



# **Cloiche Wind Farm**

Volume 1: Non-Technical Summary

April 2020



## NON-TECHNICAL SUMMARY

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## Preface

This document forms the Non-Technical Summary (NTS) of the Environmental Impact Assessment (EIA) Report for Cloiche Wind Farm located approximately 11km to the south-east of Fort Augustus, in the Highlands of Scotland. The EIA Report accompanies an application to the Scottish Ministers for consent under Section 36 of the Electricity Act 1989, and deemed planning permission under Section 57 of the Town and Country Planning (Scotland) Act 1997, for the construction and operation of a wind farm of over 150 megawatts (MW).

The EIA Report comprises seven volumes:

- Volume 1: Non-Technical Summary;
- Volume 2: Main Report;
- Volume 3: Figures;
- Volume 3A: Landscape and Visual Photomontages (Scottish Natural Heritage (SNH) Methodology);
- Volume 3B: Landscape and Visual Photomontages (The Highland Council (THC) Methodology);
- Volume 4: Technical Appendices; and
- Volume 5: Confidential Annex.

Additional documentation that has been submitted with the Section 36 application for consent includes:

- Planning Statement; and
- Cover letter.

A copy of the EIA Report is available on the application website at [www.sse.com/cloiche](http://www.sse.com/cloiche) or on the Scottish Government Energy Consents website at [www.energyconsents.scot](http://www.energyconsents.scot).

Copies of the EIA Report may be obtained from SSE Generation Limited (contact: SSE Generation, FAO Carolyn Wilson, 1 Waterloo Street, Glasgow, G2 6AY or [carolyn.wilson@sse.com](mailto:carolyn.wilson@sse.com)) at a charge of £350 for a hard copy, or on electronic USB or DVD copies free of charge. Copies of a short Non-Technical Summary are also available free of charge.

Any representations in respect of the application may be submitted via the Energy Consents Unit website at [www.energyconsents.scot/Register.aspx](http://www.energyconsents.scot/Register.aspx); by email to The Scottish Government, Energy Consents Unit mailbox at [representations@gov.scot](mailto:representations@gov.scot) or by post, to The Scottish Government, Energy Consents Unit, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow, G2 8LU, identifying the proposal and specifying the grounds of representation.

Written or emailed representations should be dated, clearly stating the name of the project (in block capitals), full return email and postal address of those making representations. Only representations sent by email to [representations@gov.scot](mailto:representations@gov.scot) will receive acknowledgement.

All representations should be received not later than the date falling 30 days from the date of the last published notice, although Ministers may consider representations received after this date. Additional information which is submitted by the Applicant will

be subject to further public notice in this manner, and representations to such information will be accepted as per this notice.

The EIA Report will be advertised in the following newspapers upon submission of the application:

- Edinburgh Gazette;
- The Herald; and
- The Inverness Courier.

## **1. Introduction**

### **1.1 Overview**

- 1.1.1 SSE Generation Ltd (SSEG), hereafter referred to as ‘the Applicant’, is proposing to construct a new onshore wind farm to generate renewable electricity from wind power. The proposed Cloiche Wind Farm, hereafter referred to as ‘the Proposed Development’ is located on Glendoe and Garrogie Estates, adjacent to the operational Stronelaig Wind Farm and Glendoe Hydroelectric Scheme and approximately 11 kilometres (km) to the south-east of Fort Augustus, as shown on Figure 1: Location Plan and Figure 2: Site Context.
- 1.1.2 The total installed capacity of the Proposed Development would be over 150MW. This would comprise of 36 turbines with a maximum tip height of 149.9 metres (m). The exact capacity of the Proposed Development would be dependent on the rated power of the turbine model procured.
- 1.1.3 The Applicant holds the necessary generation licence required for the Proposed Development. The application for Section 36 consent has been prepared by SSE Renewables Development (UK) Limited (SSE Renewables), “the Developer”, on behalf of the Applicant.

### **1.2 Development Context**

- 1.2.1 The Proposed Development comprises two clusters; an eastern cluster and a western cluster. These two clusters cover an area of approximately 15km<sup>2</sup> centred on OS Grid References 256665, 802745 (eastern cluster) and 247780, 802578 (western cluster). It is intended that the Proposed Development would be permitted, constructed and operated as a single project.
- 1.2.2 One of the benefits of constructing and operating a wind farm in this location would be the capacity to make use of existing infrastructure and access tracks created for Glendoe Hydroelectric Scheme and Stronelaig Wind Farm, as well as the experience gained from construction of both of these projects.
- 1.2.3 Access to the Proposed Development would be taken off the B862 utilising the existing haul road through Glendoe Estate constructed originally as part of Glendoe Hydroelectric Scheme, and utilised and upgraded as required during the construction of Stronelaig Wind Farm. Other existing infrastructure from the recent construction of Stronelaig Wind Farm (such as site compounds), would be utilised where possible or practicable as part of the Proposed Development.
- 1.2.4 The existing tracks built for Glendoe Hydroelectric Scheme and Stronelaig Wind Farm would be used as far as practicable, with additional tracks to each turbine base also required. Each turbine would comprise permanent foundations and hard standing for cranes, and underground cable connections to a new on-site substation.

### **1.3 The Need for the Project**

- 1.3.1 On 28<sup>th</sup> April 2019, Scotland’s First Minister declared a climate emergency. Following this declaration, the Climate Change (Emissions Reduction Targets) (Scotland) Act 2019 was passed by the Scottish Parliament to amend the Climate Change (Scotland) Act 2009. The

2019 Act commits Scotland to reducing its greenhouse gas emissions to net-zero by 2045 at the latest. This compares with the UK Government target of net-zero by 2050.

- 1.3.2 The Scottish Government's Energy Strategy (Scottish Government 2017), sets out the target of achieving the "equivalent of 50% of the energy for Scotland's heat, transport and electricity consumption... from renewable sources" by 2030.
- 1.3.3 In order to meet this and wider renewable energy targets by 2030, approximately 17GW of installed capacity will be required. The document recognises that onshore wind offers the lowest cost renewable technology and is a vital component of the renewables industry in Scotland. As such, it will be a key part of achieving these targets.
- 1.3.4 The Scottish Government's Onshore Wind Policy Statement (Scottish Government 2017a), recognises the need to deliver new onshore wind farms subsidy free and acknowledges the technology shift towards larger turbines.
- 1.3.5 In June 2011, the 2020 Routemap for Renewable Energy in Scotland was launched which is an update and extension to the Renewables Action Plan (RAP) 2009. The 2020 Routemap aims to drive forward renewables and meet the Governments green energy targets. It reflects the challenge of the new target to meet an equivalent of 100% demand for electricity from renewable energy by 2020, as well as 11% renewable heat.
- 1.3.6 The Proposed Development, as a generator of renewable electricity from wind, would contribute to these targets by adding over 150MW of installed onshore wind capacity.



## **2. Site Selection and Design Evolution**

### **2.1 Site Selection**

2.1.1 The site of the Proposed Development, situated adjacent to the operational Stronelaig Wind Farm and Glendoe Hydroelectric Scheme, has an excellent and proven wind resource, as well as existing access tracks and other infrastructure connecting to the local road network which would be used during construction and operation. This would reduce requirements for new tracks and other infrastructure.

2.1.2 Following an agreement with the landowners of both Glendoe and Garrogie Estates, a Proposed Development Area (PDA) was set out, defining the area for technical and environmental studies to be focused and determine where turbines could be placed to maximise wind resource and minimise environmental effects. Other factors leading to selection of the site included:

- The Proposed Development would avoid being situated within any areas designated for nature conservation;
- The Proposed Development would not be located within any statutory landscape designations; and
- Supplementary planning guidance produced by The Highland Council (THC) identifies the development site as partially within Group 2 (where wind farms may be appropriate in some circumstances) and partially within Group 3 (where wind farms are likely to be acceptable).

### **2.2 Design Considerations**

2.2.1 Through the design process, consideration was given to a range of factors, including technical constraints, environmental constraints, economic factors and health and safety. These were determined by desk and field studies, consultation with stakeholders such as THC and Scottish Natural Heritage (SNH), and the knowledge and experience gained from construction of Stronelaig Wind Farm and Glendoe Hydroelectric Scheme.

