



Renantis UK Limited

The Repowered and Extended Ben Aketil Wind Farm

Non-Technical Summary

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1 INTRODUCTION

1.1 Background to the Non-Technical Summary

This is the non-technical summary (NTS) of the Environmental Impact Assessment Report (EIAR) for the proposed Repowered and Extended Ben Aketil Wind Farm (hereafter ‘the Proposed Development’). The EIAR is the main document accompanying the application for consent and the NTS will summarise its key findings.

The NTS describes the Proposed Development in non-technical language, identifying the likely effects it may have on people and the receiving environment. It also describes the mitigation measures proposed by the Applicant to avoid or reduce potential adverse effects that have been identified. It will also discuss how environmental issues will be managed during the construction, operation and decommissioning of the Proposed Development.

1.2 Introduction to the Proposal

Renantis UK Limited, formerly Falck Renewables Wind Limited, (hereafter ‘the Applicant’) develops, designs, builds and manages power production plants from renewable sources. Renantis have an installed capacity of 1420 MW (Megawatts) across the United Kingdom, the United States and Europe using wind power, solar power, waste-to-energy and biomass technologies.

The operational Ben Aketil Wind Farm consists of twelve turbines at a height of 99.5 m to tip, generating up to 27.6 MW of energy. Ten of the turbines were constructed in 2007 and another two were constructed in 2010. The wind turbines had an expected operational life of 26 and 23 years respectively from the first export of electricity to the grid, ending operation in 2033. In March 2021, an operational life extension was granted, extending the life of the operational wind farm to 2040.

The Applicant is seeking consent to repower the existing Ben Aketil Wind Farm and to add an extension. Repowering is the process of replacing older first-generation wind turbines with more powerful models that use the latest technology and are capable of producing significantly more electricity, more efficiently. The process is carried out within a timeframe which allows for the replacement of older units before they come to the end of their operational life.

The Proposed Development would comprise nine turbines in total, of a maximum height of 200 m to blade tip. As each turbine would generate approximately 5.6 to 6.6 MW of electricity, the total installed capacity of the proposed turbines would exceed 50 MW and the Proposed Development would generate enough electricity to supply the equivalent of 40,855 homes¹. A 20 MW battery energy storage system (BESS) has also been included as part of the Proposed Development. A BESS enables energy to be stored and then released when the national grid needs power most.

¹ Using the formula described on the RUK website (<https://www.renewableuk.com/page/UKWEDEexplained>) and a site-specific load factor of 39.6%..

The Proposed Development is located at the operational Ben Aketil Wind Farm site. The Proposed Development Site is situated in the vicinity of the Ben Aketil summit, the A850 and the operational Edinbane Wind Farm, which is due east of the Site. The Site is bordered by commercial forestry to the north and access is currently gained to the existing wind farm via a track through the plantation from the A850.

The Site is within The Highland Council local authority area and settlements near to the Site include Caroy, Feorlig, Edinbane, Dunvegan and Roskill. The Site is approximately 15 km west of Portree, and 5 km east of Dunvegan.

The Site Location plan is shown on **Figure 1**.

The terminology adopted in this document is provided in **Table 1.1** below.

Table 1.1: Terminology adopted in the Non-Technical Summary

Term	Explanation
Proposed Development	The Repowered and Extended Ben Aketil Wind Farm.
Applicant	Renantis, formerly Falck Renewables Wind Development.
Site	This refers to everything within the application red line boundary.
Northern Site Access	This refers to the existing access route from the public road to the north of the Site.
Southern Site Access	This refers to the proposed Site access route from the public road to the south of the Site.
Study Area	The Site and/or Site Access plus any additional area over which desk based or field assessments have been extended. The study area varies depending on the nature of the potential effects for each environmental parameter, as informed by professional guidance and best practice regarding EIA.
Developable Area	An area within the red line boundary area defined by the Applicant as the area where the turbines and associated infrastructure would be located.
ECU	The Scottish Ministers Energy Consents Unit, the governmental body which decides the outcome of the application for consent under Section 36 of the Electricity Act (1989).

