions. Evidence must be provided in the submission to support why an issue is not relevant in this site specific instance in order to avoid delay and potential objection.

If there is a delay between scoping and the submission of the application then please refer to our website for our latest information requirements as they are regularly updated; current best practice must be followed.

We would welcome the opportunity to comment on the draft submission. As we can process files of a maximum size of only 25MB the submission must be divided into appropriately named sections of less than 25MB each.

### 1. Site layout

- 1.1 Each of the maps below must detail all proposed upgraded, temporary and permanent site infrastructure. This includes all tracks, excavations, buildings, borrow pits, pipelines, cabling, site compounds, laydown areas, storage areas and any other built elements. Existing built infrastructure should be re-used or upgraded wherever possible to minimise the extent of new works in previously undisturbed ground. For example a layout which makes use of lots of spurs or loops is unlikely to be acceptable.

### 2. Engineering activities in the water environment

- 2.1 The site layout must be designed to avoid impacts upon the water environment. Where activities such as watercourse crossings, watercourse diversions, water abstractions or other engineering activities in the water environment cannot be avoided then the submission must include:
  - a) A map showing all proposed temporary or permanent infrastructure overlain with all lochs and watercourses;
  - b) A buffer of at least 50 m demarcated around each loch or watercourse. If this minimum buffer

cannot be achieved each breach must be numbered on a plan with an associated photograph of the location, dimensions of the loch or watercourse, drawings of what is proposed in terms of engineering works, volumes and timings of any abstractions and what mitigation measures are to be put in place;

- c) Each plan must detail the layout of all proposed mitigation including all cut off drains, location, number and size of settlement ponds.
- 2.2 Further advice and our best practice guidance is available within the water [engineering](#) section of our website. Guidance on the design of water crossings can be found in our [Construction of River Crossings Good Practice Guide](#).
- 2.3 Reference should be made to Appendix 2 of our [Standing Advice](#) for advice on flood risk. Watercourse crossings should be designed to accommodate the 1 in 200 year flow, or information provided to justify smaller structures. If it is thought that the development could result in an increased risk of flooding to a nearby receptor then a Flood Risk Assessment must be submitted in support of the planning application. Our [Technical flood risk guidance for stakeholders](#) outlines the information we require to be submitted as part of a Flood Risk Assessment.

### **3. Disturbance and re-use of excavated peat and other carbon rich soils**

- 3.1 Scottish Planning Policy (SPP) states (Paragraph 205) that "Where peat and other carbon rich soils are present, applicants should assess the likely effects of development on carbon dioxide (CO<sub>2</sub>) emissions. Where peatland is drained or otherwise disturbed, there is liable to be a release of CO<sub>2</sub> to the atmosphere. Developments should aim to minimise this release."
- 3.2 The planning submission should a) demonstrate how the layout has been designed to minimise disturbance of peat and consequential release of CO<sub>2</sub> and b) outline the preventative/mitigation measures to avoid significant drying or oxidation of peat through, for example, the construction of access tracks, drainage channels, cable trenches, or the storage and re-use of excavated peat.
- 3.3 The submission must include:
- a) A detailed map of peat depths (this must be to full depth and follow the survey requirement of the Scottish Governments Development on Peat: Site Surveys and Best Practice) with all the built elements (including peat storage areas) overlain to demonstrate how the development avoids areas of deep peat and other sensitive receptors such as GWDTE.
  - b) A table which details the quantities of acrotelmic, catotelmic and amorphous peat which will be excavated for each element and where it will be re-used during reinstatement. Details of the proposed widths and depths of any peat to be re-used and how it will be kept wet must be included.
- 3.4 To avoid delay and potential objection proposals must be in accordance with [Guidance on the Assessment of Peat Volumes, Reuse of Excavated Peat and Minimisation of Waste](#) and our [Regulatory Position Statement – Developments on Peat](#).
- 3.5 Dependant upon the volumes of peat likely to be encountered and the scale of the development, applicants must consider whether a full Peat Management Plan (as detailed in the above guidance) is required or whether the above information would be best submitted as part of the schedule of mitigation.
- 3.6 Please note we do not validate carbon balance assessments, but our advice on peat management options may need to be taken into consideration when you consider such assessments.

### **4. Disruption to Groundwater Dependant Terrestrial Ecosystems (GWDTE)**

- 4.1 GWDTE are protected under the Water Framework Directive and therefore the layout and design of the development must avoid impact on such areas. The following information must be included in the submission:
- a) A map demonstrating that all GWDTE are outwith a 100m radius of all excavations

shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater water abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the distances require it.

- b) If the above minimum buffers cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all GWDTE affected.

4.2 Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice and the minimum information we require to be submitted. The checklist form provided in Appendix 2 of this letter must be completed and submitted with the above information.

## 5. Existing groundwater abstractions

5.1 Excavations and other construction works can disrupt groundwater flow and impact on existing groundwater abstractions. The submission must include:

- a) A map demonstrating that all existing groundwater abstractions are outwith a 100m radius of all excavations shallower than 1m and outwith 250m of all excavations deeper than 1m and proposed groundwater water abstractions. If micro-siting is to be considered as a mitigation measure the distance of survey needs to be extended by the proposed maximum extent of micro-siting. The survey needs to extend beyond the site boundary where the distances require it.
- b) If the above minimum buffers cannot be achieved, a detailed site specific qualitative and/or quantitative risk assessment will be required. We are likely to seek conditions securing appropriate mitigation for all existing groundwater abstractions affected.

5.2 Please refer to [Guidance on Assessing the Impacts of Development Proposals on Groundwater Abstractions and Groundwater Dependent Terrestrial Ecosystems](#) for further advice on the minimum information we require to be submitted.

## 6. Forest removal and forest waste

6.1 We support the approach of key-holing wherever possible as large scale felling can result in large amounts of waste material and in a peak release of nutrients which can affect local water quality.

6.2 We would be supportive of clear felling only in cases where planting took place on deep peat and it is proposed through a Habitat Management Plan to reinstate peat-forming habitats. The submission must include:

- a) A map demarcating the areas to be subject to different felling techniques;
- b) Photography of general timber condition in each of these areas;
- c) A table of approximate volumes of timber which will be removed from site and volumes, sizes of chips or brash and depths that will be re-used on site;
- d) A plan showing how and where any timber residues will be re-used for ecological benefit within that area, supported by a Habitat Management Plan. Further guidance on this can be found in [Use of Trees Cleared to Facilitate Development on Afforested Land – Joint Guidance from SEPA, SNH and FCS](#).