2.2.2 Environmental considerations during the design process included:

- Landscape character and visual amenity, particularly in relation to the Cairngorms National Park, Special Landscape Areas and Wild Land Areas;
- Sites designated for natural heritage, in particular the Monadhliath Special Area of Conservation (SAC) adjacent to the development site;
- Sensitive habitats, such as areas of deep peat;
- Protected species, including birds; and
- Effects on watercourses, surface water and groundwater.

2.2.3 As the Proposed Development would be situated over 5km from the nearest residential properties, adverse effects from noise or on private water supplies were not key considerations. These have, nonetheless, been considered in the EIA Report.

2.2.4 Technical consideration during the design process included:

- The steepness of slopes;
- Peat depth;
- Watercourse crossings; and

- Wind resource.

## **2.3 Design Evolution**

- 2.3.1 The Proposed Development has undergone an extensive design evolution process, commencing with high-level reviews at the pre-Scoping stage in 2017, and settling on a design fix in December 2019. The design evolution process is summarised below, with further details provided in Chapter 2 of the EIA Report (Site Selection and Design Evolution), and the Design Statement (Technical Appendix 2.1 of the EIA Report).

### **Pre-Scoping (2017)**

- 2.3.2 The pre-Scoping stage involved a high-level review largely focused on the capacity of the development site to accommodate a wind farm from a landscape and visual perspective, while also taking into account ornithological and technical constraints. This review resulted in identification of possible scope for further turbines to the east and west of the operational Stronelairg Wind Farm.

### **Scoping (August 2018)**

- 2.3.3 A Scoping Report was issued which presented the two separate development areas identified at pre-Scoping. No turbine layout was included; however, a high-level technical review indicated up to 40 turbines could be included, with tip heights of up to 175m.

### **Preliminary Design Workshop (June 2019)**

- 2.3.4 A design workshop was held in June 2019 to verify the key environmental constraints identified at the development site. It provided an opportunity to discuss issues such as extent of visibility, initial peat depth survey information, habitat and protected species survey results and bird survey data. A modelling exercise was also carried out to establish aviation constraints for turbines up to 175m in height. Tip height was one of the main considerations, and a comparison was carried out with turbines at circa 150m tip height from a landscape and visual perspective.

### **Layout Options (August to October 2019)**

- 2.3.5 During August to October 2019, various layout options of between 32 and 40 turbines were considered and analysed prior to reaching a design fix. A landscape and visual review of two layout options (32 turbines and 40 turbines) was undertaken, considering the potential visual effect from key viewpoints, as well as the composition of the layouts, both in isolation and in combination with Stronelairg Wind Farm and other consented and operational wind farms in the vicinity. Whilst the 32 turbine layout comprised fewer turbines compared with the 40 turbine layout, many of these turbines had been pushed towards the periphery of the site boundary, moving some of the turbines onto higher ground (compared with other turbines) to maximise energy yield. This had the effect of increasing the theoretical visibility of this layout on sensitive receptors such as the Cairngorms National Park and the Great Glen, including Urquhart Castle.
- 2.3.6 This exercise resulted in a modified 37 turbine layout being considered.
- 2.3.7 Whilst some of the remaining 37 turbines were still prominent from sensitive receptors, it was felt that improvements to this layout could be made. As such, a number of turbine locations were adjusted slightly in order to achieve an improved composition and

reduced visibility of turbines from key viewpoints, in relation to the scale and spacing of the existing development pattern, at the same time as minimising turbines breaching the skyline from views from the north side of Loch Ness as far as possible. Due consideration was also given to other constraints such as peat depth and watercourse buffers. In general, it was felt that this modified 37 turbine layout appeared to be in proportion to the landscape and addressed some of the issues surrounding the prominence of particular turbines. Some potential constraints on sensitive bird species were however noted for further review and consideration of effects.

- 2.3.8 The layout options at this stage were focussed on turbine heights at circa 150m tip height, although consideration was also given to the potential for turbines up to 175m in height. From a landscape and visual perspective, the circa 150m tower height offered greater opportunity for minimising potential landscape and visual effects, particularly when considering the potential visible aviation lighting requirements above 150m.
- 2.3.9 In parallel to the consideration of layout options, a transport review of different turbine heights was undertaken. Whilst the challenges associated with transporting turbines to site were well understood from the experiences gained at Stronelaig Wind Farm, further review was required given that turbine blades and tower sections proposed were larger than for Stronelaig Wind Farm.
- 2.3.10 The conclusion to this stage of the design evolution process was that the 37 turbine layout with turbines at circa 150m tip height should be taken forward for further technical and environmental review and refinement, and an infrastructure layout (including tracks and hardstandings) should be developed on this basis.

#### **Infrastructure Layout and Design Fix**

- 2.3.11 The final stage of the review of layout options involved detailed modelling of turbine locations and track layouts. A number of iterations were explored at this stage, with a key consideration being avoidance of areas of deep peat as well as consideration of potential effects to sensitive bird species. This resulted in the deletion of two turbines to the north of the western cluster and the relocation of another to minimise potential effects on Golden Eagle foraging, the relocation of one turbine to the south of the western cluster to minimise potential effects on Greenshank, and the inclusion of one additional turbine in the western cluster.
- 2.3.12 This culminated in the design fix in March 2020 for a 36 turbine layout with maximum tip height of 149.9m.

### 3. Description of the Proposed Development

#### 3.1 Development Components

- 3.1.1 The Proposed Development comprises two main clusters of wind turbines to the east and west of the operational Stronelaig Wind Farm. The Proposed Development is located on Glendoe and Garrogie Estates within the Monadhliath Mountains, south-east of Fort Augustus. It is intended that the Proposed Development would be designed, permitted, constructed and operated as a single project.
- 3.1.2 The Proposed Development would include the following key components (see Figure 3):
- Thirty-six wind turbines of up to 149.9m tip height with internal transformers;
  - Crane hardstanding and associated laydown area at each wind turbine location;
  - On-site access tracks (of which approximately 26km are new access tracks and approximately 29km are existing tracks where upgrades may be undertaken);
  - A new on-site substation;
  - A network of underground cabling to connect each wind turbine to the on-site substation;
  - Up to two LiDAR units to collect meteorological and wind speed data, and associated hardstanding; and
  - Any associated ancillary works required.
- 3.1.3 In addition to the permanent components, the construction phase would comprise the following temporary facilities:
- Reuse of former main site compound area (utilised for Stronelaig Wind Farm and Glendoe Hydroelectric Scheme) adjacent to the B862, including welfare facilities, site cabins, and parking;
  - Reuse of further site compound areas on the plateau, as well as storage areas;
  - Reuse of a former concrete batching plant area on the plateau, for a temporary concrete batching plant;
  - Temporary telecommunications infrastructure; and
  - Borrow pits, comprising a combination of reuse of existing borrow pits created for Stronelaig Wind Farm, and new borrow pits.
- 3.1.4 The Proposed Development would utilise existing access tracks constructed for the Glendoe Hydroelectric Scheme and Stronelaig Wind Farm where possible, including the site entrance off the B862 and the main access track up to the plateau and through the wind farm site. New access tracks for the Proposed Development would be built to a similar standard as those already present.
- 3.1.5 It is estimated that approximately 132,895m<sup>3</sup> of stone would be required for construction of the Proposed Development (including access tracks, structural fill beneath turbine foundations, and hardstandings at turbine bases and compounds). It is anticipated this would be sourced from on-site borrow pits, which would be reinstated following construction.