1.3 Project Team

The Applicant appointed RSK Environment Limited (RSK), an experienced environmental consultancy, as the lead consultant to carry out the EIAR and related assessments which will accompany an application for planning consent to the Scottish Government's Energy Consents Unit (ECU). RSK was supported by:

- David Bell Planning - provided specialist planning assessment;
- Stephenson Halliday - provided landscape and visual modelling and assessment;



- Avian Ecology - provided ecology and ornithology surveys, modelling and assessments;
- WRc – provided geology, hydrology, hydrogeology and peat assessments;
- CFA Archaeology – provided archaeological and cultural heritage assessment;
- SCP – provided traffic and transport assessment;
- Hayes McKenzie - provided noise modelling and assessment; and
- Wind Business Support - provided aviation assessment.

2 PLANNING PROCESS

2.1 Consents and Applications

The Applicant is seeking to secure approval for the Proposed Development by an application under Section 36 of the Electricity Act 1989 to the ECU.

2.2 Environmental Impact Assessment

2.2.1 The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017

The Electricity Works (Environmental Impact Assessment (EIA)) (Scotland) Regulations 2017 applies where consent is being sought for developments under Section 36 of the Electricity Act 1989. The EIA has been undertaken to identify the likely significant effects that the Proposed Development could potentially have on the environment. The purpose of the EIAR is to ensure that any effects on the environment are fully understood and are taken into account during the design, consenting and authorisation process. The methods and findings of the EIAR are outlined within this NTS.

2.2.2 Scoping and Consultation

The requirements of the EIA were informed by a Scoping process. A Scoping Report, which was submitted to the ECU in July 2022, considered the potential for environmental effects to occur as a result of the Proposed Development.

The Scoping exercise involved a review of available documentation, consultation with statutory and non-statutory organisations, desk-based and site-based surveys. The ECU issued a Scoping Opinion in October 2022, which included feedback from consultees.

The Scoping process concluded that the following aspects would require further assessment, in the form of an EIA, due to their potential to cause environmental effects:

- landscape and visual amenity;
- ecology;
- ornithology;
- geology, hydrology, hydrogeology and peat;
- cultural heritage and archaeology;
- traffic and transport;
- noise;
- socio-economics, land-use, recreation and tourism;
- aviation;
- climate change mitigation; and
- other issues, including telecommunications and shadow flicker.

Following the Scoping exercise, the Applicant undertook further consultation with key stakeholders. This consultation has been integral to the design and development of the Proposed Development, identification of existing environmental constraints and sensitivities, and identification and assessment of the likely environmental effects of the Proposed Development.

The Applicant also undertook extensive pre-application consultation with local communities, by way of the following:

- informal stakeholder liaison, including meetings and correspondence by letters, emails and by phone;
- The Highland Council (THC) formal pre-application advice service, which involved a discussion of the consenting issues and was attended by key consultees;
- Scoping, which involved the submission of a formal EIA Scoping request to the ECU, and statutory and non-statutory consultees;
- two in-person public exhibitions were hosted within the local community in Dunvegan; and
- a project website.

The consultation activities that were undertaken throughout the EIA process and the outcomes of this engagement are detailed in a standalone Pre-Application Consultation Report (PAC Report), which will be submitted as part of the Section 36 application.

2.2.3 Approach to EIA

As outlined below, an EIA is a systematic process which is undertaken to identify, predict and evaluate the environmental effects of proposed developments.

It should be noted that for the Proposed Development, different technical assessments adopt this same broad approach, but vary in the detail of how they are applied, such as study areas, established guidance or assessment criteria.

2.2.3.1 Existing Environment

Baseline studies including desk-based research and field surveys have been completed in order to collect data relating to the characteristics of the existing environment. This enabled the identification of environmental sensitivities that could be affected by the Proposed Development.