## 7. Borrow pits

7.1 Scottish Planning Policy (SPP) states (Paragraph 243) that “Borrow pits should only be permitted if there are significant environmental or economic benefits compared to obtaining material from local quarries, they are time-limited; tied to a particular project and appropriate reclamation measures are in place.” The submission should provide sufficient information to address this policy statement.

7.2 In accordance with Paragraphs 52 to 57 of Planning Advice Note 50 [Controlling the Environmental Effects of Surface Mineral Workings](#) (PAN 50) a Site Management Plan should be submitted in support of any application. A map of all proposed borrow pits must be submitted along with a site specific plan of each borrow pit detailing:

- a) Sections showing the nature, area and depth of working in relation to the existing water table height and the volumes of dewatering required;
- b) A site map showing how surface water run-off and dewatering will be managed on site including cut off drains, silt management devices and settlement lagoons;
- c) A site map showing the location of any watercourses and how these are being avoided during the operation of the site. If this is not possible please refer to Section 2 below.
- d) A site map showing the location of pollution prevention measures such as spill kits, oil interceptors, any drainage associated with welfare facilities, recycling and bin storage and vehicle washing areas;
- e) A site map showing where any overburden will be stored including details of the heights and dimensions of each store, how long the material will be stored for and how it will be kept fit for restoration purposes;
- f) Sections and plans detailing how restoration will be progressed including the phasing, profiles, depths and types of material to be used;
- g) A site log sheet detailing how often the pollution prevention and drainage measures will be checked and maintained which will be kept on site ready for inspection at any time.

## **8. Pollution prevention and environmental management**

- 8.1 One of our key interests in relation to developments is pollution prevention measures during the periods of construction, operation, maintenance, demolition and restoration.
- 8.2 A schedule of mitigation supported by the above site specific maps and plans must be submitted. These must include reference to best practice pollution prevention and construction techniques, regulatory requirements, the daily responsibilities of ECOWS, how site inspections will be recorded and acted upon and any proposals to fund a planning monitoring enforcement officer. Please refer to the [Pollution prevention guidelines](#).

## **9. Decommissioning / Repowering**

- 9.1 Any proposal to discard materials that are likely to be classed as waste would be unacceptable under current waste management licensing, and under waste management licensing at time of decommissioning if a similar regulatory framework exists at that time. Further guidance on this may be found in the document [Is it waste - Understanding the definition of waste](#).
- 9.2 The environmental assessment process should take this waste regulatory position, and the need to demonstrate waste minimisation, into account from the outset in designing the layout and in developing the general principles for the site of decommissioning or repowering.

### **Impact of Flooding, Michelle Lawrie, Flood Risk Management Team**

The Highland Council Flood Risk Management (FRM) Team have reviewed the information provided and have the following advice for the Applicant at this stage. We would be happy to provide comment on any draft designs prior to the formal submission of the planning application.

A number of small tributaries of the River Glen Heysdale are located within the site. We believe that through careful siting of the infrastructure, flood risk from these sources can be avoided. Should any infrastructure be located close to any of the watercourses then we would request that a Flood Risk Assessment is submitted to support this and demonstrate that there is no risk of flooding in a 1 in 200 year plus climate change event.

The access route to the site may need to cross watercourses. Culverting of watercourses should be avoided unless there is no practical alternative. Any new or upgraded culverts or bridges should be adequately designed to accommodate the 1 in 200 year flows (including a 20% allowance for climate change) to avoid increasing the risk of flooding. Analysis of the impact of any proposed new bridges/crossings should be

submitted for review.

We would request that a Drainage Impact Assessment (DIA) be submitted. The DIA should include details relating to any existing field drains and the management of surface water drainage which should be designed in line with general Sustainable Drainage Systems (SuDS) principles. The Applicant should demonstrate, within the proposals submitted, any mitigation measures to manage the residual risk of overland flow/pluvial flooding. Natural Flood Management Techniques should be applied to reduce the rate of runoff where possible.

Tracks should not act as preferential pathways for runoff and efforts should be made to retain the existing drainage network.

Appropriate drainage is required to restrict runoff to pre-development rates and to minimise erosion to existing watercourses. The DIA should ensure that post development runoff rate is no greater than pre-development runoff rate (i.e. greenfield runoff) for all return periods up to the 1 in 200 year event (Including an allowance for Climate Change).

Runoff from all events up to and including the 1 in 200 year event plus climate change should be managed within the site boundary, with no flooding to critical roads or properties, and evidence as to how this will be achieved should be included within the DIA.

A minimum buffer strip of 50m should be kept free from development from the top of bank(s) of any watercourse/waterbody. Storage of materials within this area during construction is not permitted.

Development or land raising within any flood plain should be avoided. If this cannot be achieved, further consultation with the Flood Risk Management Team will be required.

Please refer to the Supplementary Guidance: *Flood Risk and Drainage Impact Assessment*, available from the Highland Council website, for further detailed requirements for addressing flood risk and drainage.

[http://www.highland.gov.uk/info/178/local\\_and\\_statutory\\_development\\_plans/213/supplementary\\_guidance/14](http://www.highland.gov.uk/info/178/local_and_statutory_development_plans/213/supplementary_guidance/14)

Key Points	Assessments to be carried out and/or submitted with application
<ul style="list-style-type: none"><li>• Schedule of mitigation including pollution prevention measures.</li><li>• Access/Watercourse crossings</li><li>• Use of SuDS principles/Natural Flood Management Techniques</li><li>• Care in relation to pollution of water courses</li><li>• Minimum 50m Buffer Strip from watercourses</li></ul>	<ul style="list-style-type: none"><li>• Need to utilise the existing windfarm access road to Ben Aketil</li><li>• Map and assessment of all engineering works within and near the water environment including buffers and details of any related CAR applications;</li><li>• Map and assessment of impacts upon Groundwater Dependant Terrestrial Ecosystems and buffers;</li><li>• Map and assessment of impacts upon groundwater abstractions and buffers;</li><li>• Peat depth survey and table detailing re-use proposals;</li><li>• Map and site layout of borrow pits;</li><li>• Drainage Impact Assessment</li><li>• Schedule of mitigation including pollution prevention measures.</li><li>• Construction Environmental Management Plans</li><li>• Borrow Pit Site Management Plan</li></ul>

#### **Impact on Scottish Water Assets, Steven Gordon, Scottish Water**

The developer should contact Scottish Water to assess if the proposals will impact any of our infrastructure / water catchments in the area.