### **3.2 Construction Programme and Environmental Management**

- 3.2.1 A typical construction period for a wind farm of this size is estimated to be between 24 and 36 months. The final period would be dependent on weather and ground conditions experienced at the site, and operations would be carried out concurrently, where possible, to minimise overall construction time.
- 3.2.2 On-going consultation with the local community during the construction of the Proposed Development would be an important consideration for the Applicant and the Principal Contractor. For Stronelaig Wind Farm, a community liaison group was set up which provided the local community with information about key construction activities and a mechanism by which concerns from within the local community can be shared and discussed. A similar working group would be established during the construction of the Proposed Development.
- 3.2.3 Prior to construction works, sensitive ecological areas, and other specific sensitive locations (e.g. watercourses) would be marked out as appropriate on site by specialist advisers in order to avoid unnecessary encroachment and protect sensitive areas during construction.
- 3.2.4 A Construction Environmental Management Plan (CEMP) would be implemented during construction. The principal objective of the CEMP is to provide information on the proposed infrastructure and to aid in avoiding, minimising and controlling adverse environmental impacts associated with the Proposed Development. Furthermore, the CEMP aims to define good practice as well as specific actions required to implement mitigation requirements as identified in the EIA Report, the planning process and / or other licensing or consenting processes. The CEMP would be updated during the pre-construction phase and would form part of the contract documents between the Applicant and Principal Contractor. The CEMP would also be updated as required to reflect recent legislation or guidance documents, best practice techniques and lessons learned from Stronelaig Wind Farm.
- 3.2.5 The Principal Contractor would have overall responsibility for environmental management on the site. The services of specialist advisors, such as the project Environmental Clerk of Works (ECoW) would be retained as appropriate and called on as required to advise on specific issues. Other factors which would be controlled during construction of the Proposed Development include:
- Waste management;
  - Health and Safety; and
  - Site reinstatement.
- 3.2.6 Following the anticipated 50-year operational lifespan of the Proposed Development, the wind farm would be decommissioned over a period of approximately 12 months. Detailed decommissioning proposals would be established and agreed with relevant authorities prior to commencement.

## **4. EIA Process and Methodology**

### **4.1 Baseline**

4.1.1 EIA is a process which considers how a proposed development will change existing environmental conditions and what the consequences of such changes would be. These changes are measured against the existing conditions at the site, known as the baseline.

4.1.2 The baseline scenario for the Proposed Development was established from:

- Site visits and surveys;
- Desk-based studies;
- Review of existing information;
- Computer modelling;
- Review of relevant national and local planning policies;
- Consultation with relevant statutory consultees; and
- Identification of sensitive receptors.

### **4.2 EIA Regulations**

4.2.1 The EIA Report was prepared in accordance with The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017, referred to hereafter and throughout the EIA Report as ‘the EIA Regulations’.

4.2.2 Best practice guidance set out by the Scottish Government informed the approach to assessment, and an overview of the guidance and methodology adopted is set out within each technical Chapter of the EIA Report.

### **4.3 Assessment of Environmental Effects**

4.3.1 Assessment of environmental effects is achieved through comparison of the sensitivity of environmental features against the magnitude of change likely to be brought about by the Proposed Development.

4.3.2 The sensitivity, or importance, of baseline conditions was determined from the relative importance of existing environmental features or their sensitivity to change. Criteria for importance or sensitivity was established based on prescribed guidance, legislation and / or statutory designation. Where no published standard exists, each technical chapter of the EIA Report sets out professional judgements which underpin applied significance.

4.3.3 The magnitude of change for each effect has been identified and predicted as a deviation from the baseline conditions. This takes into account:

- The degree to which the environment is affected (e.g. whether its quality is enhanced or impaired);
- The scale or degree of change from the baseline;
- Whether the change is temporary or permanent, indirect or direct, short term, medium term or long term;
- Any in-combination effects; and
- Potential cumulative effects with other similar developments.

- 4.3.4 The sensitivity and magnitude of change are taken into account to determine whether the effect upon an environmental receptor is 'significant' in the context of the EIA Regulations. This varies between receptors, and there is no general definition of what constitutes significance therefore the assessment of significance or the importance of effects ultimately involves professional judgement based on values which reflect environmental, social and economic criteria.
- 4.3.5 The assessment of significance also considers the extent to which mitigation and enhancement will reduce or reverse adverse effects. Against this background, the environmental assessment for the Proposed Development has been progressed through the identification of four levels of impact as appropriate:
- Major;
  - Moderate;
  - Minor; and
  - Negligible
- 4.3.6 Major and moderate effects are considered to be significant in the context of the EIA Regulations. Minor and negligible effects are not considered significant. Occasionally, where it assists in describing the level of impact, a "Not Significant" category is also used. These terms are generally used to define the level of impact arising for the environmental factors. Where different terms to the above are used, they are defined within the methodology section for the topic area as appropriate.
- 4.3.7 Where significant effects are identified, mitigation measures are proposed to prevent, reduce or remedy effects to ensure residual effects (those remaining after mitigation measures have been implemented) would be non-significant. The nature and extent of these measures are set out within each technical Chapter of the EIA Report, where relevant, and summarised within Chapter 18: Schedule of Mitigation.
- 4.3.8 Cumulative effects are also assessed within each technical Chapter of the EIA Report in accordance with the EIA Regulations. Cumulative impact assessment is concerned with identifying situations where a number of potential effects from separate projects could combine to cause a significant impact on an environmental receptor.
- 4.3.9 For the Proposed Development, cumulative impacts are considered with other wind farms in the vicinity. These include operational wind farms, those under construction, consented sites and those whereby applications for consent have been submitted and are yet to be determined. Nearby wind farms of most relevance to the Proposed Development include:
- Stronelairst Wind Farm (Operational);
  - Dell Wind Farm (Consented); and
  - Glenshero Wind Farm (Application).

## **5. Scoping and Consultation**

### **5.1 Scoping**

5.1.1 An EIA should describe the likely significant effects of a proposed development on the environment. Scoping of potential issues against the physical and operational aspects of a proposed development provides a basis for ensuring that the assessment of environmental effects is appropriately limited to issues of genuine potential significance. This ensures a proportionate approach focused on likely significant effects that have not already been considered. Consultation and engagement with stakeholders early in the process, with advice and input from key consultees being sought at the early stages of a project, helps greatly to inform decisions about the Proposed Development.

5.1.2 An EIA Scoping Opinion was sought from the Scottish Ministers on the environmental information to be provided in the EIA Report. Information on the Proposed Development, the proposed approach to the EIA, and issues to be scoped out of assessment were set out in a Scoping Report. The Scoping Opinion contained responses from various statutory and non-statutory consultees and set out the key Scoping issues raised by the Scottish Ministers. These included:

- Consultee responses – the EIA Report must demonstrate that all advice, guidance, concerns and requirements raised by each consultee at Scoping have been addressed;
- Viewpoints – a final list of viewpoints should be agreed with THC and SNH;
- Private Water Supplies – the EIA Report should identify all supplies which may be impacted by the Proposed Development and assess potential impacts upon them;
- EIA Directive – impacts on biodiversity, population and human health must be assessed;
- Peat – a full assessment of impact on peat soils and a peat landslide hazard risk assessment must be included with the EIA Report;
- Mitigation measures – mitigation measures should be presented as a conclusion to each chapter and in a consolidated summary of all measures in the EIA Report; and
- Further consultee engagement – Scottish Ministers should be kept informed of ongoing discussions between the Applicant and other consultees.

### **5.2 Pre-Application Meeting**

5.2.1 A pre-application meeting was held with statutory consultees in November 2019 to present the final layout and advise how it had evolved in consideration of environmental and technical constraints, as discussed earlier in this NTS.

### **5.3 Gate Check**

5.3.1 A Gate Check Report was issued to the Scottish Ministers and key stakeholders in December 2019 which outlined consultations with statutory and non-statutory consultees, engagement (or proposed engagement) with the local community and how matters raised during the Scoping process have been dealt with in the EIA Report. Consultation responses to the Gate Check Report were considered prior to finalisation of the EIA Report.



## **5.4 Consultation with the Local Community**

- 5.4.1 Public exhibition events were held within the local area through January and February 2020 to allow members of the public to obtain information and return comments on the Proposed Development. Meetings were also held with local community councils to provide updates as the project progressed. The feedback received from these events and meetings is included within the Pre-Application Consultation Report; Technical Appendix 5.5 of the EIA Report.

