

Corriegarth 2 Wind Farm

Environmental Impact Assessment Report

Volume 4 - Non-Technical Summary

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PREFACE

This Non-Technical Summary (NTS) summarises the findings of the Environmental Impact Assessment Report (EIA Report) that has been undertaken on behalf of Corriegarth 2 Windfarm Limited (the Applicant) to accompany the Section 36 application for the construction and operation of the Corriegarth 2 Wind Farm (the Development).

The EIA Report comprises of the following documents:

- **Volume 1** – EIA Report Text;
- **Volume 2** – EIA Report Figures;
 - **Volume 2a** – Figures excluding LVIA;
 - **Volume 2b** – LVIA Plan Figures;
 - **Volume 2c** – LVIA NatureScot Visualisations Part 1 of 2;
 - **Volume 2d** – LVIA THC Visualisations Part 2 of 2;
- **Volume 3** – EIA Report Technical Appendices; and
- **Volume 4** – EIA Report Non-Technical Summary.

In addition to the above, the EIA Report is accompanied by a Planning Statement.

The EIA Report and supporting documentation can be viewed on the Corriegarth 2 Wind Farm project website: www.baywa-re.co.uk/en/wind/corriegarth-2-windfarm/

Part 5 of the EIA Regulations requires the EIA Report to be available for public viewing; however, as a result of the ongoing COVID-19 pandemic, this would not be in line with current public health guidance from the Scottish Government. Consequently, the Coronavirus Regulations introduces a temporary relaxation of Part 5 of the EIA Regulations during the emergency period; the amended regulations therefore require that the Applicant must:

"state that the EIA report is available for inspection free of charge and the means by which, the EIA report is available for inspection;".

CD copies of the complete application submission are available free of charge, whilst supplies last. Hard copies of this NTS can be obtained free of charge and the full hard copy of the EIA Report may be obtained for a fee of £1,000.

To request a copy of the application submission or NTS please contact:

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1 INTRODUCTION

This Non-Technical Summary (NTS) summarises the Environmental Impact Assessment Report (EIA Report) which accompanies the application by Corriegarth 2 Windfarm Limited (the Applicant), for consent to install and operate Corriegarth 2 Wind Farm (the Development). The Development comprises 16 wind turbines and associated infrastructure, with a generation capacity exceeding 50 megawatts (MW), and is located adjacent to the Operational Corriegarth Wind Farm, within the Corriegarth Estate on the edge of the Monadhliath Mountains, approximately 15 kilometres (km) north-east of Fort Augustus and 10 km south-east of Foyers (NTS Appendix A: Figure 1).

As the Development exceeds 50 MW, the Applicant is seeking consent from the Scottish Ministers under Section 36 of the Electricity Act 1989 (as amended)¹, with deemed planning permission under Section 57(2) of the Town and Country Planning (Scotland) Act 1997².

Given that the Development qualifies as a Section 36 application, the EIA has been undertaken in accordance with the Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017³, referred to as the EIA Regulations.

1.1 The Applicant

The Applicant is Corriegarth 2 Windfarm Limited, a wholly owned subsidiary of BayWa r.e. UK Limited.

BayWa r.e. UK Ltd is a leading international renewable energy project developer and service provider. In the UK and Ireland, BayWa r.e. has installed over 650 Megawatts (MW) of wind and solar renewable energy projects and is currently developing over 300 MW of onshore wind. BayWa r.e. UK also provides technical and commercial services, and manages more than 1.5 Gigawatts (GW) of operational solar and wind assets for its clients.

BayWa r.e. UK Ltd is part of the leading global renewable energy company BayWa r.e. Established in 2009 BayWa r.e. is a leading global renewable energy developer, service supplier, wholesaler and energy solutions provider. Globally, BayWa r.e. has brought over 2.5 GW of energy online, while managing over 5 GW of assets.

1.2 Site Context and Operational Corriegarth Wind Farm

The Site covers an area of 1,694 hectares (ha), centred on National Grid Reference (NGR) (NGR) 257500, 813100 and includes the Operational Corriegarth Wind Farm. The Site lies wholly within the administrative boundary of the Highland Council.

As shown on Figure 2 in NTS Appendix A, the Development is proposed to encircle the existing operational Corriegarth Windfarm. Existing access tracks will be utilised to minimise the environmental impact of the Development, with new access tracks branching off existing access tracks to new turbine locations.

In addition to the Operational Corriegarth Wind Farm, the Site and immediate vicinity consists of rural upland farmland used for grazing and grouse shooting. The Site itself varies significantly in elevation ranging from approximately 550 - 810 m Above Ordnance Datum (AOD) with elevations reducing to approximately 200 m AOD along the access track as it slopes down towards the B862. The Operational Corriegarth Wind Farm lies

¹ UK Government, 1989, Electricity Act 1989 [Online] Available at: <http://www.legislation.gov.uk/ukpga/1989/29/contents> (Accessed 11/08/2020)

² UK Government (1997) Town and Country Planning (Scotland) Act 1997 [Online] Available at: <http://www.legislation.gov.uk/ukpga/1997/8/section/57> (Accessed 08/08/2020)

³ The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017 [Online] Available at: <https://www.legislation.gov.uk/ssi/2017/101/contents/made> (Accessed 11/08/2020)

within the central part of the Site, which in turn is situated within a bowl surrounded by higher hilltops.

There are a number of watercourses within the Site. The River E and associated tributaries flow east to west towards Loch Mhor. There are no waterbodies within the Site.

The Site contains one public road (the U1221), which forms part of the Site Access from the B862. There is one residential property within the Site located along the existing access track, approximately 5.3 km northwest from the closest turbine.

2 ENERGY AND PLANNING POLICY

The Development will have an overall installed capacity over 50 Megawatts (MW). In Scotland, onshore renewable energy developments that have capacity to generate over 50 MW require consent from the Scottish Ministers under the Electricity Act 1989⁴ (the Electricity Act). In such cases, the Planning Authority is a statutory consultee in the development management process and procedures. The Planning Authority for the Development is The Highland Council (the Council).

Energy policy has been referenced briefly in the EIA Report. The Development relates to the generation of electricity from renewable energy sources and comes as a direct response to national planning and energy policy objectives. Furthermore, the Development would make a contribution to the attainment of emissions reduction, renewable energy and electricity targets at both the Scottish and UK levels. Detailed reference to the renewable energy policy context is provided in the Planning Statement.

National planning policy and guidance has been reviewed as part of the EIA process including the National Planning Framework, Scottish Planning Policy and relevant Circulars and Planning Advice Notes.

The statutory Development Plan relevant to the Development has also been taken into account. This comprises the following documents:

- The Highland Wide Local Development Plan⁵ (HwLDP) (2012);
- The Inner Moray Firth Local Development Plan⁶ (IMFLDP) (adopted 2015); and
- Relevant supplementary guidance, particularly the Onshore Wind Energy Supplementary Guidance (2016)⁷.

Consideration has been given to the relevant policies contained within the Development Plan during the design of the Development. The policies most relevant to the Development relate to renewable energy developments, and they provide guidance on the main issues the Council will consider when acting as statutory consultees.