## 14. Built and Cultural Heritage

### **Impact on the Historic Environment, Nicola Hall, Historic Environment Scotland**

Key Points	Assessments to be carried out and/or submitted with application
<p>The proposed development is for between 7 and 10 x 125m wind turbines and associated infrastructure.</p> <p>We have considered the development proposal from our statutory remit. That is, scheduled monuments, category A listed buildings, Inventory gardens and designed landscapes, Inventory historic battlefields and Historic Marine Protected Areas. These are available to download from <a href="http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2000:10:0">http://data.historic-scotland.gov.uk/pls/htmldb/f?p=2000:10:0</a> :</p> <p>Based on the information available, the proposal raises concerns because of the potential significant impact on heritage assets. In light of this, we would welcome further pre-application discussion in order to address these concerns.</p> <p>Your Historic Environment Team will also be able to advise on potential impacts on the historic environment.</p>	<p>In general terms, any ES should include a detailed assessment of direct (i.e. physical) and indirect (i.e. the setting of a heritage asset) impacts on the historic environment, including any cumulative impact, and this should be supported and informed by visualisations. Mitigation measures that reduce any impacts on the historic environment should be explored.</p> <p>The proposal raises concerns because of the potential significant impact on a number of heritage assets, including:</p> <ul style="list-style-type: none"><li>• Dun Vegan Castle (HB Num 501/502/503) and its associated Inventory garden and designed landscape</li><li>• St Mary's Church and Burial Ground, Dunvegan (Index No. 9249)</li><li>• Dun Osdale broch 850m N of Osdale (Index No. 3493)</li><li>• Barpannan, two chambered cairns, Vatten Duirinish (Index No. 893)</li><li>• 3 Dun Feorlig broch 230m NNE of Feorlig Farm (Index No. 494)</li><li>• Ardmore chapel &amp; burial ground 230m SW of (Index No. 3884)</li><li>• Dun Neill, dun 420m SW of Ardmore (Index No. 3885)</li></ul> <p>It is presently unclear from the topography and scale of the ZTV how likely the turbines are to be visible from these heritage assets. However, any visibility should be illustrated with photomontages and wireframes.</p> <p>As there are numerous other heritage assets located in the vicinity of the development, impacts on those located within the ZTV should also be assessed.</p> <p>Given the other proposed wind farms in the vicinity, particular attention should be given to assessing the potential cumulative impact on heritage assets. This assessment should be illustrated by visualisations.</p> <p>In undertaking their assessment, the applicant may find the following advice useful:</p> <p><b>EIA FAQ's:</b> <a href="http://www.historic-scotland.gov.uk/index/heritage/policy/environmental-assessment/eiafaqs.htm">http://www.historic-scotland.gov.uk/index/heritage/policy/environmental-assessment/eiafaqs.htm</a></p> <p><b>Setting:</b> <a href="http://www.historic-scotland.gov.uk/index/heritage/policy/managingchange.htm">http://www.historic-scotland.gov.uk/index/heritage/policy/managingchange.htm</a></p>

## **Impact on the Historic Environment, Kirsty Cameron, Historic Environment Team**

A few features of historic interest are currently recorded within the development boundary. These consist of the remains of historic and prehistoric settlement in the form of at least one roundhouse, a broch, shieling groups and farmsteads. Further traces of such settlement are recorded in the wider area and there remains the potential for further features or remains of prehistoric (or later) date to be present. Overall, direct impacts to cultural heritage are not envisaged to be a significant constraint in this case. There are, however, a number of important archaeological remains, landscapes and features in the wider area that may have their setting adversely impacted by a development in the location proposed.

The Cultural Heritage chapter of an Environmental Statement will need to be undertaken by a professional and competent historic environment consultant and will follow the Highland Council Standards for Archaeological Work, specifically Section 4 which deals with Environmental Statements (particularly para 4.14) and Section 3. The Standards are available at [http://www.highland.gov.uk/downloads/file/1022/standards\\_for\\_archaeological\\_wok](http://www.highland.gov.uk/downloads/file/1022/standards_for_archaeological_wok). Consideration of all recent research (including unpublished material) should be included in this work.

Designated assets will need to be assessed if the ZVI demonstrates an impact, unless there is robust evidence as to why assessment is not necessary. Undesignated assets potentially of national importance, undesignated sites where setting contributes to significance and undesignated sites that collectively form a rich single or multi-period landscape up to 10km will be assessed. The indirect impact assessment will need to include a study of cumulative impacts. Where indirect impacts are predicted, these will be illustrated using photomontages.

Where impacts are unavoidable, HET expect proposed methods to mitigate this impact to be discussed in detail, including both physical (i.e. re-design) and where appropriate, compensatory/off-setting.

The assessment will include a walkover survey of the development area (including any land required for associated infrastructure). The assessment will consider the potential direct impacts of the development to cultural heritage as well as indirect impacts.

Key Points	Assessments to be carried out and/or submitted with application
Indirect (setting) impacts are likely to be a more significant issue than direct impacts.	HET will expect cultural heritage to be rigorously assessed as part of an Environmental Statement.

## **15. Developer Contributions**

No specific contributions required although may be requirement for improvements to the public road network.

## **16. Pre-application Procedures/Guidance**

Public consultation should be undertaken as the proposals develop to help both gauging the opinion of the local community and also scoping potential areas of conflict which could be addressed prior to submission of the application.

When carrying out community consultation we recommend that full consideration is taken of Scottish Government Planning Advice Note 3/2010 - Community Engagement. This includes the standards for community involvement which should be adhered to. These standards are:

- Involvement
- Support
- Planning
- Methods
- Working together
- Sharing information

- Working with others
- Improvement
- Feedback
- Monitoring and evaluation

It is advisable to take into consideration all of the comments made by members of the public before a planning application is submitted to ensure that the public feel they have had an influence over the proposals. For public consultation it may be useful to use the SP=EED tool developed by Planning Aid Scotland. This builds on the Standards for Community Engagement set out in PAN 3/2010. This is available online at <http://www.planningaidscotland.org.uk>.