## **5.5 Issues Scoped Out of Assessment**

- 5.5.1 Detailed assessment of the following topics was scoped out of the EIA:
- Forestry – there are no areas of commercial forestry at or near the development site;
  - Air Quality – emissions from construction traffic would be short-term and spread over a large, rural area. Dust generation is unlikely to cause a nuisance or affect air quality due to the large separation distances from residential properties;
  - Shadow Flicker – as the nearest residential properties are over 5km away from the Proposed Development, shadow flicker effects would not occur;
  - Ice Throw – due to the remote location of the Proposed Development and the safety systems within each turbine causing them to shut down when any imbalance from ice build up is detected, the risk of ice throw is very low;
  - Telecommunications, TV and Radio Links – previous assessment for Stronelairg Wind Farm determined it was unlikely to cause significant effects to TV, radio or microwave links. Given its proximity, the Proposed Development is not anticipated to cause interference either. Confirmation has also been sought from British Telecom, who confirmed the nearest link to be approximately 8km away;
  - Climate Change – emissions associated with the Proposed Development would be temporary and short-term during construction, and potential release of carbon dioxide from exposure of peat soils. Neither source would be significant in terms of global warming potential;
  - Human Health – health effects could potentially arise from noise, air quality or shadow flicker. Noise is assessed within the EIA Report, and air quality and shadow flicker are scoped out as noted above; and
  - Risk of Major Accidents and / or Disasters – the nature and remote location of the Proposed Development meant risk of major accidents or disasters is extremely low. The Principal Designer would fully assess risks and mitigate as appropriate during the design stage. A peat slide and hazard risk assessment has been undertaken for the Proposed Development and included as Technical Appendix 11.2 of the EIA Report.

## **6. Planning**

### **6.1 Overview**

- 6.1.1 Since the electricity generating capacity of the Development exceeds 50MW, the application for consent is submitted under section 36 of the Electricity Act 1989 and section 57(2) of the Town and Country Planning (Scotland) Act 1997, as amended. A decision on the Application under the 1989 Act is the principal decision to be made in determining the acceptance or otherwise of the Proposed Development.
- 6.1.2 Various energy policy documents provide the backdrop for wind energy in particular, including:
- Climate Change (Scotland) Act 2009;
  - Climate Change (Emissions Reduction Targets) (Scotland) Act 2019;
  - Scottish Energy Strategy; and
  - Onshore Wind Policy Statement.

### **6.2 Planning Policy**

- 6.2.1 The National Planning Framework 3 (NPF3) and Scottish Planning Policy (SPP) set out the long-term vision for the development of Scotland and the policies which reflect Scottish Ministers' priorities for the operation of the planning system and for the development and use of land. Both seek to move towards a sustainable, low carbon, resilient and connected Scotland.
- 6.2.2 At the development plan level, the Proposed Development lies wholly within THC area. The adopted development plan comprises the Highland-Wide Local Development Plan (HwLDP), adopted in April 2012. A number of policies within the HwLDP are relevant to the Proposed Development, as set out in Chapter 6: Planning of the EIA Report, and assessed within the Planning Statement accompanying the application and EIA Report.
- 6.2.3 The Proposed Development also borders the area covered by the West Highlands and Islands Local Development Plan (WestPlan), adopted in September 2019. The WestPlan focuses predominantly on settlements within the Plan area and there are no provisions or policies relevant to the Proposed Development.
- 6.2.4 Several Supplementary Guidance documents produced by THC also apply to the Proposed Development, inclusive of:
- Onshore Wind Energy Supplementary Guidance, November 2016 (with addendum, December 2017), which comprises:
  - Onshore Wind Energy Supplementary Guidance, November 2016; and
  - Addendum Supplementary Guidance: 'Part 2b', December 2017.
  - Flood Risk and Drainage Supplementary Guidance, January 2013;
  - Protected Species Supplementary Guidance, March 2013; and
  - Sustainable Design Supplementary Guidance, January 2013.

### **6.3 Cairngorms National Park**

- 6.3.1 The Cairngorms National Park Authority are the neighbouring planning authority, and through the pre-application consultation phase it was noted that indirect effects from the

Proposed Development must be considered against the policy framework for the National Park. The Cairngorms National Park Partnership Plan, the Cairngorms National Park Local Development Plan 2015, and the Cairngorms National Park Proposed Local Development Plan 2020 were all considered in this regard.

## **7. Landscape and Visual Amenity**

### **7.1 Introduction**

- 7.1.1 A landscape and visual impact assessment (LVIA) has been undertaken for the Proposed Development in accordance with best practice guidance including the Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3). This has considered the potential effects of the Proposed Development on landscape character, designated and protected landscapes, and also the potential effects of the Proposed Development on the visual amenity of those present within the landscape, including established views from residential areas, routes and recreational areas within a 40km study area. It also gives full consideration to the cumulative landscape and visual effects of the Proposed Development when considered in addition to other existing and proposed wind farm developments.
- 7.1.2 The Proposed Development is located in close proximity to the operational Stronelairg Wind Farm which already results in landscape and visual effects within the study area and thereby reduces the sensitivity of the landscape and visual resource to additional wind farm development.

### **7.2 Landscape Effects**

- 7.2.1 The assessment of landscape character has considered National Landscape Character Types (LCTs) identified by SNH and Cairngorms National Park (CNP) Landscape Character Areas (LCAs). The assessment of designated and protected landscapes has considered potential effects to the CNP, National Scenic Areas (NSAs), Wild Land Areas (WLAs), Special Landscape Areas (SLAs) and sites included on the Inventory of Gardens and Designed Landscapes.
- 7.2.2 The vast majority of effects on landscape character, landscape designations and other protected landscapes resulting from the Proposed Development would not be significant. Significant effects would be limited to very localised effects within 2km of the Proposed Development and not more than 8km away, generally affecting small, discrete parts of the landscape.
- 7.2.3 These significant effects would lead to a very localised significant effect on one WLA (WLA 20: Monadhliath), although this would not significantly affect the Key Qualities or wildness value of this WLA overall. There would be no significant effects to the Special Qualities or integrity of any other designated or protected landscape areas.
- 7.2.4 Whilst some of these localised significant effects may affect the landscape character of a small area within the CNP, it is not considered that this would contribute to a significant effect on any CNP Special Landscape Qualities or that the integrity of the CNP would be affected.

### **7.3 Visual Effects**

- 7.3.1 Twenty representative viewpoints (VPs) have formed the basis of the assessment of effects on visual amenity. The assessment also considered potential visual effects on residential areas within the study area, and transport and recreational routes.
- 7.3.2 The visual effect for the vast majority of visual receptor locations, including all residential locations, were identified as being not significant. Potential longer-term significant

effects were identified for two representative VPs where the Proposed Development would appear more prominent (VP7: Carn a'Chuilin; and VP18: Loch na Lairige).

#### **7.4 Cumulative Landscape and Visual Effects**

- 7.4.1 The cumulative landscape and visual assessment (CLVIA) has considered the potential landscape and visual effects of the Proposed Development when added to a baseline cumulative situation of all existing and proposed wind farm development (those sites which were operational, under construction, consented or the subject of a valid planning application or appeal as of 30 November 2019).
- 7.4.2 No significant cumulative landscape effects have been identified when considering the addition of the Proposed Development to the baseline cumulative scenario of existing and proposed wind farm sites.
- 7.4.3 A significant cumulative visual effect has been identified for one representative VP (VP7, Carn a' Chuilinn).
- 7.4.4 Overall, the LVIA has concluded that the Proposed Development would result in a limited number of very localised significant effects on landscape character and visual amenity, affecting discrete areas of high ground mostly within 8km and locally up to 11km of the Proposed Development. The majority of landscape and visual effects would not be significant.

## **8. Ecology**

- 8.1.1 An assessment has been carried out which considers the potential impacts and their associated effects on ecological features, such as designated nature conservation sites, habitats and protected species in line with best practice guidance from the Chartered Institute of Environmental Management (CIEEM).
- 8.1.2 The study area was surveyed in 2019 to provide baseline information on habitats and faunal species. Surveys included an extended Phase 1 habitat survey and National Vegetation Classification (NVC) surveys. The dominant habitats were wet modified bog, blanket bog and wet heath. Five potential Groundwater Dependent Terrestrial Ecosystems (GWDTE) were recorded but these are unlikely to be groundwater dependent in the setting of the study area. Protected species surveys identified the presence of numerous water vole burrows, two potential otter holts and a resting place, mountain hare, brown trout, European eel, common frog, an unidentified newt, common lizard and red deer. The newt and fish species were present at low densities, with the rest of the species common and widespread throughout the study area.
- 8.1.3 Without application of mitigation, significant effects in terms of the EIA Regulations are predicted on the Monadhliath Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) and otter. Adverse effects not significant in EIA terms are also considered to occur from pollution events on habitats, water vole and otter.
- 8.1.4 Following the application of mitigation, such as a deer management plan and standard working methods and good practice measures during construction, no significant residual effects are predicted.