3 SITE SELECTION & DESIGN EVOLUTION

As part of an ongoing UK wide search, the Development was identified by the Applicant as having potential to be progressed to the more detailed design stage. Further high-level investigations and a willing landowner resulted in the Site being advanced to the initial feasibility and survey phase. The Site was selected to be progressed for the following reasons:

- The principle of wind energy development has been established at the site with the Operational Corriegarth Wind Farm;
- Opportunity to use existing tracks and infrastructure associated with the Operational Corriegarth Wind Farm;
- Excellent predicted wind speed;
- Good road access to transport turbine components from nearby ports to the Site;
- Available grid capacity and existing overhead connection to the national grid;

⁴ UK Government. (1989). Electricity Act 1989 [Online]. Available at: <http://www.legislation.gov.uk/ukpga/1989/29/contents> (Accessed 04/09/2020).

⁵ The Highland Council. (2012) Highland-wide Local Development Plan. [Online]. Available at: https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan (Accessed 04/09/2020).

⁶ The Highland Council (2015). Inner Moray Firth Local Development Plan [Online]. Available at: https://www.highland.gov.uk/downloads/file/15008/adopted_inner_moray_firth_local_development_plan (Accessed 04/09/2020).

⁷ The Highland Council (2016) Onshore Wind Energy: Supplementary Guidance [Online] Available at: https://www.highland.gov.uk/downloads/file/18793/onshore_wind_energy_supplementary_guidance_november_2016 (Accessed 10/04/20)

- No residential properties within 5 km of potential turbine locations;
- Limited theoretical visibility of wind turbines from populated areas and transport routes; and
- The Site itself does not support any international or national ecological, landscape or cultural heritage designations.

The Development layout has evolved during the EIA process. An iterative approach to the siting of the turbines has been taken which has considered the consultation responses, and the findings of the environmental surveys, to guide the evolution of the Development and allowed modifications to the layout, when required, to avoid environmental effects, where possible.

The final site design was achieved through detailed assessments of the environmental effects and consideration of the identified spatial constraints combined with consideration of the appearance of the Development from sensitive viewpoints. A series of design workshops, with project team input and site visits, were held to inform the design process. These involved members of the EIA and technical team who provided information on potential constraints following the baseline assessments. The process was also informed by detailed civil engineering requirements to ensure technically viable design solutions.

The design process involved a number of individual design iterations to explore the various technical and environmental issues identified through the baseline surveys. Through these surveys, it became apparent that there were site sensitivities in relation to landscape and visual effects, ecology, ornithology and peat constraints and the layout was modified to take account of these. Additionally, the decision to restrict the turbine tip height to 149.9 metres (m) was (in part) made to avoid lighting the turbines with visible, red aviation lights (the Civil Aviation Authority requires that all structures greater than 150 m high are lit). This decision has meant there are no night time visual impacts associated with the Development.

The EIA process has considered all design iterations with the effects associated with the final design assessed and reported in the EIA Report.

4 DEVELOPMENT DESCRIPTION

The layout of the Development is shown on Figure 2 in NTS Appendix A.

4.1 Development Components

The Development would comprise 16 three-bladed horizontal axis turbines up to 149.9 m tip height and the following associated infrastructure: substation and control building; crane hardstandings; underground cabling; (the option of) external transformer enclosures adjacent to each turbine; a temporary construction compound; up to two borrow pits; and temporary laydown areas. Access from the B862 to the turbine area will be via the existing Operational Corriegarth Wind Farm track. New tracks will connect the existing tracks to the new turbines. The components of the Development are summarised in Table 1.

Table 1: Key Parameters of the Development

Element	Details
Turbines	16 turbines, each with a maximum tip height of 149.9 m. Depending on the final turbine choice, a small transformer may be located at the base of each turbine. Each turbine will have a foundation with a diameter of approximately 21 m and a depth of approximately 3 m.
Access Track	Access track to serve the construction and operation of the wind farm with width approximately 5 m, this will consist of localised upgrades along the 13 km of existing track and 10 km of newly constructed track. For the southern borrow pit at Carn Fluich Bhaid, the access track will not be utilised for abnormal loads therefore there is no requirement for widening.
Electrical Infrastructure	A substation building will be located towards to the west of the turbines, measuring approximately 30 x 20 m with an associated control building measuring approximately 25 x 15 m. Both buildings will be located within a compound measuring approximately 60 x 90 m, which will also include any external electrical infrastructure and vehicle parking. Underground cabling, laid where possible alongside the access tracks, will link the turbine transformers to the onsite substation.
Crane Hardstanding	Crane hardstandings will be required adjacent to each turbine consisting of a main area of approximately 1400 m ² at each turbine. In addition to the main hardstanding areas, there will be additional flattened areas for crane assembly and turbine blade storage; however, these will be temporary and only include small areas of hardstandings.
Temporary Construction Compound	A temporary construction compound will be required during construction. An area of hardstanding will provide space for portakabins, parking and lay down areas. The compound will measure a maximum of 100 x 50 m and will be located at the same location as the construction compound for the Operational Corriegarth Wind Farm.
Borrow Pits	Up to two onsite borrow pits are proposed. One is located adjacent to the borrow pit used for the Operational Corriegarth Wind Farm at Carn na Saobhaidhe and the other is in the south of the Site on the slopes of Carn Fluich Bhaid. As only 10 km of new track will be built relatively little aggregate will be required when compared to a typical wind farm of this size, and the use of both borrow pits may not be required.
Site Access	Site access will be taken from the B862, utilising the existing access for the Operational Corriegarth Wind Farm.

4.2 Construction Phase

The construction period for the Development would be approximately 18 months in duration.

The starting date for construction activities will largely be dependent upon the date that consent might be granted and the grid connection date.

Construction activities have been assumed to take place between 07:00 to 19:00 hours on weekdays and 07:00 to 13:00 on Saturdays, with the exception of any emergency working or turbine deliveries.

The construction phase will be controlled via a series of detailed Construction Method Statements (CMSs) which will be prepared by a Principal Contractor appointed by the Applicant, who will have overall responsibility for environmental management on the construction site. A Construction Environmental Management Plan (CEMP) would be prepared to support the CMSs. The CEMP will be the overarching document which combines the principles of all other management plans and environmental plans required to support the construction.

4.3 Operational Phase

During operation, general servicing is required. Each turbine manufacturer has specific maintenance requirements, but typically, routine maintenance or servicing of turbines is carried out at least once per year. In the first year, there is also an initial service shortly after commissioning.

4.4 Decommissioning Phase

The Development has been designed with an operational life of 30 years. At the end of the operational period, it would be decommissioned and the turbines dismantled and removed. Any alternative to this action would be subject to further consenting process.

5 EIA PROCESS & METHODOLOGY

Environmental Impact Assessment (EIA) is the process undertaken to identify and evaluate the likely significant effects of a proposed development on the environment and to identify measures to mitigate or manage any significant adverse effects. The assessment must be carried out following consultation with statutory consultees, other interested bodies and members of the public. The purpose of identifying significant effects is to ensure decision makers are able to make an informed judgement on a proposal. Where one or more significant effects are identified, it does not automatically follow that a proposal should be refused.