#### *Processing Agreements*

A processing agreement is a way of helping developers, the Council and relevant stakeholders work together through the planning process. It involves setting out the key stages involved in deciding a planning application, identifying what information is required from whom and setting time scales for the various stages of the process.

The Council actively encourages the use of processing agreements for major applications. You are advised to contact the Council's Major Application Team with a view to agreeing a Processing Agreement at the earliest possible opportunity. Contact details are provided in section 18 towards the end of this pack.

#### *Proposal of Application Notice*

The Town and Country Planning (Development Management Procedure) (Scotland) Regulations 2008 require that for any major development (over 20MW) pre-application consultation must be undertaken. This requires a formal Proposal of Application Notice to be submitted to the Planning Authority at least 12 weeks prior to any formal planning application being lodged and any subsequent planning application must be accompanied by a Pre-application Community Consultation report. Further information is provided on the Council website, see:

<http://www.highland.gov.uk/yourenvironment/planning/pre-application-advice/statutory-preapplication-consultation.htm>

#### *Environmental Impact Assessment Screening*

The Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2011 requires that this development must be screened to determine whether an Environmental Impact Assessment (EIA) is required to support a planning application. This proposal is likely to be EIA development but a formal request for a Screening Opinion/s should be made in writing to the Planning Authority. An EIA Screening Opinion form can be downloaded from the Councils website by following the link below. At present it is not possible to do this online.

<http://www.highland.gov.uk/yourenvironment/planning/planningapplications/applyforplanningpermission.htm>

#### *Community Councils*

In terms of the appropriate Community Councils to consult, the proposal is located within the Dunvegan and District Community Council area. A development of the nature proposed may affect a number of adjacent Community Councils. As such it is recommended that adjacent Community Councils are also consulted. The Ward Manager, Willie Mackinnon, Tigh na Sgire, Park Lane, Portree IV51 9GP, 01478 613849, can provide advice further in this regard if required. Contact details for all community Councils can be found on the link below:

<http://www.highland.gov.uk/livinghere/communitiesandorganisations/communitycouncils/>

#### *Access*

It would be beneficial to at this stage consult with the local Disability Access Panel. The contact details for your local panel are:

- Skye and Lochalsh Access Panel, Tir Nan Og, 11 Ose, Struan, Isle of Skye, IV56 8FJ. Telephone: (01470) 572385.

For general advice in relation to the removal of barriers and the promotion of equal access for all people affected by disability for your development contact the [Scottish Disability Equality Forum](#), 12 Enterprise House, Springkerse Business Park, Stirling, FK7 7UF. Telephone: (01786) 446456.

#### *Councillors Code of Conduct*

It would be beneficial for you to be familiar with the Councillors' Code of Conduct. This is available online [from the Scottish Government's website](#).

### **17. Any other appropriate information**

#### **Gaelic**

In line with the Council's ongoing commitment to promote the increased use of Gaelic in developments within the Highlands, you are encouraged to consider the use of bilingual signs - both internal and external - as part of your proposal. Our Gaelic Translation Officers are able to provide additional advice and help with translations, if required.

For further information and guidance, please contact the Council's Gaelic Translation Officer on (01463) 724287 or visit <http://www.qaidhealtachd.gov.uk>.

To download a copy of the Council's 'Using Gaelic in Signs' advice note, please visit:

<http://www.highland.gov.uk/yourenvironment/planning/planningapplications/Adviceandguidance.htm>.

For details on grant funding for bilingual signage, please contact Comunn na Gàidhlig on (01463) 724287 or visit [www.cnaq.org.uk](http://www.cnaq.org.uk).

### **18. Contacts**

Major Applications Team Planning and Development Service Council Headquarters Glenurquhart Road Inverness IV3 5NX	<b>E-mail</b> <a href="mailto:devplans@highland.gov.uk">devplans@highland.gov.uk</a>	<b>Phone</b> 01463 702506
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#### **Highland Council**

Contact	Email	Phone
David Mudie, Team Leader - Development Management	<a href="mailto:david.mudie@highland.gov.uk">david.mudie@highland.gov.uk</a>	01463 702255
Kirsty Cameron, Historic Environment	<a href="mailto:Kirsty.cameron@highland.gov.uk">Kirsty.cameron@highland.gov.uk</a>	01463 702504
Michelle Lawrie, Flood Risk Management	<a href="mailto:Michelle.Lawrie@highland.gov.uk">Michelle.Lawrie@highland.gov.uk</a>	01349 868 803
Nicola MacKenzie, Scientific Officer, Contaminated Land	<a href="mailto:Nicola.mackenzie@highland.gov.uk">Nicola.mackenzie@highland.gov.uk</a>	01463 228746
Donald Kennedy, Access Officer	<a href="mailto:Donald.kennedy@highland.gov.uk">Donald.kennedy@highland.gov.uk</a>	01478 613811
Robin Fraser, Environmental Health	<a href="mailto:Robin.fraser@highland.gov.uk">Robin.fraser@highland.gov.uk</a>	01349 868445
Fred McIntosh, Transport Development Officer	<a href="mailto:Fred.mcIntosh@highland.gov.uk">Fred.mcIntosh@highland.gov.uk</a>	(01463) 252941
Anne Cowling, Landscape Officer	<a href="mailto:Anne.cowling@highland.gov.uk">Anne.cowling@highland.gov.uk</a>	01463 702509
Carrie Pratt, Planner, Policy	<a href="mailto:Carrie.pratt@highland.gov.uk">Carrie.pratt@highland.gov.uk</a>	01463 702271

#### **Outside Agencies**

Cerian Baldwin, SEPA	<a href="mailto:Planning.Dingwall@sepa.org.uk">Planning.Dingwall@sepa.org.uk</a>	01349 860415
Nicola Hall, Senior Heritage Management Officer, Historic Environment Scotland	<a href="mailto:Nicola.Hall@gov.scot">Nicola.Hall@gov.scot</a>	0131 668 8092
Liz McLachlan, Area Officer, SNH	<a href="mailto:liz.mclachlan@snh.gov.uk">liz.mclachlan@snh.gov.uk</a>	01349 865333