## 9. Ornithology

- 9.1.1 An ornithology assessment has been carried out to determine the potential effects of the Proposed Development on bird species of conservation concern and their supporting habitats.
- 9.1.2 The east and west clusters of the Proposed Development support a range of upland habitats, such as blanket bog, and various lochs and lochans, including the artificial reservoir for Glendoe Hydroelectric Scheme, which may support sensitive bird species.
- 9.1.3 There are no statutory or non-statutory natural heritage designations within the boundary of the Proposed Development (e.g. SSSIs or Special Protection Areas (SPAs)). The Monadhliath SSSI and SAC sits adjacent to the eastern cluster. All other designated sites with ornithological interest within 20km have been scoped out of the assessment as no appreciable effects on their associated populations are likely.
- 9.1.4 The assessment follows current best practice and focuses on potential effects on key bird receptors as agreed with SNH. The baseline surveys followed standard methods and were also agreed in consultation with SNH. The core survey area encompassed a 500m wide strip around the turbine locations. For a small number of key species a wider buffer zone of 2km was included.
- 9.1.5 The impact assessment considered the various potential adverse effects arising from the construction, operation and decommissioning of the Proposed Development and evaluated the significance of these effects on key bird species. Following consideration of a range of best practice and mitigation measures, residual effects for all receptors would not be significant.
- 9.1.6 The breeding bird surveys confirmed the presence of populations of breeding golden plover and dunlin within the western and eastern clusters. The western survey area was also used by breeding greenshank in 2019 and there are previous records of breeding activity in the vicinity of the eastern and western survey areas.
- 9.1.7 There was no evidence of any breeding attempts by any scarce birds of prey (e.g. peregrine, merlin, hen harrier, short-eared owl) within the raptor survey area during 2019 and no evidence of previous breeding activity from the data collated from other sources. In the surrounding area (i.e. >2km from the Proposed Development) there are up to five golden eagle territories, most of which were occupied by breeding pairs during 2018-2019. This is a population of regional importance. The extent to which the Proposed Development is used by golden eagle (hunting, display, territorial interactions etc.) has been a key focus of the baseline surveys, informed by data provided by the Highland Raptor Study Group and mathematical modelling of breeding and non-breeding golden eagle habitat use. Golden eagle is on Schedule 1 to the Wildlife & Countryside Act, Annex I of the EC Birds Directive and currently on the UK Green List. The golden eagle population within the region (i.e. the Central Highlands Natural Heritage Zone (NHZ)) has increased in recent years and is currently considered to be in 'favourable' conservation status.
- 9.1.8 The use of waterbodies within the survey area was also monitored regularly through the whole survey period. Red-throated diver (which breed in the surrounding area, i.e. >2km from the Proposed Development) were recorded occasionally using Glendoe Reservoir as were whooper swan and common scoter (which also breed in the surrounding area). There was no evidence of any areas of within or near to the Proposed Development (i.e.

within 500 m of the Site Boundary) being used regularly by appreciable numbers of wild geese or swans during the survey period. There was some migratory movement of geese, primarily greylag geese, through the survey area during September 2018, however most of this activity was above the collision risk zone.

- 9.1.9 The design of the Proposed Development has been modified to reduce the potential effects on sensitive species. Particular consideration has been given to moving wind turbines away from areas of importance to breeding golden eagle and greenshank.
- 9.1.10 There is the potential for construction works to have localised effects on bird breeding success for up to three breeding seasons. However, measures are proposed to help ensure that impacts on all breeding birds are minimised and that rarer species which are specially protected from disturbance while nesting are properly safeguarded. Pre-works breeding bird surveys are proposed so that up-to-date information is available to inform the construction process so that nest sites are effectively protected. In addition, a suitably experienced Ecological Clerk of Works would be appointed for the duration of the construction and site restoration phase to oversee the effective implementation of the bird protection measures.
- 9.1.11 No significant direct habitat loss was predicted for any species, taking into consideration the relatively small scale of permanent habitat loss from the construction of the wind farm.
- 9.1.12 The risk of bird mortality from collision with the proposed wind turbines has been assessed using data gathered during systematic flight activity surveys and using a standard wind farm EIA collision risk model. Whilst collisions are predicted, the levels are not considered to be of concern at a population level beyond a local-scale for all species.
- 9.1.13 Significant operational displacement effects are not predicted for any species.
- 9.1.14 Cumulative impacts with other nearby wind farm developments were also considered, with a focus on golden eagle, golden plover, dunlin and greenshank. Effects on golden eagle were considered initially in a local context and in terms of the wider regional breeding population of the Central Highlands. In relation to cumulative displacement effects, considering Stronelairg and two other proposed wind farms that could affect the same territories as the Proposed Development, the combined predicted habitat loss was assessed as not significant. Consideration was also given to displacement and collision mortality effects on the Central Highlands breeding populations of golden plover, dunlin and greenshank. The assessment concluded, on a precautionary basis, that significant cumulative operational effects are possible for breeding golden plover. It was determined that this conclusion would apply whether the Proposed Development was built or not, on the assumption that all of the other proposed wind farms that could affect golden plover population were consented and built. However, it was recognised that there is currently some uncertainty about the long-term effects of wind farm development on this species, as well as uncertainty about current Central Highlands population sizes, and that a non-significant cumulative effect is also realistically possible in the long-term.
- 9.1.15 In conclusion, the impact assessment considered the various potential adverse effects arising from the construction, operation and decommissioning of the proposed wind farm and evaluated the significance of these effects on key bird species in the context of the sensitivity of their populations, vulnerability to wind farm development and the scale of the potential effects. Following consideration of a range of best practice and mitigation



measures for the construction, operational and decommissioning phases of the Proposed Development (in isolation), and the residual (i.e. mitigated) effects for all receptors would be not greater than minor in the long-term and would not be significant in terms of the EIA Regulations.

## **10. Hydrology and Hydrogeology**

- 10.1.1 An assessment of the potential effects on the hydrological and hydrogeological environment associated with the construction, operation and decommissioning of the Proposed Development has been carried out. Such effects could include:
- Potential impacts on water quality (including both surface water and groundwater bodies) and assessment of risks from chemical pollution or sedimentation;
  - Increase in flood risk and the potential direct and indirect impacts of the Proposed Development on flood risk at the site and potentially affecting land downstream;
  - Impacts on flow regimes, water quality or the geomorphological characteristics of watercourses as a result of proposed watercourse crossings;
  - The potential for the Proposed Development to impact GWDTE; and
  - Any alterations to regimes of water supplying Private Water Supplies in the locale of the Proposed Development or within potential hydrological connection to the site.
- 10.1.2 Taking into account measures that shall be detailed in a site CEMP and the implementation of best practice measures as described in SEPA guidance, the assessment concludes that there would be no significant residual effects on the hydrology and hydrogeology of the development site during the construction phase.
- 10.1.3 This assessment also concludes that there would be no significant effects on the hydrology or hydrogeology of the development site during the operational phase of the Proposed Development, due to the proposed installation of appropriate Sustainable Drainage System (SuDS) measures. Some direct loss of habitat would occur (and therefore some localised alteration in surface drainage).
- 10.1.4 At the decommissioning stage the implementation of best practice measures would ensure no significant residual effects on the hydrology and hydrogeology of the site.

## **11. Geology and Carbon Balance**

- 11.1.1 The potential effects of construction and operation of the Proposed Development on geology and carbon balance have been identified and assessed.
- 11.1.2 Peat deposits are present across the majority of the site. Bedrock across the site comprises the Crom Granodiorite Formation, the Allt Crom Complex, the Garva Bridge Psammite Formation and Loch Laggan Psammite Formation.
- 11.1.3 Potential effects in relation to geology and carbon balance are most likely during construction and may relate to effects on peat stability and excavation. The results of a peat slide risk assessment have informed the layout design.
- 11.1.4 Baseline conditions were identified through desk-based assessment, consultation and field survey, including peat depth surveys. The assessment undertaken has identified the presence of sensitive receptors within the Site, namely areas of nationally important carbon rich soils with priority peatland habitat (Class 1 or 2).
- 11.1.5 As part of the conceptual design, the disruption of peat has been minimised by avoiding areas of thick peat deposits as far as practicable, and the re-use of excavated peat would be maximised in accordance with best practice management.
- 11.1.6 The potential construction effects identified have been assessed and would not be significant in terms of the EIA Regulations.