This EIA Report has been prepared following a systematic approach to EIA and project design.

The process of identifying environmental effects is both iterative and cyclical, running in tandem with the iterative design process. The key elements in EIA are:

- Scoping and ongoing consultation, including consideration of responses and how these should be addressed;
- Technical environmental assessments, including baseline studies, input to the design process and identification of potential significant environmental effects;
- Preparation of the EIA Report; and
- Submission of the Section 36 application and EIA Report, including publicity of the submitted EIA findings.

The aim of the scoping process is to identify key environmental issues at an early stage, to determine which elements of the Development are likely to result in significant effects on the environment and to establish the extent of survey and assessment required for the EIA.

A Scoping Request for the Development was made to Scottish Ministers in February 2020, which described the Development and its potential environmental effects. A number of statutory and non-statutory consultees responded to the scoping request which in turn informed the EIA process.

The Applicant consulted the members of the local community through attendance at local Community Council meetings, and an 'Online Public Exhibition' was held in June 2020. The public exhibition was hosted online due to the Scottish Government's COVID-19 advice and guidelines⁸.

A number of environmental disciplines have been assessed to identify any effects that may be significant in the context of the EIA Regulations. Mitigation is proposed where possible to prevent significant effects.

In accordance with the EIA Regulations, the assessment has considered 'cumulative effects' where applicable.

⁸ The Scottish Government (2020) Online Public Exhibition established in accordance with COVID-19 Scottish Government advice and regulations [Online] Available online at: <https://www.gov.scot/publications/coronavirus-covid-19-planning-guidance-on-pre-application-consultations-for-public-events/> (Accessed 22/9/2020)

6 LANDSCAPE AND VISUAL AMENITY

Chapter 6 of the EIA Report assesses the likely significant landscape and visual effects of the Development during construction, operation and decommissioning, with reference to mitigation which was developed during the design and planning process. The landscape and visual impact assessment (LVIA) also considers the possible cumulative effects arising from Corriegarth 2 Wind Farm in conjunction with other approved, under construction and proposed (for which an undetermined valid planning application exists) wind farms in the local area.

The LVIA methodology was prepared in accordance with the principles contained within Guidelines for Landscape and Visual Impact Assessment (GLVIA3). The key steps in the methodology for assessing both landscape and visual effects are as follows:

- The area from which the Development may theoretically be visible was established through creation of a "Zone of Theoretical Visibility "ZTV" covering a distance of 40 km from the outermost wind turbines of the Development;
- The landscape of the Study Area was analysed, and landscape receptors identified;
- The visual baseline was recorded in terms of the places where people will be affected by views of the Development, and the nature of views and visual amenity, seen by different groups of people;
- Viewpoints were selected (including representative viewpoints, specific viewpoints and illustrative viewpoints), in consultation with the Council, NatureScot (formerly Scottish Natural Heritage, SNH) and Cairngorm National Park Authority; and
- Likely effects on landscape and visual resources were identified.

The LVIA was informed by desk study, field survey and consultation with statutory consultees. Field survey work was carried out during several visits under differing weather conditions between November 2019 and August 2020, and records were made in the form of field notes and photographs. Field survey work included visits to the Site, viewpoints, designated landscapes and Wild Land Areas (WLA), as well as extensive travel around the Study Area to consider potential effects on landscape character and on experiences of views seen from designated landscapes, settlements and routes.

The landscape character of the Study Area is varied and includes open areas of rolling moorland plateau contrasted with intimate glens and straths. The Site is located within two landscape character types (LCTs): the Rolling Uplands – Inverness (LCT 221) and Farmed Strath – Inverness (LCT 227). Proposed wind turbines are located within the interior of the Rolling Uplands plateau (LCT 221). The existing access track connects to the B862 and is partially located within the smaller-scale Farmed Strath (LCT 227). The assessment found that the Development will result in moderate (adverse) and significant landscape effects within localised extents of the Site. Effects on the landscape character of the Study Area are considered to be not significant.

Potential visual receptors within the Study Area include residents, road users (including tourists), people engaged in recreational activities and those at their place of work (including agricultural workers).

Within 5 km of the outermost wind turbines of the Development, theoretical visibility is largely focused within the interior of the Site, with the broad 'bowl'-shaped landform of the Site containing visibility of the Development in views from lower lying areas to the west of the Site. Theoretical visibility is indicated from lower lying areas along and adjacent to the existing access track, which passes to the north-west of the Site to the B862. Within 10-15 km of the outermost wind turbines of the Development, theoretical visibility is indicated from Stratherrick, elevated slopes to the west of the Great Glen, and elevated summits and slopes within the interior of the Monadhliath Mountains to the east. Due to intervening landform and the dramatic profile of the Great Glen, very limited

visibility is indicated across much of Loch Ness and its shoreline with actual visibility further limited by the presence of intervening woodland and forestry.

During the operational phase, the assessment found that moderate (adverse) and significant visual effects will be experienced from four of the 19 representative viewpoints located within 11 km of the Development:

- Viewpoint 3: B862 West of Corriegarth Lodge;
- Viewpoint 4: South Loch Ness Trail, north of Whitebridge;
- Viewpoint 5: Errogie; and
- Viewpoint 7: General Wade's Military Road.

Moderate (adverse) and significant effects will be experienced from localised sections of the B862, NCN Route 78 and the South Loch Ness Trail; however, an overall minor (adverse) and not significant effect will be experienced from each of these routes as a whole.

Whilst a moderate (adverse) and significant effect will be experienced by residential receptors from VP1: Gorthleck, this represents a worst-case scenario from relatively limited extents of the settlement. An overall minor (adverse) and not significant effect will be experienced for the settlement of Gorthleck as a whole.

The Site itself is not located within any landscape designations and wild land areas; however, there are a number of designations within the 40 km Study Area. The Loch Ness and Duntelchaig Special Landscape Area (SLAs), the Cairngorms National Park (CNP), and Monadhliath Wild Land Area (WLA 20) were considered within the assessment. An overall minor (adverse) and not significant effect was identified for the Loch Ness and Duntelchaig SLA. The adverse effects on the special landscape qualities (SLQs) of the CNP and the Wild Land Qualities of WLA 20 identified within the assessment are judged not to undermine the objectives for the protection of the areas. The overall integrity of the CNP and WLA 20 will not be compromised by the introduction of the Development.

Operational wind farms and those under construction including the Operational Corriegarth Wind Farm are included as part of the baseline for the LVIA and considered as part of the primary LVIA assessment. Scenario 1 of the Cumulative Landscape and Visual Impact Assessment (CLVIA) considers the addition of the Development to a landscape with operational, under construction and consented wind farms. Scenario 2 of the CLVIA considers the addition of the Development to a landscape with operational, under construction, consented and undetermined valid planning applications. Where the assessment found potential for cumulative effects under either scenario, these were considered to be minor (adverse) and not significant. No significant cumulative effects were identified in the CLVIA.

Significant landscape and visual effects will be limited to relatively localised extents of the Study Area. All significant effects are judged to be fully reversible; following decommissioning of the Development at the end of the operational phase, when the wind turbines and ancillary infrastructure would be removed, and the Site fully restored.