## Planning Application Submission Checklist

If there is a tick next to one of the following documents then we will require you to submit it along with your application for planning permission. If you choose not to follow our advice and do not submit one of the required documents then we will expect a justification for this. A form for this which should be submitted with your application is available to download from <http://www.highland.gov.uk/>

Natural Heritage	Landscape and Visual Impact Assessment	✓
	Landscape Plan	
	Landscape Maintenance/Management Plan	
	Protected Habitat Survey	✓
	Protected Species Survey	✓
	Tree Survey	
Design	Design Brief and/or Master Plan	
	Design and Access Statement	✓
	Sustainable Design Statement	✓
Amenity	Contaminated Land Report	
	Dust Survey	
	Noise Impact Assessment	✓
	Waste Strategy	
Transport and Wider Access	Green Travel Framework	
	Scottish Transport Appraisal Guidance (STAG)	
	Transport Assessment	✓
Water	Flood Risk Assessment	✓
	Sustainable Urban Drainage System Plan	
Built and Cultural Heritage	Archaeology watching brief/Site investigations	✓
	Conservation Statement	
	Structural Survey	
Public Consultations	Pre-application Consultation Report	✓
Miscellaneous	Minerals (mitigation and restoration management plan)	✓
	Retail Assessment	
Any other appropriate document	Likely to be Environmental Statement that will cover the above and more	

## Environmental Impact Assessment

### Screening

The Council is obliged to screen development proposals that may require an Environmental Impact Assessment (EIA). Unless specifically requested it is not the Council's intention to automatically screen proposals and issue a formal Screening Opinion.

The Highland Council Screening response was issued on.....	
The Highland Council Screening response is attached	
The Highland Council Screening response <b>is not</b> attached because it was not requested.	✓

### Scoping

Where a proposal has been determined to require an EIA, and therefore will require the production of an Environmental Statement, we aim to give a Scoping response at this stage if we have not already been approached to do so.

The Highland Council Scoping Response was issued on....	
The Highland Council Scoping Response is attached	
The Highland Council Scoping Response <b>is not</b> attached because it was not requested.	✓

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#### APPENDIX 4: KNOWN CUMULATIVE SITES (FEBRUARY 2016)

The following wind farm sites and wind turbines greater than 50m to blade tip will be considered within the EIA:

##### Operational Wind Farms

- Ben Aketil Wind Farm (12 turbines) 100.0m to blade tip
- Edinbane Wind Farm (18 turbines) 100.0m to blade tip

##### Proposed Wind Farms

- Glen Ullinish Wind Farm (14 turbines)<sup>26</sup> 119.0m to blade tip Planning Permission issued
- Ardmore Wind Farm (7 turbines)<sup>27</sup> 100.0m to blade tip In Scoping
- Ben Crokaig Wind Farm (11 turbines)<sup>28</sup> 126.5m to blade tip In Scoping
- Beinn Mheadhonach (3 turbines)<sup>29</sup> 99.5m to blade tip In Scoping
- Glen Hinnisdal (4 turbines)<sup>30</sup> 93.0m to blade tip In Scoping

##### Operational Single Wind Turbines greater than 50m to blade tip

- Meadale Farm<sup>31</sup> 53.7m to blade tip
- Sumardale Croft<sup>32</sup> 79.0m to blade tip

##### Proposed Single Wind Turbines greater than 50m to blade tip

- South Cuidreach<sup>33</sup> 77m to blade tip Planning Permission issued

Only proposals that have reached a formal planning application stage at the time of submission will be considered in detail within the ES. Any known proposals that are still in pre-planning stage will be appropriately referenced but not assessed due to the lack of firm information available about those projects.

<sup>26</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=NDN05UIH7R000>

<sup>27</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=NKBSVRIHOAS00>

<sup>28</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=NGBAWPIH0A000>

<sup>29</sup> See: <http://wam.hightland.gov.uk/wam/caseDetails.do?caseType=Application&keyVal=NOXWEJIH09K00>

<sup>30</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=M0M410IH01P00>

<sup>31</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=LNM22BIH7R000>

<sup>32</sup> See: <http://wam.hightland.gov.uk/wam/applicationDetails.do?activeTab=summary&keyVal=LPM2KNIH05Y00>

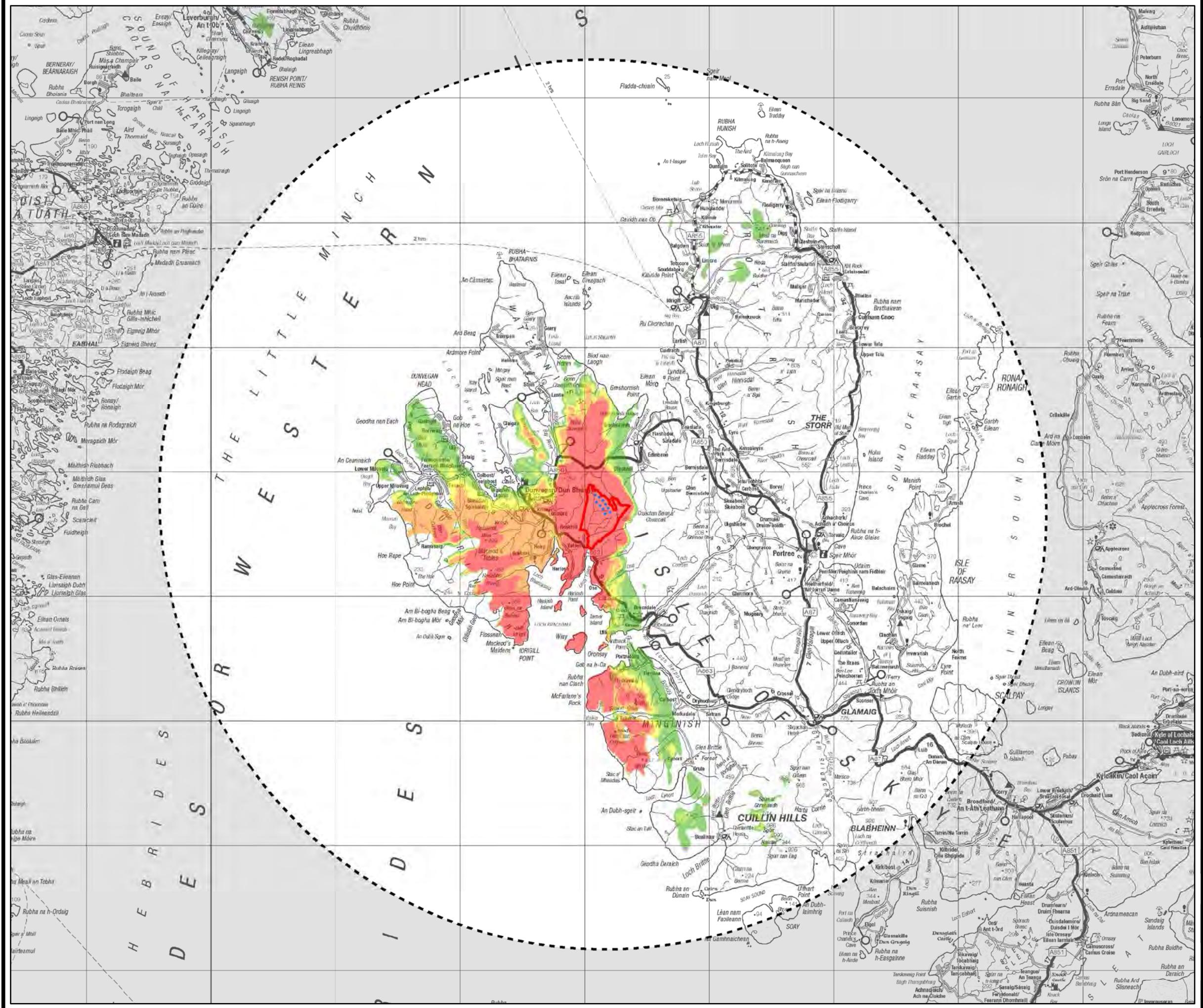
<sup>33</sup> See: <http://wam.hightland.gov.uk/wam/caseDetails.do?caseType=Application&keyVal=NGS9EOIH0A000>