## 12. Cultural Heritage

- 12.1.1 An assessment of the archaeological and cultural heritage value of the site and the direct and indirect likely significant effects on archaeological features and heritage assets resulting from the construction, operation and decommissioning of the Proposed Development has been carried out. The assessment also considers measures that should be taken to mitigate predicted likely significant adverse effects and reports on the residual impact of the Proposed Development on heritage assets.
- 12.1.2 The Proposed Development has been designed to avoid direct impacts on known heritage assets where possible. There would be no direct impacts on any known assets within the site. Where heritage assets are recorded within the site, these are restricted to areas where suitable access tracks are already in place and no further works are required.
- 12.1.3 National planning policies and planning guidance, as well as local planning policies, require that account is taken of potential effects upon the historic environment by proposed developments and that, where possible, such effects are avoided. Where avoidance is not possible, these policies and guidance documents require that effects on any significant remains be minimised or offset.
- 12.1.4 All known heritage assets within 50m of the proposed working areas, including all areas to be used by construction vehicles, would be fenced off under archaeological supervision prior to construction. Most of these are adjacent to the existing access road; however, the need for fencing would be confirmed by the archaeologist on site. This fencing would be maintained throughout the construction period to ensure the preservation of these assets.
- 12.1.5 It is anticipated that no archaeological monitoring of groundworks would be required during the construction phase of the Proposed Development. However, the need for and scope of any archaeological monitoring of groundworks would be determined by THC Historic Environment Team.
- 12.1.6 Potential indirect effects on the settings of designated heritage assets have been considered in detail as part of this assessment. All potential effects on the individual heritage assets have been deemed to be neutral, negligible or minor and therefore not significant in EIA terms.
- 12.1.7 The possibility of cumulative effects has been assessed. No significant cumulative effects were identified.

### 13. Traffic and Transport

- 13.1.1 An assessment of traffic and transport effects on the public road network associated with the Proposed Development has been undertaken.
- 13.1.2 The assessment considers the impacts during the construction phase of the Proposed Development, when volumes of traffic generation are anticipated to be at their greatest due to the delivery of equipment and construction materials. In line with Institute of Environmental Management and Assessment (IEMA) guidelines, severance, driver delay, pedestrian delay, pedestrian amenity, fear and intimidation as well as accidents and safety have been evaluated. These receptors were also evaluated cumulatively considering other committed and in-planning wind farms to produce a worst-case scenario. The operational phase of the Proposed Development would not have any significant impacts on the public road network as a result of the low levels of traffic that are forecast.
- 13.1.3 All turbine blade loads would originate from Kyle of Lochalsh and access the site via the preferred route of the A87 to Invergarry then the A82 to Fort Augustus before following the same route as HGV traffic on the B862 road, entering the site entrance from the west. All other turbine components would be delivered to Corpach and would also access the site via the A82 from the south.
- 13.1.4 Traffic volumes as a result of construction activities are likely to increase on the public roads approaching the site. The anticipated total traffic volumes are projected to be well within the capacity of the roads in question and the environmental effect would not be significant providing that suitable mitigation measures such as a comprehensive Construction Traffic Management Plan (CTMP) are implemented.
- 13.1.5 For the purposes of the cumulative assessment, it was assumed that all construction programmes for consented developments: Millennium South; Dell and Aberarder Wind Farms, as well as in-planning development Glenshero Wind Farm; would coincide with the Proposed Development. Although this is highly unlikely in reality, the cumulative assessment has considered the worst-case scenario. The results indicate that when considering the cumulative construction phases, traffic increase on the A82 and A87 would be minimal (less than 10%). Total Heavy Goods Vehicle (HGV) traffic movement flows would increase by more than 30% on the A82. However, the total volume of traffic movements is not anticipated to increase by more than 10%.
- 13.1.6 The B862 is a receptor of medium sensitivity designed to accommodate general traffic and HGV movements between primary destinations. However, the road has also previously been used and was upgraded during the construction of Stronelairg Wind Farm. The significance of any cumulative effects is considered to be minor and can be mitigated through the implementation of CTMPs associated with each individual development. The overlap of peak construction activities is considered unlikely due to likely capacity constraints on construction material, turbine manufacturer and logistics supply chains.
- 13.1.7 When considering the overlap in construction programmes of other developments within the cumulative assessment, the effects are not considered to be significant.

## **14. Socio-economics and Tourism**

- 14.1.1 The Highland Council area has a relatively older population than Scotland as a whole, with slower population growth expected particularly in rural areas. Economic activity is higher than the Scottish average and wages are comparable, but the working age population is lower than the Scottish average.
- 14.1.2 Based on an indicative minimum installed capacity of 154.8MW, it was estimated that during the development and construction phase, the Proposed Development could generate up to:
- £28.1 million Gross Value Added (GVA) and 412 job years in Highland; and
  - £64.4 million GVA and 983 job years in Scotland as a whole.
- 14.1.3 It was estimated that each year during the operation and maintenance phase the Proposed Development would generate:
- £1.4 million GVA and 16 jobs in Highland; and
  - £2.5 million GVA and 29 jobs in Scotland as a whole.
- 14.1.4 It is expected that there would be community benefit funding associated with the Proposed Development, which would build on the existing Stronelairg Wind Farm Community Fund.
- 14.1.5 During the construction and operation of the Proposed Development there would likely be negligible effects on recreation and tourism assets in the study areas.
- 14.1.6 Throughout its operation, the Proposed Development would also contribute to local public finances and in this way supporting the provision of public services locally. It was estimated that the Proposed Development could contribute £1.8 million each year in non-domestic rates.

## **15. Land Use and Recreation**

- 15.1.1 An assessment of potential effects on land use and recreation amenity has been undertaken for the Proposed Development. The assessment considers existing land uses which may be physically or indirectly affected by construction and operation of the Proposed Development. It also considers the potential to which recreational activities which currently take place may be deterred.
- 15.1.2 The assessment has concluded that the Proposed Development would result in temporary effects to sections of three recreational routes (Scottish Hill Track 235, the Monadhliath Trail and the route to access the Corbett Carn a' Chulinn) through conflict with construction of access tracks or their use by construction traffic. These effects are anticipated to be Moderate and temporary, reducing to non-significant levels during operation of the Proposed Development. However, the employment of mitigation measures, including an Outdoor Access Management Plan, would ensure access to the existing walking routes are maintained while ensuring the safety of the public and construction staff.
- 15.1.3 All other effects are anticipated to be not significant and no long-term significant effects to land use and recreation are predicted.

## **16. Aviation**

- 16.1.1 An assessment of the potential for effects of the Proposed Development on aviation interests has been carried out.
- 16.1.2 The Proposed Development is within a low priority military low flying area; however, it is anticipated that the Ministry of Defence (MOD) would request a suitable lighting scheme, for example 25 candela or infrared lighting on cardinal / perimeter turbines.
- 16.1.3 Following the implementation of a suitable MOD lighting scheme there would be no effects on aviation as a physical obstruction.
- 16.1.4 Radar modelling confirms that no part of the Proposed Development is likely to be detected by any civil or military radar.
- 16.1.5 No significant effects have been identified in the assessment of aviation issues.