2.2.3.2 Potential Impacts

The characteristics of the Proposed Development, including the project infrastructure, construction, operation and decommissioning activities, and Schedule of Mitigation, have been considered to identify potential impacts on the existing environment.

The following types of impacts have been considered within the EIA:

- direct impacts which may occur when some aspect of a development physically impinges upon a valued resource, for instance the proposed construction of a turbine may result in the loss of ecological habitat, or an archaeological site.
- indirect impacts which could occur in either time, or location, from the source; for instance construction works on a slope could result in heavy rainfall washing exposed soil into a nearby watercourse, which could affect aquatic life.
- cumulative impacts are defined as:
 - impacts that result from changes caused by a proposed development, together with other past, present or future developments; and
 - impact interactions that may arise from a combination of separate impacts on one or a small number of receptors, due to the same proposed development.

2.2.3.3 *Residual Effects*

Following the assessment of identified potential impacts, additional mitigation measures were identified, where necessary, to eliminate, minimise or manage the potential environmental effects.

The significance of residual effects, the environmental effects that remain after mitigation measures have been considered, has been presented in the findings of the EIAR.

Any significant residual effects that the EIA identifies are key to understanding the outcome of the EIA process, because these are given the greatest weight by decision makers and stakeholders when considering an application for consent.

2.3 **Planning and Energy Policy**

The EIAR identified and reviewed national policy guidance and local development plans which are relevant to the location and design of the Proposed Development, to establish overall compliance with policy objectives.

The Proposed Development will be considered under Section 36 of the Electricity Act 1989. As part of the S.36 application process, the Applicant will request that the Scottish Ministers issue a Direction under s.57(2) of the Town and Country Planning (Scotland) Act 1997 ("the 1997 Act") that deemed planning permission be granted for the Proposed Development.

In materially considering the Development Plan, the test to be applied is not the same as in the case of the Town and Country Planning (Scotland) Act 1997 as amended (the 1997 Act). The test, as set out in Section 25 of the 1997 Act against the Development Plan, is not triggered in the case of a Section 36 application. In effect a development being considered under Section 36 of the Electricity Act need not necessarily accord with the Development Plan to be considered acceptable for consent to be granted.

Notwithstanding the role of the Development Plan in the decision making process, a separate Planning Statement assesses the conformity of the Proposed Development with the Development Plan and other material considerations.

National policy identifies a requirement to encourage the use of renewable technologies to tackle the issue of climate change, strengthen the economy and improve energy security. In May 2019, the Scottish Government declared a climate emergency and passed the Climate Change (Emissions Reduction Targets) (Scotland) Act, which legally requires a 100% reduction in CO₂ emissions by 2045.

THC also declared a climate emergency in May 2019 and launched the Carbon CLEVER initiative with a target of a carbon neutral Inverness in a low carbon Highlands by 2025.

The Proposed Development would contribute to national and local emission targets by replacing fossil fuel energy with renewable energy and thereby reducing greenhouse gas emissions.

3 PROJECT DESCRIPTION

3.1 Existing Environment



Above: Photograph of the existing Ben Aketil Wind Farm

The existing Ben Aketil Wind Farm is located north-west of the peak of Ben Aketil within the north western part of the Isle of Skye in the Highland Council area. Access is currently gained via a track running southwards through forestry from the A850 in the north.

The Site sits within undulating upland moorland, gently sloping downwards from northeast to south-west. The elevations of the Site range from 20 m above sea level near the crossing of the A863 over the Caroy River, to the peak of Ben Aketil at 266 m. The Site is approximately 1043 ha in size.

As well as being used for the generation of renewable energy, the Site is currently utilised by crofters, predominantly for sheep grazing. Surrounding land uses include upland grazing, commercial forestry and wind energy generation.