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APPENDIX 5: PRELIMINARY ZTV (130M TO BLADE TIP)

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**res**

# GLEANN EOGHAINN WIND FARM

## APPENDIX 5.1

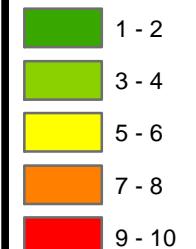
ZTV

© CROWN COPYRIGHT, ALL RIGHTS RESERVED.  
2016 LICENCE NUMBER 0100031673.

## TURBINE LOCATION

 SITE BOUNDARY  
 35km FROM OUTER TURBINE

## NUMBER OF TURBINES VISIBLE AT 130m TIP HEIGHT



1. THE ANALYSIS DOES NOT TAKE INTO ACCOUNT THE SCREENING EFFECT OF VEGETATION, BUILDINGS AND OTHER SURFACE FEATURES
  2. PSCodvg015 USES TURBINES OF 130M TIP HEIGHTS.
  3. PREDICTED VISIBILITY BASED ON A VIEWER EYE HEIGHT 2m ABOVE GROUND AND TURBINE TIP HEIGHT OF 130M.
  4. VISIBILITY CALCULATED USING ORDNANCE SURVEY LAND-FORM PANORAMA ON A 50m GRID
  5. EFFECT OF EARTH CURVATURE AND ATMOSPHERIC LIGHT REFRACTION IS INCLUDED.



LAYOUT DWG T-LAYOUT NO

03229D0001-02 FSC0uvg013

03229D2001-02

SCALE - 1:300,000 @ A3

A SCOPING REQUEST 2016

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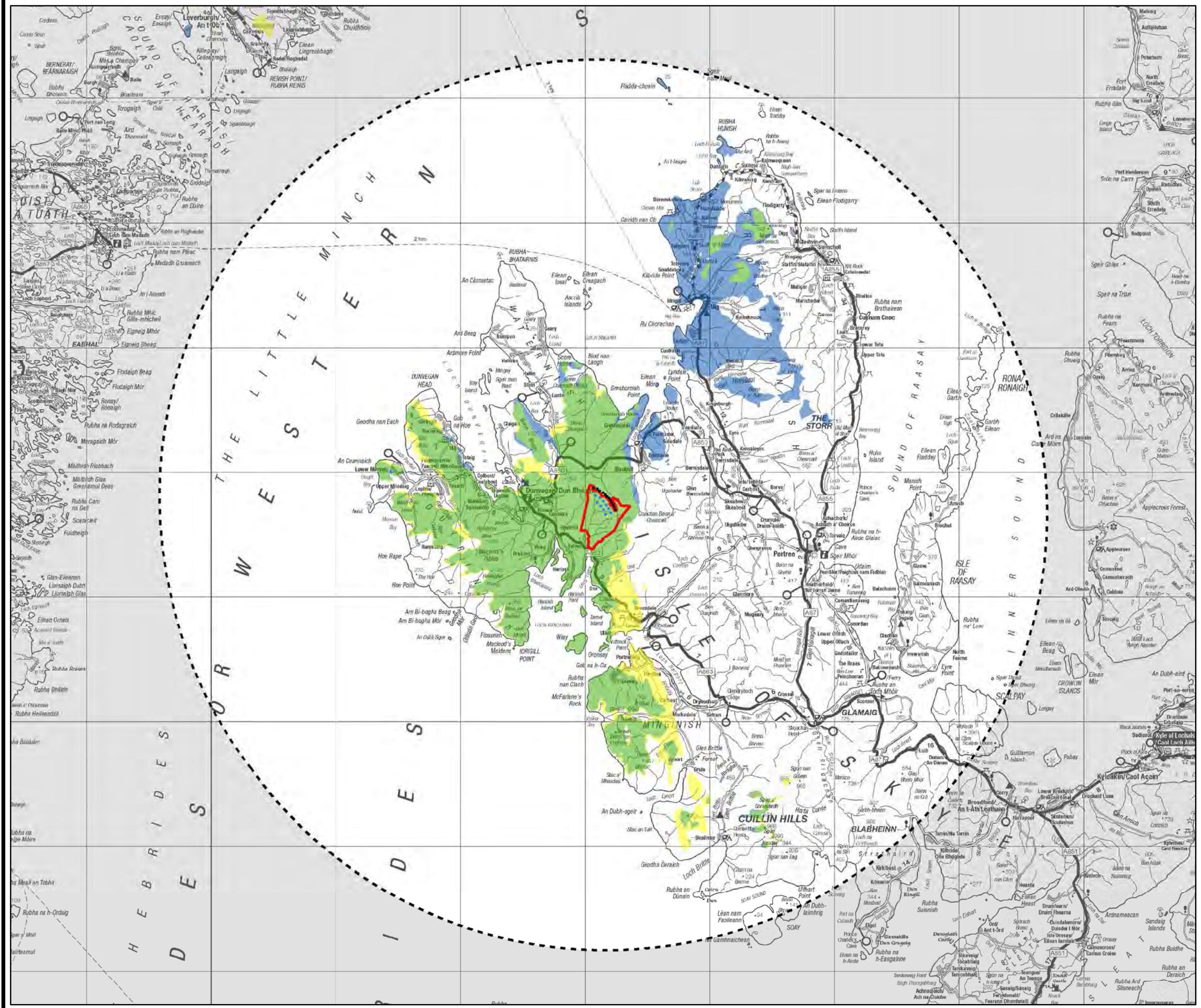
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## GLEANN EOGHAINN WIND FARM