## **17. Noise**

- 17.1.1 A noise assessment has been undertaken to determine the likely significant noise effects from the operational phase of the Proposed Development.
- 17.1.2 Due to the large separation distances between the Proposed Development and the nearest receptors a simplified assessment methodology has been adopted for the assessment. A total of four Noise Assessment Locations (NALs) were chosen to be representative of the noise sensitive receptors surrounding the Proposed Development.
- 17.1.3 The noise assessment has been undertaken in three stages, which involved setting the Total Noise Limits (TNL) (which are limits for noise from all wind farms in the area) at the nearest noise sensitive receptors, predicting the likely effects of the Proposed Development (undertaking a cumulative noise assessment where required) and setting Site Specific Noise Limits (SSNL) for the Proposed Development.
- 17.1.4 Predicted cumulative operational noise levels indicate that for noise sensitive receptors assessed, cumulative wind turbine noise (which considers noise predictions from all nearby proposed, consented or operational wind turbines and the Proposed Development) would meet the TNL at all NALs.
- 17.1.5 Predictions of wind turbine noise from the Proposed Development have been made in accordance with good practice using a candidate wind turbine. Predicted operational noise levels from the Proposed Development indicate that for noise sensitive receptors neighbouring the Proposed Development, wind turbine noise from the Proposed Development would meet the SSNL at all NALs.
- 17.1.6 The use of SSNL would ensure that the Proposed Development could operate concurrently with other proposed, consented or operational turbines in the area and would also ensure that the Proposed Development's individual contribution could be measured and enforced if required.
- 17.1.7 Should the Proposed Development receive consent, the final choice of wind turbine would have to meet the SSNL presented in this assessment.

## 18. Summary

18.1.1 This Non-Technical Summary has provided a summary of the EIA Report for the Proposed Development, outlining the key environmental constraints that have helped inform the design of the wind farm. The main findings of the environmental impact assessment are also summarised, concluding that likely significant residual effects (i.e. after mitigation) are predicted for:

- Temporary effects during the construction period on sections of three recreational routes within the vicinity of the Proposed Development. However, the employment of mitigation measures, including an Outdoor Access Management Plan, would ensure access to the existing walking routes are maintained while ensuring the safety of the public and construction staff;
- a limited number of significant landscape effects, affecting relatively discrete parts of the landscape within 8km and potentially leading to very localised significant effects to wild land characteristics within the Monadhliath WLA (WLA 20);
- potential longer-term significant visual effects identified for two viewpoints where the Proposed Development would appear more prominent (VP7: Carn a'Chuilinn; and VP18: Loch na Lairige) which are representative of occasional views obtained by recreational users of the landscape on the hills around the western cluster of the Proposed Development and Strath Mashie. A significant cumulative visual effect was also noted for VP7; and
- on a precautionary basis, assuming all other wind farms in the vicinity of the Proposed Development are built, significant cumulative operational effects are possible for breeding golden plover. However, it was recognised that there is currently some uncertainty about the long-terms effects of wind farm development on this species, as well as uncertainty about current Central Highlands population sizes, and that a non-significant cumulative effect is also realistically possible in the long-term.

## 19. References

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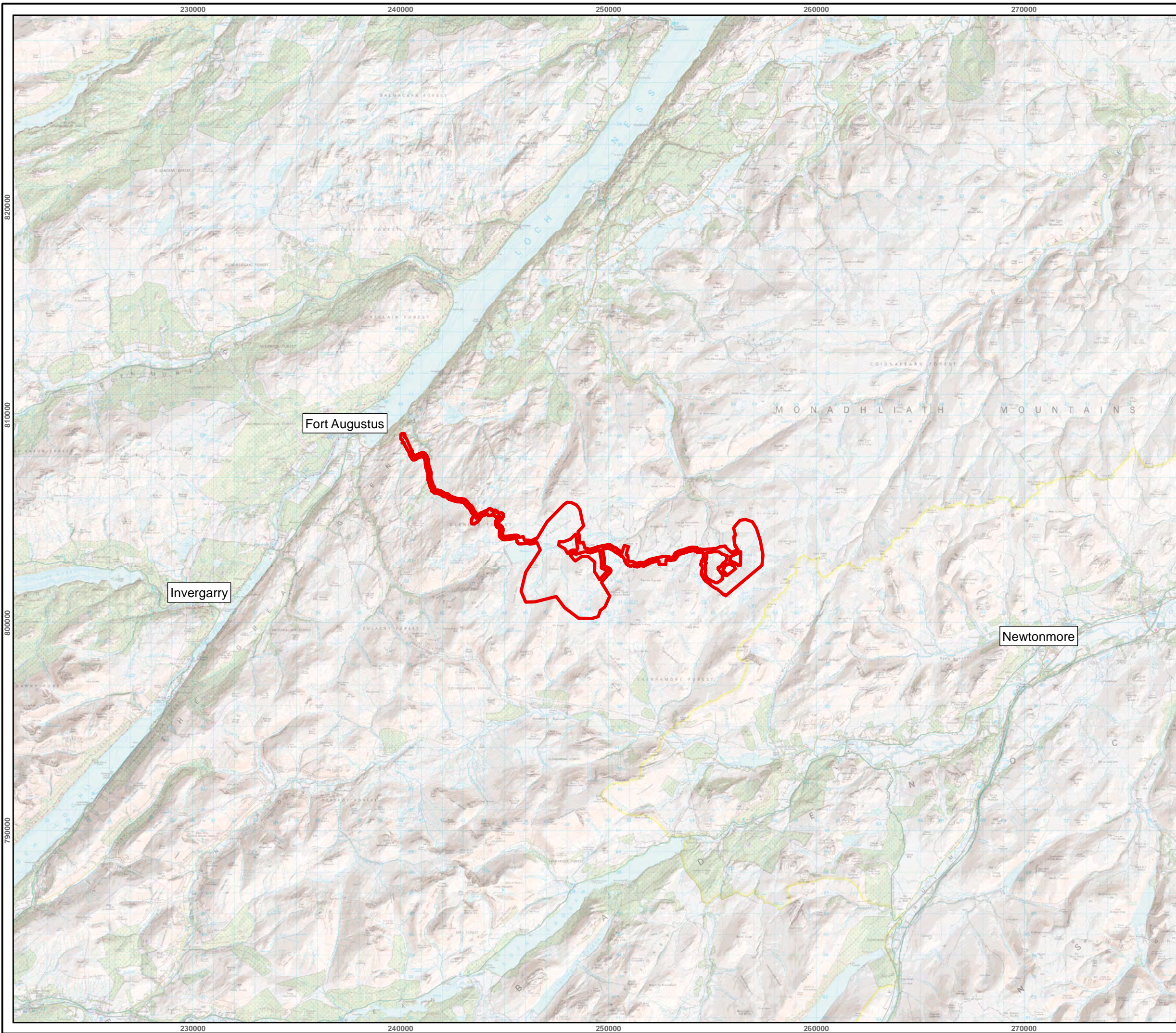
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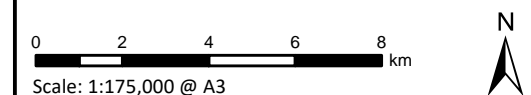
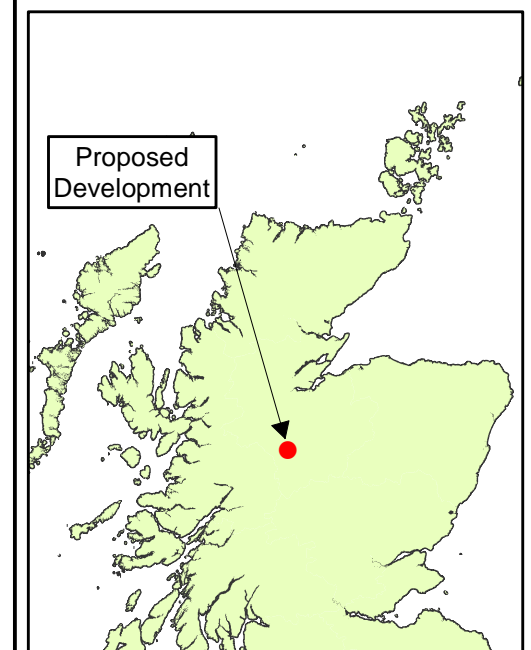
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Key