7 ECOLOGY

Chapter 7 of the EIA Report evaluates the effects of the Development on habitats, flora and fauna.

Baseline Ecology Surveys were completed between May 2019 and March 2020 (inclusive). The survey programme comprised the following: protected species surveys (excluding bats), bat surveys, fisheries surveys, and habitat and botany surveys. The results of these surveys, together with an ecology Desk Study, were used to identify those terrestrial species and designated sites that would potentially be affected by the Development.

No statutory sites were identified within 5 km of the Site as part of the Desk Study. One site, Ness Wood SAC is located with 10 km and is designated for otter, as well as mixed woodland on base-rich soils associated with rocky slopes and western acidic oak woodland, and was included for further consideration.

Habitat within the existing access track was dominated by improved, marshy and semi-improved grasslands. Habitat within the turbine envelope was dominated by peatland; including blanket bog, wet heath and wet modified bog. Other habitat, such as bare ground and infrastructure associated with the Operational Corriegarth Wind Farm, also accounted for a substantial percentage of the habitats present.

Overall Site suitability for protected species (excluding bats) was considered moderate, with only two protected species recorded within the Survey Area: badger and otter. Evidence of badger, in the form of one outlier sett, was identified; however, the sett (located on the southern edge of the Site boundary within the access track area) was scoped out of the EIA assessment based on its distance from the turbine envelope and the lack of suitable habitat elsewhere in the Survey Area. Signs of otter were found within the Survey Area; however, the effects of the Development on the species were considered to be temporary, reversible and of low magnitude and therefore not significant in terms of EIA regulations. Fisheries surveys did not reveal any watercourses within the Survey Area with the potential to support Atlantic Salmon. Bat surveys revealed very low numbers of bats using the Site for feeding or commuting. No bat roosts were identified during the surveys. Whilst no wildcat evidence was found within the Survey, there is some limited potential for species to utilise the Site.

Based on these results, six IEFs were identified as having the potential to be affected by the Development: Ness Woods SAC, blanket bog, flush and spring habitat, bats, otter and wildcat. A detailed assessment of potential effects on these IEFs during all phases of the Development (construction, operation and decommissioning) was completed. This included potential effects such as habitat loss, pollution and turbine-related mortality.

It is considered that effects of the Development on ecology will be of low to negligible magnitude and not significant in terms of the EIA Regulations. Similarly, there are considered to be no significant effects on nearby statutory sites in terms of the EIA Regulations.

8 ORNITHOLOGY

Chapter 8 of the EIA Report evaluates the effects of the Development on bird species of conservation concern and their supporting habitats.

The assessment of potential effects on ornithological features considers: direct habitat loss and disturbance during construction, displacement of birds as a result of indirect habitat loss and collision risk during operation and cumulative effects.

The study area for the assessment comprises the Site and appropriate buffers around all infrastructure, as recommended by NatureScot guidance. Following the collation of existing bird records from baseline surveys and operational monitoring associated with the Operational Corriegarth Wind Farm, and along with consultation with NatureScot to determine the scope of the survey programme, field surveys were undertaken from January to August 2019.

There are no statutory nature conservation designations with an ornithological interest within the Site. The closest designated site is approximately 6.8 km away, and based on information presented in Chapter 8, all designated sites were scoped out of the assessment due to a lack of connectivity.

Based on baseline survey results and historic data, a total of six key species were taken forward for assessment, due to identified potential for significant effects from the Development: red kite, golden eagle, white-tailed eagle, peregrine, golden plover and dunlin.

Ornithological interests were taken into consideration during the iterative design layout process. The following embedded mitigation is integral to the final layout:

- Wind Turbines, wherever possible, were located as close to Operational Corriegarth Wind Farm Wind Turbines, to minimise the extent of area potentially subject to displacement of birds; and
- The design process made efforts to consider ornithological receptors by avoiding at sufficient distance, the locations of key species' nest and roost sites and take into consideration any associated spatial patterns of foraging activity, to minimise the likelihood of disturbance-displacement and collision risk effects.

Construction and operational effects were considered for each key species. Construction effects included temporary and long-term habitat loss, and disturbance over a short-term construction period.

Without any mitigation, a disturbance effect of no more than minor adverse significance was predicted, mainly due to the lack of breeding activity in proximity to infrastructure in the case of raptors, and relatively low numbers of waders within a population context that may be temporarily affected. An Ecological Protection Plan would be implemented during construction as part of the Construction Environmental Management Plan (CEMP) to ensure reasonable measures are taken to avoid the destruction or disturbance of any nest site, and with species-specific temporal and spatial restrictions around construction works, the residual effects are no more than Minor adverse and Not Significant.

Operational effects (displacement and collision risk) were considered for each key species. Again, the design iteration process took these into consideration, thereby minimising risks. Various mitigation measures to reduce the likelihood of a significant displacement or collision effect would be in place throughout the operational period including removal of carrion as a food source around Wind Turbines to reduce collision risks, a programme of monitoring and tagging, and habitat management of blanket bog to improve raptor prey and wader habitat, as well as maintaining mature woodland within the estate for potential nesting and roosting sites for red kite and white-tailed eagle. With these mitigation measures in place, the residual effects were considered to be no more than Minor adverse and Not Significant.

Cumulative construction and operational effects were assessed for other Wind Farm projects within the appropriate search area. When mitigation measures for the Development and other projects were considered, the cumulative level of significance was determined to be no more than Minor adverse and Not Significant. The exception to this was the potential cumulative collision effects on the very small local populations of red kite and white-tailed eagle. However, when placed within a wider North Scotland and national population context respectively, and when considering that no breeding pairs are likely to regularly use any Wind Farm site, a Minor adverse and Not Significant effect is more appropriate.

9 ARCHAEOLOGY AND CULTURAL HERITAGE

Chapter 9 of the EIA Report evaluates the effects of the Development on archaeological and cultural heritage receptors.

The assessment of archaeological and cultural heritage effects has taken into account both potential direct effects arising from proposed construction activities, as well as indirect (primarily visual) effects as a result of changes to the settings of cultural heritage assets.

The assessment was informed by a Desk-Based Assessment (DBA) which aided understanding of impacts on known (buried) archaeological remains within the core study area, and the potential for unknown (buried) archaeological remains to be present. The DBA revealed that the archaeological interest of the core study area is largely confined to the waterways with 13 archaeological remains recorded. The potential for any unknown archaeological remains to survive within the Development is low due to the exposed upland nature of the core study area which has avoided all known archaeological remains and avoidance of areas most likely to contain archaeology, i.e. watercourses. Given the low potential for unknown archaeological remains to survive, no mitigation is recommended.

The assessment considered the potential effect of the turbines in relation to the setting of heritage assets beyond the core study area. This included consideration of all designated heritage assets (i.e. Scheduled Monuments and Listed Buildings) within 10 km that were also within the Zone of Theoretical Visibility. The key aim of the assessment was to determine whether the turbines altered the settings of heritage assets so that the cultural significance of these assets was diminished.