### APPENDIX 5.2

#### CUMULATIVE ZTV



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APPENDIX 6: ECOLOGICAL AND ORNITHOLOGICAL SURVEY FINDINGS (FEBRUARY 2016)

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## Ecology Summary Notes (Caledonian Conservation)

A brief preliminary desk study was undertaken using the NBN gateway to identify protected species known from the area. As these results cannot be used in support of a planning application, a full desk study requiring purchase of data from data providers would be undertaken to inform the ecology assessment or appraisal.

Novel baseline ecology surveys were undertaken in 2014 and 2015. These included an Extended Phase 1 Habitat survey, a National Vegetation Classification (NVC) survey and bat surveys. An Extended Phase 1 Habitat survey was undertaken in July 2014 within the original indicative site boundary and 500m buffer area. The proposed development area has subsequently been altered and enlarged to include new indicative turbine locations and a 500m buffer. Additional Extended Phase 1 Habitat survey effort was undertaken in June 2015 covering habitat within the new core study area outwith the original indicative site boundary. The NVC and bat surveys of 2015 were undertaken within the new core study area.

The Extended Phase 1 Habitat Survey showed that the core study area supported habitats listed under Annex I of the Habitats Directive and Ground Water Dependent Terrestrial Ecosystems (GWDTEs).

Otter spraints were found in the upper reaches of Gleann Eoghainn. There is suitable habitat for foraging and watercourses through the core study area provide potential routes for otter movement. The wet heath and modified bog within the core study area and buffer provide a good food source in the form of small mammals, amphibians and reptiles and the plantation provides shelter for holts and couches.

No field signs of pine marten were found during the Extended Phase 1 survey. However pine marten are known to inhabit southern Skye and, although unlikely due to sub-optimal foraging opportunities, it is not impossible that pine marten could inhabit the forestry adjacent to the Site.

No field signs were recorded for badger during the Extended Phase 1 survey and the presence of badger in the core study area is extremely unlikely due to the habitat being unsuitable for this species.

Only very low numbers of common pipistrelle bat were recorded during the course of the survey, and the Site was found to be of low value for foraging, commuting and roosting bats.

The Site offers suitable habitat for reptiles, although none were recorded during surveys. This species is of medium risk of collision with wind turbines. It is considered unlikely, therefore, that the proposed wind farm will have a measureable impact on local bat populations.

The NVC recorded Annex I habitats throughout the majority of the core study area. The habitat at Gleann Eoghainn is composed of a large scale mosaic of wet heath and blanket bog. Much of this habitat is heavily modified through grazing, drainage and repeated burning. The central, gently sloping ground north of the Rageary Burn is primarily composed of sub-communities of M17 *Tricophorum germanicum* - *Eriophorum vaginatum* blanket mire. The mire communities of M25 *Molinia caerulea* - *Potentilla erecta* and M19 *Calluna vulgaris* - *Eriophorum vaginatum* mires occur in drier areas within the bog.

Bog pools with communities of M2 *Sphagnum cuspidatum* / *fallax* and M3 *Eriophorum angustifolium* are found throughout the wetter areas of bog, primarily within the less modified areas of M17 mire. A small area of M18 *Erica tetralix* - *Sphagnum papillosum* mire also occurs within the M17 mire west of Maesweyns Burn.

The steeper, better drained ground sloping into the Gleann Eoghainn burn and covering the north western and southern slopes of the core study area is colonised by M15 *Tricophorum germanicum* - *Erica tetralix* wet heath, mainly of the typical M15b sub-community. On the steepest slopes of Ben Aketil the drier M15c sub-community occurs alongside H10 *Calluna vulgaris* - *Erica cinerea* heath. M15c

and H10 are also found along the slopes around the Rageary burn. Smaller scale mosaics of these habitat types occur throughout the core study area.

Alkaline flushes occur throughout the core study area. M10 *Carex dioica* - *Pinguicula vulgaris* mires occur in rocky burns on the higher slopes of Ben Aketil. M9 *Carex rostrata* - *Calliergon cuspidata* mires occur on lower lying areas, along tributaries draining into the Gleann Eoghainn burn. Also along these tributaries are more acidic flushes of M4 *Carex rostrata* - *Sphagnum fallax* mire, M6 *Carex echinata* - *Sphagnum fallax* / *denticulatum* mire and M23 *Juncus effusus* - *Galium palustre* mire. The larger, more freely flowing burns are also bordered by small, heavily grazed areas of acidic U5 *Nardus stricta* - *Galium saxatile* grassland. Arising from the slopes west of Gleann Eoghainn are springs dominated by *Philonotis fontana* which have affinities to the M32a sub-community of *Philonotis fontana* - *saxifraga stellaris* spring. A plantation of non-native *Picea sitchensis* (Sitka spruce) occurs to the north of the core study area and is of negative biodiversity conservation value.

#### Ornithological Summary Notes (Caledonian Conservation)

Novel baseline ornithology surveys were undertaken between April 2014 and February 2015. The start of surveys was delayed until April due to the late commissioning of the contract. However, additional survey effort was undertaken in April and May to compensate for this. The surveys included flight activity surveys, breeding bird (wader), breeding raptor and owl surveys and winter bird surveys.