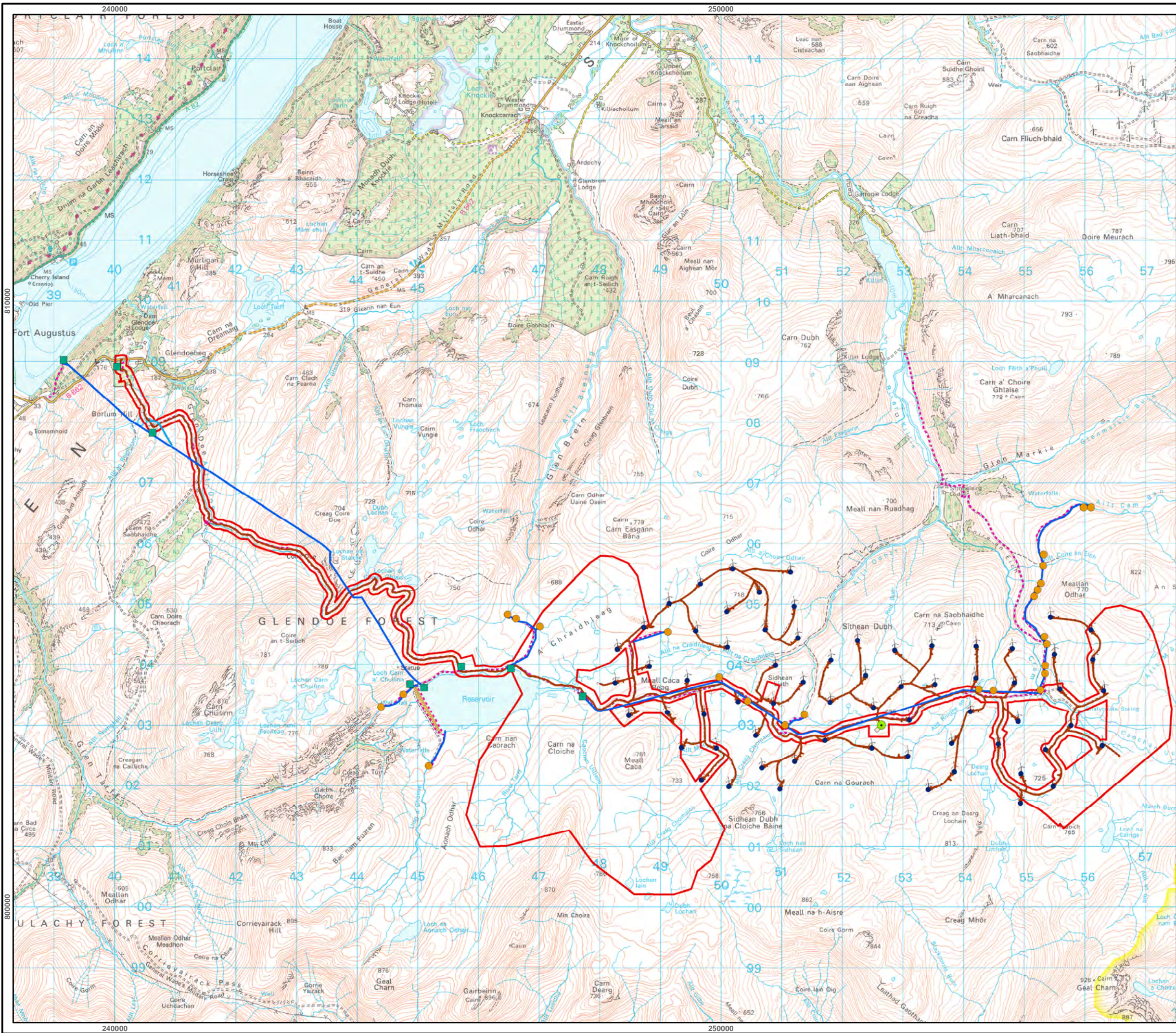
 Site Boundary



**Figure 1**  
Location Plan

**Cloiche Wind Farm**  
Non-Technical Summary





Key

- Site Boundary
- Stronelaig Wind Farm
  - Turbine
  - Substation and Substation Compound
  - Track/Hardstanding
- Glendoe Hydroelectric Scheme
  - Intake
  - Areas Necessary for Access
  - Tunnels and Pipeline
  - Track
  - Dam

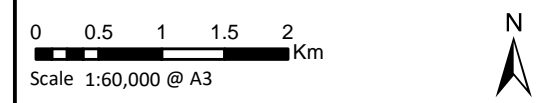
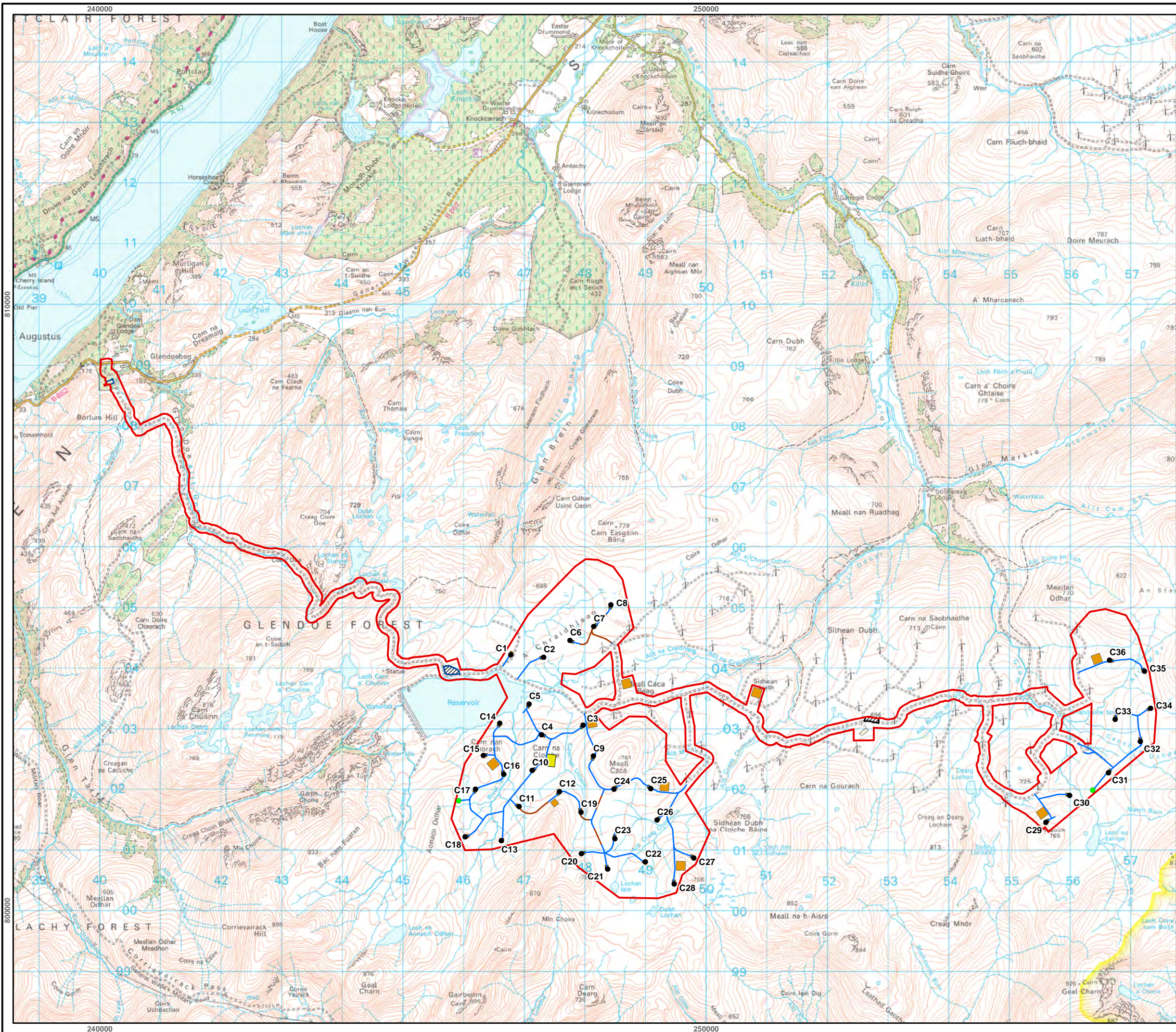


Figure 2  
Site Context

Cloiche Wind Farm  
Non-Technical Summary





Key

- Site Boundary
- Turbine
- LiDAR
- Cut Track
- Floating Track
- Hardstanding
- Compound
- Batching Plant
- Borrow Pits
- Substation

0 0.5 1 1.5 2 Km  
Scale 1:60,000 @ A3



Figure 3  
The Proposed Development

Cloiche Wind Farm  
Non-Technical Summary