The Site is relatively remote, with the closest residences being crofters' cottages located near, but outside of, the south-western red line boundary along a public road in Upper Feorlig.

The operational Edinbane Wind Farm is within a 15 km distance of the Site, as are the consented Ben Sca, Beinn Mheadhonach and Glen Ullinish Wind Farms.

3.2 The Proposed Development

During the EIA process, the Proposed Development went through a number of design iterations to reduce potential environmental impacts. The alternative design and infrastructure layouts included a variety of potential turbine locations, varying turbine heights, and a number of access route options to and between development infrastructure. **Chapter 2 of Volume 1** (Main Text) of the EIAR includes a detailed description of the design evolution.

The main components of the Proposed Development would comprise the following:

- decommissioning and removal of the twelve existing turbines and related infrastructure including hardstandings and the existing operational control building;
- erection of nine new turbines of approximately 5.6 to 6.6 MW each, with a maximum tip height of 200 m, a rotor diameter of approximately 140 m to 155 m and hub height of approximately 122.5 m;
- hardstanding areas at the base of each turbine;
- approximately 9 km of new track, of which 1.5 km will consist of floating track;
- approximately 2.3 km of upgraded track;
- two substations and associated compounds including parking and welfare facilities;
- an energy storage facility;
- up to six construction compounds;
- two potential borrow pits, to provide suitable rock for access tracks, turbine bases and hardstandings; and
- underground cabling linking the turbines with the substations.

As the blade tip heights of the Proposed Development turbines are greater than 150 m, aviation lighting would be required. The Applicant has proposed a reduced aviation lighting scheme that would result in only the outside turbines (T1, T5, T6 and T9) being lit.

The Applicant is considering two alternative construction phasing options:

- Scenario 1, 18 months: construction of the extension turbines and the construction of the repowering turbines is undertaken at the same time.
- Scenario 2, no more than 5 years: four extension turbines are constructed first, followed by the decommissioning of the existing, operational Ben Aketil Wind Farm, followed by construction of the five repowering turbines.

The shorter construction phase of Scenario 1 may contribute to the mitigation of some of the anticipated environmental impacts on aspects such as ecology, ornithology and hydrology. The main advantages of Scenario 2 would be the continued, uninterrupted contribution of renewable energy to the national grid and therefore, continued, uninterrupted community benefits. As the Applicant is considering both construction scenarios, the EIAR evaluated both possibilities.

The Proposed Development seeks permission to operate for 35 years, after which the it would be decommissioned and the turbines dismantled and removed, unless permission is sought to extend the operational lifespan.

The infrastructure layout of the Proposed Development is illustrated on **Figure 2**.

4 ENVIRONMENTAL IMPACT ASSESSMENT SUMMARY

4.1 Introduction

This section outlines the predicted environmental effects of the Proposed Development. Detailed assessments are included in **Chapters 6 – 16 of Volume 1** (Main Text) of the EIAR.

4.2 Landscape and Visual Assessment

The Landscape and Visual Assessment considers the potential effects of the Proposed Development on landscape character and people who view the landscape. The assessment takes a precautionary approach to investigate the potential effects on the landscape and visual resources of the Site and the surrounding area during construction, operation and decommissioning. The assessment uses extensive field study, Zone of Theoretical Visibility (ZTV) mapping which show where the Proposed Development would be theoretically visible from and visualisations. The assessment focuses on locations where receptors are likely to be affected by the Proposed Development.

4.2.1 Landscape Effects

The Proposed Development is aligned with much of the design guidance for onshore wind farms issued by THC and, when considering the operational and consented wind farms in the area, the Proposed Development would appear as a grouping with Ben Sca and complementary in the landscape to the nearby Edinbane and Glen Ullinish Wind Farms.