Work was designed and carried out to cover the original site boundary supplied by RES in 2014. However, the Development area has been subsequently altered and enlarged to cover new indicative turbine locations and a 500m buffer around them, after the completion of first year surveys.

The potential for collision mortality of white-tailed eagle and golden eagle would necessitate robust assessment (including population modelling) and mitigation (such as reducing livestock levels on-site and collision monitoring) to confirm there would be no adverse impact on the integrity of the population on Skye. The Site is located some distance from any designated sites, and little sensitivity was identified during surveys. As such the Site appears to be of medium to high ornithological value (due only to the eagle activity), although further surveys and consultation will confirm this and additional surveys and stakeholder consultation may reveal further sensitivities.

Raptors, in particular golden eagles which may be associated with the nearby Cuillins Special Protection Area, and white-tailed eagles which overfly the Site remain the main sensitivity of the proposed development.

Golden eagle flights were recorded during and outwith the breeding season. Preliminary collision risk modelling estimated a risk of one collision every 231.41 years during the breeding season and one collision every 15.79 years during winter. This is equivalent to a total estimated mortality of 0.06 birds per year.

White tailed eagle flights were recorded during and outwith the breeding season. Using the recommended avoidance rate of 95% preliminary collision risk modelling estimated a risk of one collision every 5.49 years during the breeding season and one collision every 9.69 years during winter. This is equivalent to a total estimated mortality of 0.28 birds per year.

The 95% avoidance rate used for white tailed eagles recommended by SNH is based on consideration of observations at from Smøla wind farm. A later study calculated a 95.8% avoidance rate using data gathered at the same wind farm, and is therefore likely to be more realistic. Using an avoidance rate of 95.8%, preliminary collision risk modelling estimated a risk of one collision every 6.54 years during the breeding season and one collision every 11.54 years during winter. This is equivalent to a total estimated mortality of 0.24 birds per year.

As white-tailed eagle flights are not obviously connected to a known active territory, they are likely to represent sub-adult birds or floating (non-breeding) adults. In this case, the 95% and 95.8% avoidance rates are likely to be precautionary, as these relate to the behaviour of birds within their natal ranges.

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Birds observed at Dunvegan do not appear to have an affinity with any identified territory, and so are unlikely to be exhibiting the same behaviour as the birds included in the studies on which these low avoidance rates are based. As such, collision estimates are likely to be precautionary.

No evidence of breeding golden or white-tailed eagles was found within the 6km buffer area.

Hen harrier flights were recorded during and outwith the breeding season, the vast majority of flights represented foraging flights well below Potential Collision Height (PCH). Preliminary collision risk modelling estimated a negligible risk of collision with turbines.

It is possible that hen harrier breed in the forestry immediately to the north of the Site, within the 2km breeding raptor buffer area. Access restrictions have prevented visits to the forestry and breeding has not been confirmed, the forest rides provide good breeding habitat and hen harrier have been recorded displaying here.

Only one merlin flight was recorded at PCH during flight activity surveys and the risk of collision can be considered to be negligible. A merlin pair was recorded south of the Site in Glen Heysdal although no evidence of breeding was recorded and an individual was seen within the core study area during breeding raptor surveys.

A single barn owl flight of an individual bird was recorded outside the breeding season over the core study area although this foraging flight was well below PCH. The risk of collision with turbines for this species is considered to be negligible. No evidence of barn owl nesting was found during breeding owl surveys. It is however possible that barn owls nest in the wider area.

Although black grouse are thought to persist at very low densities on Skye as vagrant birds from the mainland population, it is thought unlikely that an established breeding population remains. However a pair of black grouse was recorded flying over the core study area during the winter of 2014/5 and a small possibility remains that they may breed in the forestry to the north of the Site as it provides good black grouse habitat.

Of wader species only snipe have been recorded during flight activity surveys. Seven flights of snipe were recorded, all but one of individual birds and all within the wader breeding season. Collision risk modelling estimated a risk of one collision every 28.91 years during the breeding season. This is equivalent to a total estimated mortality of 0.03 birds per year.

A single snipe territory was recorded within the breeding wader buffer area during breeding bird surveys. The moorland habitats within the core study area offer potentially suitable breeding habitat for upland waders, and other species may breed in the farmland at the south of the Site. It is possible that the Site may support wader breeding territories in the future.

Wildfowl have not been seen overflying the core study area in any significant numbers, only two flights (of barnacle geese and whooper swan) were recorded during flight activity surveys. Only a single flight of five whooper swans overflowed the Site at PCH, and so any risk of collision is considered to be extremely small.

Fifteen species of passerine were recorded during breeding bird surveys, three of which are Red Listed as Birds of Conservation Concern (BOCC) while four are Amber Listed.

Thirty-six skylark (Red Listed) territories were recorded as well as an estimated 169 meadow pipit (Amber Listed) territories. These are very high densities and likely to be a precautionary overestimate. Cuckoo (Red Listed) were also recorded, although no breeding behaviour was seen. Cuckoos are a brood parasite known to use meadow pipits and skylarks as favourite host species, both of which occupy the Site in large numbers.

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Lesser redpolls (Red Listed) were observed during the breeding bird survey although the Site offers very limited habitat for this species, which is more likely to occupy the forestry to the north of the Site. Willow warbler, wheatear, wren and dunnock (all Amber Listed) were also noted.

The most sensitive Valued Ecological Receptors (VERs) identified during work to date include golden eagle which may be considered to be associated with the Cuillins SPA, white-tailed eagle, hen harrier and black grouse.

Flight activity surveys were initially undertaken based on an indicative site boundary that has subsequently been altered through the early project development stages. The new layout extends beyond the viewshed of the two vantage points used during flight activity surveys and much of the new 500m buffer lies outside of these viewsheds. However the habitat around the Site is relatively uniform and the flight activity recorded can be considered representative of the wider area, i.e. including the new core study area and buffer area

Breeding bird and winter bird surveys were also conducted within the original indicative site boundary and 500m buffer, the new core study area and buffer is now larger and therefore includes ground not covered during these surveys. However the habitat around the Site is relatively uniform, consisting mostly of heavily modified bog, wet heath and acid flushes. The area appears to offer sub-optimal breeding habitat for wader species and during breeding bird surveys only one wader territory (snipe) was recorded. Furthermore, snipe were the only wader species recorded during flight activity surveys. The Site also offers sub-optimal winter foraging for wildfowl.