All changes to setting were no more than minor adverse and Not Significant for each designated heritage asset assessed. No mitigation is considered feasible for this effect. Any effect is considered reversible upon decommissioning.

The cumulative effect of the Development considers where the Development, in combination with other consented wind farm developments or those for which an application has been submitted, has the potential to surround and dominate heritage assets. The cumulative effect assessment identified three clusters of turbines: Operational Corriegarth/Development Cluster; Dunmaglass/Aberarder Cluster; and another cluster at Stronelairg/Cloiche/Dell/Glenshero. This created three discrete clusters of turbines on the northern side of the Monadhliaths running north-east to south-west. These turbine clusters are more distant landscape feature that would not overly dominate any heritage assets or key views, so that a cumulative effect on heritage assets is unlikely.

10 NOISE

Chapter 10 of the EIA Report evaluates the effects of noise from the Development on nearby noise-sensitive receptors during construction, operation and decommissioning.

During construction, noise may result from the use of plant and machinery to carry out construction activities. However, due to the substantial separation distance between the Development and residential dwellings, no significant effects are anticipated due to general construction activities. Notwithstanding this, Best Practice mitigation measures will be adopted to manage noise emissions, including restrictions on working hours during the construction the Development.

Noise due to haulage of materials and equipment to site been reduced as much as possible through the planned use of an on-site concrete batching plant rather than importing ready-mixed concrete, thereby minimising the number of traffic movements required. However, the effect of haulage noise has been assessed as significant at one house located adjacent to the on-site access road. This effect will be reduced to not significant by the installation of temporary noise barriers.

Cumulative construction traffic noise levels could be significant if several potential wind farm and hydroelectric developments were to be constructed at the same time. However, this is unlikely to occur in practice and each development would be the subject of a Traffic Management Plan which would minimise the impacts of traffic.

During operation, wind turbines can generate noise from the machinery housed within the turbine and from the movement of blades through the air. Modern turbines are designed to minimise noise and planning conditions are used to ensure compliance with specified noise limits.

The assessment has been undertaken in accordance with the recommendations of ETSU-R-97, the method of assessing wind turbine noise recommended by Government guidance, and following the current best practice methods described in the GPG, as endorsed by the Scottish Government. It has been shown that noise due to the Development, in conjunction with the surrounding cumulative developments, would comply with the requirements of ETSU R-97 at all receptor locations.

Noise produced during decommissioning of the Development is likely to be of a similar nature to that during construction, although the duration of decommissioning will be shorter than that of construction. Any legislation, guidance or best practice relevant at the time of decommissioning would be complied with.

11 TRAFFIC AND TRANSPORTATION

Chapter 11 of the EIA Report identifies the potential effects of changes to road traffic expected as a result of the Development.

Most traffic generated by the Development is associated with the construction phase which is anticipated to last up to 18 months. The main approach route considered in this assessment assumes that wind turbine components will be transported as abnormal loads from the Port of Invergordon, and that general construction traffic will approach the site via the A9, B851 and B862 corridors.

Baseline traffic flow levels were established at four locations on the approach corridor via three Automatic Traffic Counts (ATCs) and from one publicly available traffic count. The assessment then considered the increase in traffic as a result of the Development based Department for Transport forecasts National Trip End Model and Trip End Model Presentation Programme, both of which are industry standard tools for estimating traffic growth.

The main potential transportation impacts would be associated with the movement of abnormal loads, heavy goods vehicles (HGVs), light goods vehicles (LGVs), and cars to and from the site during the construction phase. It is considered that the increase in overall traffic flow and HGV flow may have an effect on pedestrian amenity at two sensitive receptors identified in the study: Farr and Stratherrick Primary Schools.

It is estimated that a total up to 20,620 vehicle movements (where one movement equals one arrival or departure) would be associated with the construction phase of the Development, as a worst case. This figure includes 7,982 HGV and abnormal load delivery movements and 12,638 light vehicle (car and van) movements.

Over the construction period, the total daily vehicle movement numbers peak during months 6-8 where a total of 1,762 vehicles movements are predicted. This is principally due to the deliveries of stone for the access tracks, crane hardstandings and turbine foundations.

One potentially significant effect was identified relating to pedestrian amenity at Farr and Stratherrick Primary Schools. In order to address this effect, a number of mitigation measures are proposed which are recommended for adoption in the Traffic Management Plan as follows:

- As far as reasonably possible deliveries should be scheduled outside of school opening and closing times;
- Drivers of all delivery vehicles to be made aware during induction of the presence of schools within these settlements and that formal pedestrian crossing facilities are not present; and
- Part-time 20 mph speed limit exists on roads within the vicinity of the schools which should be in force during school opening and closing times. Drivers to be made aware of this during induction and reminded that strict adherence to these speed limits is a legal requirement.

A potentially significant effect was identified on the Trail of the Seven Lochs, located on the U112 road near to site between its junction with the B862 and Garthbeg Lodge. In order to mitigate against this effect, the following mitigation measure is proposed for adoption in the Traffic Management Plan:

- A temporary 30mph speed limit will be implemented on the U112 for the duration of construction.

The traffic management plan will be developed in agreement with the Council and Transport Scotland and detail the exact measures to be implemented during construction of the Development.

Traffic generated during the operation and maintenance of the Development would be minimal; this expected to be insignificant in comparison to traffic generated during construction.

Prior to decommissioning of the Development, a traffic assessment would be undertaken and appropriate traffic management procedures agreed with the relevant authorities at the time.

Cumulative effects were assessed and it was found that there is sufficient residual capacity on each of the roads within the study to accommodate the predicted increase in traffic which may occur in the cumulative scenario.

This assessment identified one location where there is a potential for significant effects to occur. Recommended mitigation measures, which include consultation with the local traffic liaison group, have been provided, with detailed mitigation to be specified in the Traffic Management Plan. As a result, all residual effects of the Development on traffic and transport are considered at maximum low, and not significant in terms of the EIA Regulations.

12 HYDROLOGY AND HYDROGEOLOGY

Chapter 12 evaluates the potential effects of the Development on the hydrological resources.

All turbine infrastructure associated with the Development is located within the catchments of the River E and River Foyers.

All turbine infrastructure is located outwith areas identified as medium to high risk of flooding from all sources. Only the existing access track to the Operational wind farm is located on a small flood plain and any upgrades would be flush to the ground, ensuring no loss of flood storage or conveyance.

The Development lies within a designated Drinking Water Protected Area (DWPA) under the Water Framework Directive associated with the Loch Ness and Invermoriston catchments. Due to the distance from the intake (approximately 9 km west of site entrance), the potential effects from the Development will be negligible.

Consultation with the Council confirmed that there are three private water supplies (PWS) within 2 km of the Development boundary. Two more PWS were identified during the assessment. With consideration for the hydrologically or hydrogeologically connectivity to the Development, three of the PWS were scoped into the risk assessment. These are Corriegarth Lodge and Keepers Cottage, Garthbeg Farm and Garthbeg Bungalow. With the implementation of construction good practice, water quality monitoring and a watching brief during track upgrades, effects on PWS is assessed as negligible.