The operational effects on the landscape character would be limited by the topography of the surrounding moorland. This would be further mitigated by the extent of wind energy development on the Site and surrounding landscapes, including those operational and consented wind energy developments. As result, no significant effects were reported on landscape character. However, there would be moderate adverse impacts on the three landscape character types (LCTs), including the host, Upland Sloping Moorland LCT, as well as the Stepped Moorland LCT and Farmed and Settled Lowlands – Skye and Lochalsh LCT. Nevertheless, the impact on landscape character would be contained within approximately a 5 km radius of the proposed wind turbines, with impacts reducing further with greater distance and the extent of screening.

Although the proposed turbines would be noticeably larger than those currently operating in the area, this would be less so when considering consented wind farm developments. In this case, the Proposed Development would be more likely to be perceived as part of an evolution of wind energy development throughout Scotland, without causing a significant increase in adverse impacts.

4.2.2 Construction Effects

There would be significant construction effects on the host Upland Sloping Moorland LCT for Scenario 2, but not for Scenario 1. Both scenarios would result in significant

construction visual effects for residents at Upper Feorlig, Feorlig, Caroy, Roag, and road users of the A863 and A850, and recreational users on the Site and surrounding fells.

4.2.3 Visual Effects

During operation, there would be significant visual effects for residents at Upper Feorlig, Feorlig and Caroy and users of the informal recreational routes across the Site. Given the existing and consented wind farms, there would be moderate, but not significant, visual effects for residents at Harlosh, Roag, Dunvegan, Colbost and users of the A863.

There would be limited impacts on visual receptors in the area, partially due to the extent of screening locally, and partially due to the extent of existing and consented wind energy on site and in the immediate area.

4.2.4 Aviation Lighting

A reduced visible aviation lighting scheme was agreed with the Civil Aviation Authority (CAA) and four of the nine turbines would be lit on their nacelles only. The Applicant has committed to further embedded mitigation measures to minimise night-time impacts, including a reduced intensity light in good visibility, directional intensity to limit brightness below the turbines and a timer to ensure the impacts only occur at night. Given the extent of mitigation incorporated into the Proposed Development, no significant visual effects were identified at night.

4.2.5 Designated Landscapes and Wind Land Areas

No significant effects were identified on designated landscapes, including the two National Scenic Areas and the three local landscape designations in the surrounding area. No significant effects were reported on the surrounding Wild Land Areas.

4.2.6 Cumulative Effects

Cumulative impacts which considered existing and consented wind farm development were included in the main assessments. However, there are two proposals at scoping stage which are expected to be submitted alongside the Proposed Development.

Balmeanach Wind Farm would be located c. 1 km east of the Proposed Development and is likely to consist of ten turbines at 149.9 m to tip, adjacent to the operational Edinbane Wind Farm. Due to the location of this proposal, if consented and constructed, it would likely be perceived to join Ben Aketil, Ben Sca and Edinbane together. The Extension and Repowering of Ben Aketil would add onto the end of this combined cluster and would lead to a moderate impact on the Upland Sloping Moorland and Stepped Moorland LCTs which would be raised to significant (greater than in the main LVIA).

Although there would be combined views of Balmeanach and the Proposed Development for visual receptors along the coast and transport routes, the nature of the cumulative effect would be to increase the density of turbines visible, but not add a new occurrence. Therefore, the magnitude of change for the Proposed Development would remain the same as reported for the main LVIA.

Regarding the replacement scheme for Beinn Mheadhonach Wind Farm, this proposal is to increase the number of turbines from four turbines at 120 m to tip to five turbines at 150 m to tip in a similar location, but with wider spacing. This proposal would be over 10 km to the south-east of the Proposed Development and given the separation distance

and differing local influence of these two proposals and no additional significant effects would be predicted.

4.3 Ecology

The Ecology chapter (**Chapter 7**) of the EIAR considers the potential for significant effects on important ecological features as a result of the construction, operation and decommissioning of the Proposed Development.