No statutory designations are hydrologically connected to the Development.

Thick peat deposits were recorded on mapping and during site visits. Embedded good construction practice will be provided in the Construction Environmental Management Plan (CEMP) and a 50 m buffer of surface watercourses will limit the potential for significant effects on the hydrological environment.

All effects have been assessed as negligible or minor and are **not significant** in terms of the EIA Regulations.

13 GEOLOGY AND PEAT

Chapter 13 of the EIA Report evaluates the effects of the Development arising from the construction, operation and decommissioning phases on the Geology, Soils and Peat resource.

The assessment for the Development was based on a desk study, site surveys, and consultation with the SEPA. Embedded design mitigation measures to reduce effects upon peat consisted of maximising use of existing access tracks and avoiding sensitive environmental constraints, minimising the number of watercourse crossings and reducing the total length of new track. Peat was identified as a sensitive receptor within the Site with average depths across the Site of 1.2 m. As such, one of the key design objectives was to ensure that no turbines are located in greater than 1.5 m of peat so that six turbines are in less than 1 m of peat with ten between 1-1.5 m of peat. The assessment also analysed the risk of peat slide and there were several areas across the site assessed as being moderate risk, in particular at turbines and associated crane hardstand areas T2, T4, T6, T7, T8, T9, T12, T13, T14 and T16 and track sections. In the absence of mitigation, significance effects were identified in the disturbance of peat and peaty soils and in peat stability.

Construction mitigation will allow for the micro-siting of infrastructure up to 50 m to avoid pockets of deep peat. The adoption of best practice for storage and re-use up peat onsite as well as drainage measures will be developed throughout the construction period to include robust peat management and a monitoring programme.

Implementation of the proposed mitigation measures and undertaking the construction works in accordance with best practice should ensure there are no significant residual effects from the Development on Geology, Soils and Peat.

14 SOCIO-ECONOMICS, RECREATION AND TOURISM

Chapter 14 of the EIA Report assessed the effects of the Development on the socio-economics, recreation and tourism resources.

The assessment considered the potential effects arising from the construction, operation and decommissioning phases of the Development on the socio-economic, recreation and tourism resource. Existing baseline conditions have been identified from desk-based collection of data, site visits and consultation with relevant stakeholders.

14.1 Socio-Economics

The Development will result in contract opportunities for local and regional contractors both for construction activities themselves and throughout the supply chain. It is estimated that, during the construction phase, the Development will be worth approximately £47 m to the UK economy. Of that £47 m, £36 m is expected to be spent in Scotland and £12 m is expected to be spent within the Highland area. In order to ensure these opportunities are delivered, the Applicant has made a commitment to work with the Inverness Chamber of Commerce and Highlands and Islands Enterprise to use existing local supply chain networks such as the "O4B" website (<https://www.o4b-highlandsandislands.com/>) as part of their procurement strategy.

It is anticipated that a temporary workforce averaging up to 60 people at any one time will be employed during the 18-month construction period. It is also likely that there will be some local employment generated as an indirect result of the construction of the Development. This could include supply chain spin-offs for local businesses and sub-contracted work relating to the transportation of labour and materials. Local shops, cafes, accommodation providers and hotels often experience an increase in turnover during the construction phase as they have opportunities to provide additional services to the developer and their contractors. There are numerous accommodation providers in the local area, and it is expected that local services will be used by temporary construction contractors.

During the construction process there will be opportunities where those employed by contractors will develop skills that will be of benefit to the local economy and to local businesses in the longer term, such as project management and construction skills which can be transferred to other roles and projects.

The construction will bring about short-term, beneficial, direct, indirect and induced effects to the area, through the increase in employment and expenditure on capital costs.

The Development will be regularly maintained by a specialist Operations Team to manage all aspects of the operations including the grid contracts, electricity sales, maintenance, health and safety and habitat management. As well as the Project and Site Managers there will be a requirement for several other services detailed, within the EIA Report, which will give rise to further potential employment opportunities. Annual operational expenditure is expected to be in the region of £4.5 million per annum. Of this total spend in the region of 42% will be spent in the local area.

The Development will contribute £5,000 per megawatt installed capacity. This will result in an annual value of up to £380,000 per year. With 30-year consent, this will provide approximately £11.4 million in community benefit.

There will therefore be beneficial long-term effects associated with the operation of the Development.

The combined socio-economic effect of the Development in conjunction with other wind farms is unlikely to lead to a fundamental change in socio-economics within the Highlands and therefore, no significant cumulative effects are anticipated.

14.2 Tourism and Recreation

The Site itself is not considered very sensitive for tourism and recreation; however, the neighbouring lands and regional area is highly sensitive for tourism and recreation, with various well-established tourism and recreation attractions, including: the South Loch Ness Trail; the Trail of the Seven Lochs; the National Cycle Network Route 78; the Monadhliath Mountain Range; the Cairngorms National park; Loch Ness; and Urquhart Castle – all of which are located within the Primary Study Area.

There are six core paths within the Secondary Study Area and one core path (IN25.02) starting/ending for a short distance within the Site. In addition, the Trail of the Seven Lochs also enters the Site, following the access track from the B862 and the Core Path IN25.02.

There are a number of settlements near to the Site which offer a range of accommodation; the nearest settlement offering accommodation is Whitebridge approximately 7 km south-west of the nearest indicative turbine. Additionally, Foyers (9 km north-west of the Site), Invermoriston (13.8 km west of the Site), Drumnadrochit (15.8 km north-west of the Site), and Fort Augustus (15.8 km north-west of the Site) are all substantial settlements offering a wide-range of accommodation.

The potential for impact on tourism and recreation is closely linked to the perception of those visiting the area. A number of studies have been undertaken which consider the impact of wind farm development on public perception and tourism, which are discussed within the EIA Report. In summary these studies highlight the varying opinions of visitors and residents regarding wind energy development, however, they suggest in all cases, that the majority of those surveyed do not have a negative attitude towards wind farms.

During construction access to the Site may be restricted and there may be short-term effects in the form of increased noise from construction traffic and/or construction visual effects, for tourism and recreation receptors within the Primary Study Area. Receptors within the Primary Study Area were all deemed to be either have no effect, a short-term negligible or minor effect as a result of the construction of the Development; therefore, no significant effects are predicted on tourism and recreation receptors within the Primary Study Area. Health & safety notices will be placed in prominent locations around the Site, and on affected routes/public rights of way, such as the Core Path IN25.02 and the Trail of the Seven Lochs; however, these routes will not be closed indefinitely as a result of the construction of the Development.

Surveys of the public's attitudes to wind farms provide no clear evidence that the presence of wind farms in an area has a negative impact on local tourism and recreation. Tourists using the local core paths and local tourist attractions may have a particular sensitivity to visual effects; however, access to tourist facilities will be unaffected, and no significant effects as a result of the operation of the Development are predicted.

No direct effects on tourism and recreational Receptors within the Primary and Secondary Study Areas are predicted; however, indirect, visual effects, as a result of the operational phase of the Development, were assessed. Due to limited or no visibility of the Development from receptors, intervening distance/topography between the Development and receptors, and evidence of public attitude, there are no significant effects identified on tourism and recreational receptors as a result of the Development's operational phase.

During operation the Site will be accessible to the public with the exception of temporary exclusions for health and safety reasons such as during maintenance.

15 CLIMATE CHANGE AND CARBON BALANCE

The predicted future baseline conditions are highly unlikely to affect the operation of the Development. The Development will have a positive effect on carbon savings and a significant positive effect, when considered cumulatively, with UK-wide renewable energy deployment.

The Development will not significantly influence climate change, and the Development will have a positive cumulative effect with regards to reduction in carbon emissions when considering the UK-wide electricity generation mix. As such, the effect of the Development on climate change is not significant.

A carbon balance assessment for the Development was generated using the methodology and carbon calculator provided in Calculating Carbon Savings from Wind Farms on Scottish Peatlands – A New Approach as recommended by the Scottish Government. Based on this guidance, the Development has an expected payback time between 1 and 4 years. The CO₂ 'payback time' is the period of wind farm operation required until there is a net saving of CO₂.

16 OTHER ISSUES

An assessment was undertaken of the effects of the Development upon other issues not covered elsewhere in the EIA Report including:

- Human Health & Safety, including Major Accidents and Disasters;
- Shadow Flicker;
- Waste
- Telecommunications, Television Reception and Utilities; and
- Aviation.

In summary, the construction and operation of the Development on Human Health & Safety, including major Accidents & Disasters; Shadow Flicker; Waste; and Telecommunications, Television Reception and Utilities, will not be significant. Significant effects are not predicted for Ministry of Defence (MoD) infrastructure; however, some effect is predicted in relation to civil aviation infrastructure.

In relation to Health and Safety, due to the location of the Development and Site management through CDM Regulations and the CEMP, major accidents and disasters are considered negligible and not significant in terms of the EIA Regulations.

Shadow flicker is an effect that can occur when the shadow of a blade passes over a small opening (such as window), briefly reducing the intensity of light within the room, and causing a flickering to be perceived. As a result of no properties falling within the shadow flicker study area, which was defined using appropriate guidance, shadow flicker effects are unlikely; therefore, shadow flicker effects will not be significant.

The Construction Environmental Management Plan (CEMP) will include details on how waste streams from the Development are to be managed, following the appropriate guidance. Therefore, waste was scoped out of assessment and not considered further in the EIA Report.

Consultation undertaken with telecommunication and utilities consultees has confirmed that the Development will not interfere with telecommunications and electromagnetic signals. Adverse effects on infrastructure such as utilities are also unlikely; however, safe systems of work, technical solutions and appropriate mitigation will be adopted to ensure no adverse effects occur.

Operational wind turbines have the potential to affect the safe operation of aviation interests, including airfields, radars, meteorological radars and military low flying exercises. With specific regard to the civil aviation, the Development falls within the safeguarding zone of Inverness Airport and has marginal visibility to the Inverness primary surveillance radar. The Applicant has committed to working with Highlands and Islands Airport Limited (HIAL) who have stated their willingness to dialogue with the Applicant to establish suitable mitigation.

Additionally, consultation with the Ministry of Defence (MoD) highlighted that the Development is within a military low flying area; however, consultation was undertaken with the MoD from an early stage and no significant effects are predicted on the safeguarding of MoD infrastructure.

17 SUMMARY

An EIA for the Development has been carried out in accordance with the regulatory requirements and relevant good practice guidance, which involves the compilation, evaluation and presentation of any potentially significantly environmental effects resulting from the Development.

The design strategy has created a wind farm that represents optimum fit within the technical and environmental parameters of the Site. Throughout this process, an iterative approach has allowed the findings of the public consultation exercises, along with the EIA, to guide the evolution of the Development allowing the design to be modified in order to avoid environment effects where possible.

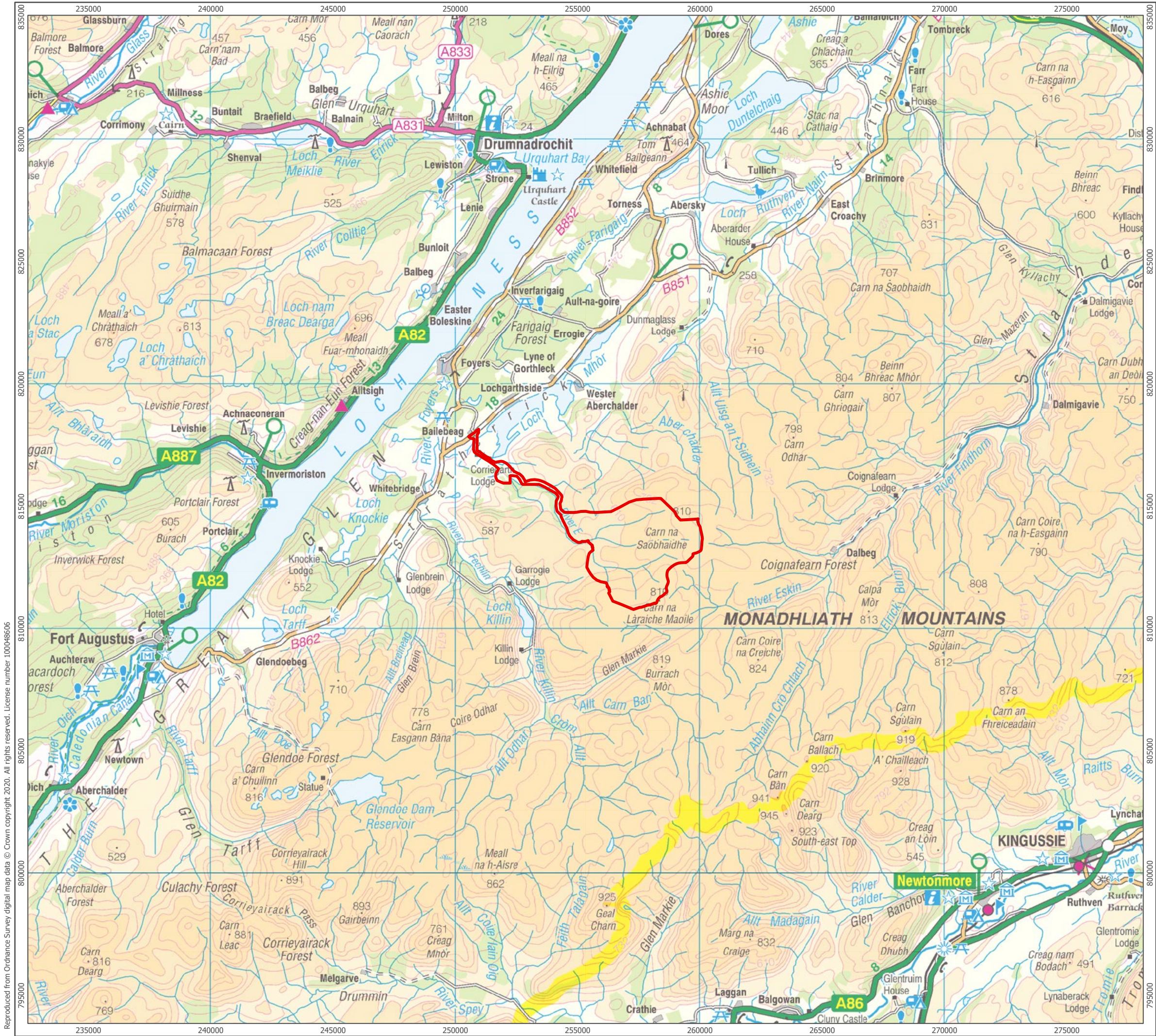
Through embedded design and proposed mitigation, major and significant adverse effects as a result of the construction and operation of the Development have been avoided; however, moderate and significant adverse landscape and visual effects will remain. Given the nature of the Development, these effects cannot be avoided in their entirety; however, landscape and visual effects will be localised in extent within approximately 11 km of the nearest wind turbine of the Development. These are limited to landscape effects on localised extents of the Site, visual effects experienced from four of the 19 representative viewpoints and visual effects on localised sections of the B862, NCN Route 78 and the South Loch Ness Trail.

The Development presents an important environmental benefit as a renewable energy generator contributing to Scotland's ambitious renewable energy targets and offsetting fossil fuel energy sources which produce CO₂ and contribute to climate change. In terms of payback periods for the Development, this equates to between 1 and 4 years. Beyond the payback periods, the Development will make a positive net contribution to CO₂ emissions savings for the remainder of its operational period.

The renewable industry is an important economic asset to the UK and Scotland, and supports a substantial and growing number of employment opportunities. The Development will further contribute to the positive effects of renewable energy, and associated skills base within the UK and Scotland, and the spend and employment is positive for the local Highland area.

Overall, this EIA shows that, given the iterative design process, and with the committed good practice measures and proposed further site-specific mitigation in place, most potential environmental effects associated with the construction and operation of the Development can be avoided or minimised.

NTS APPENDIX A: FIGURES



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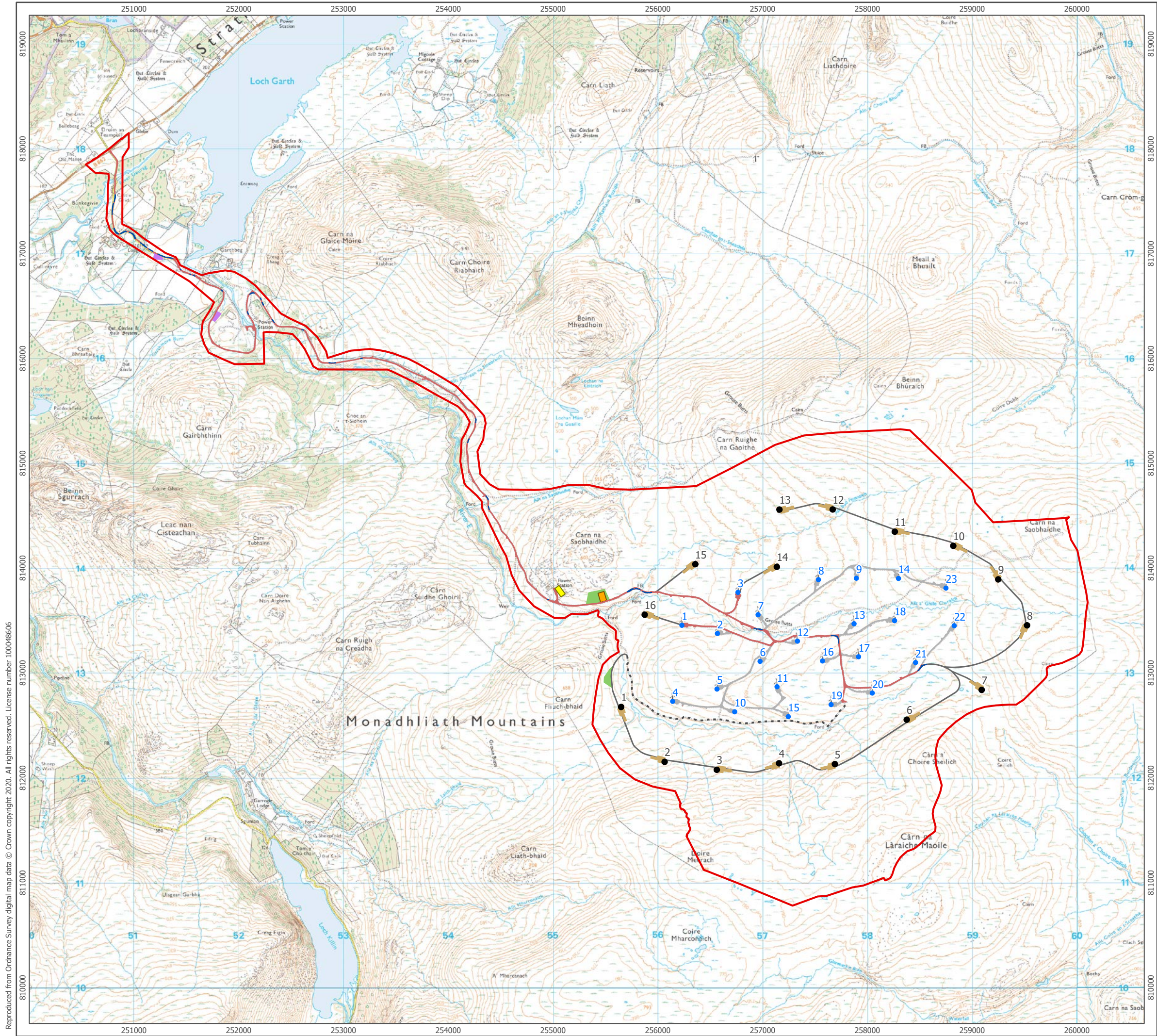
 Site Boundary

1:150,000 Scale @ A3
 0 2.5 5 km


Produced By: FC	Ref: 3369-REP-087
Checked By: SC	Date: 23/09/2020

Site Location
Figure 1

Corriegarth 2 Wind Farm
EIA Report
Non-Technical Summary



- Site Boundary
- Proposed Turbine Location
- Operational Corriegarth Wind Turbines
- Existing Track (Use restricted to construction phase for access to borrow pit only)
- Borrow Pit Extents
- Construction Compound
- Crane Hardstanding
- Existing Tracks to be Utilised
- Existing Wind Farm Tracks
- Laydown Area
- Proposed Access Tracks
- Substation Compound
- Track Widening Area

Proposed Turbine Locations

Turbine ID	Easting	Northing
1	255650	812676
2	256065	812153
3	256563	812077
4	257157	812139
5	257690	812131
6	258376	812555
7	259091	812839
8	259524	813455
9	259249	813893
10	258820	814213
11	258262	814348
12	257669	814560
13	257161	814559
14	257136	814013
15	256358	814038
16	255875	813556

1:35,000 Scale @ A3



Produced By: SC	Ref: 3369-REP-088
Checked By: HK	Date: 01/10/2020

Site Layout Plan
Figure 2

Corriegarth 2 Wind Farm
EIA Report
Non-Technical Summary