The assessment is based on comprehensive baseline data informed by ecological field studies of important and legally protected ecological features. Ecology surveys consisted of Phase 1 habitat surveys, National Vegetation Classification (NVC) surveys, protected terrestrial mammal surveys, bat surveys and fish habitat surveys. A desk-study also informed the baseline data collection, as well as standard Ecological Impact Assessment (EclA) guidance published by NatureScot and the Chartered Institute of Ecology and Environmental Management (CIEEM).

Site surveys found that the area supported extensive areas blanket and wet modified bog (Annex 1 habitat). Surveys also found habitat at the Site that supports protected mammals (otter); however, it has limited optimal fish habitat and has a bat species assemblage of 'Low/Medium Site Risk'. Habitat surveys also found evidence of roe and red deer, which were sighted on-site at the time.

Mitigation measures have been embedded in the Proposed Development and, therefore, they were considered in the assessment of ecological effects. As well as mitigation by design, mitigation includes good practice measures, such as a Construction Environment Management Plan (CEMP), pre-clearance and -construction surveys, species protection plans (SPP), a Habitat Management Plan (HMP) and the appointment of an environmental manager. An environmental manager would oversee the implementation of the ecology mitigation measures and assist with the habitat enhancement opportunities detailed in an outline habitat management plan.

Considering the measures embedded into the Proposed Development, no significant adverse direct and/or indirect effects on ecological features are assessed. However, significant benefits are expected to be delivered as a result of the Habitat Management Plan.

4.4 Ornithology

Baseline ornithological conditions to inform the design and assessment of the Proposed Development have been established through desk studies, ornithological field surveys and consultation with stakeholders and specialist recording groups.

The Site is not part of any statutory designated site for nature conservation with ornithological qualifying interests and is sufficiently spatially separated from any such site, which prevents the potential for connectivity and significant effects.

Desk studies and field surveys have established the Site and adjacent habitats are used by foraging raptors including golden eagle, white-tailed eagle and hen harrier, as well as a small number of breeding wader territories.

Collision mortality risks have been estimated for golden eagle, white-tailed eagle and snipe using the NatureScot Collision Risk Model (CRM).

Collision mortality risks for golden eagle are, however, considered to be substantial over-estimation, on the basis of evidence of strong displacement effects of wind farms upon the species. Therefore, the potential displacement effects upon golden eagles are further assessed using the Golden Eagle Topographical (GET) Model, which concludes the absence of potentially significant displacement effects.

Embedded mitigation and pre-construction checks (as directed by an appointed suitably qualified and experienced ecological or environmental manager) would enable the protection of breeding birds during construction works associated with the Proposed Development. Mitigation measures are also outlined to reduce the attractiveness of the wind farm to scavenging species, including white-tailed eagle, through the regular removal of carrion.

The Proposed Development also provides an opportunity to deliver notable habitat restoration and connectivity improvements for bird species within the Site and away from operational infrastructure, including peatland restoration and native woodland planting which is detailed in a Habitat Management Plan (HMP) and would benefit the baseline breeding birds within the Site.

No significant residual effects upon any important ornithological feature are therefore predicted to occur as a result of the Proposed Development alone or in combination with any other wind farm development.

The Proposed Development would include for a post-construction operational monitoring strategy, to be agreed in consultation with THC, NatureScot and additional stakeholders.

4.5 Geology, Hydrology, Hydrogeology and Peat

The Proposed Development has been assessed in relation to the potential impacts on geology, hydrogeology, hydrology and peat during the construction, operation and decommissioning phases, including required works to decommission the existing wind farm infrastructure. Information on the Study Area was compiled using data gathered within a desk study and verified by an extensive programme of fieldwork. The assessment was undertaken through consideration of the sensitivity of receptors identified during the baseline study, the potential magnitude of effect and the likelihood of that effect occurring, and taking into consideration any mitigation measures incorporated as part of the Proposed Development design.

A detailed programme of peat depth and condition surveying has been completed and the results used to inform the Site design. A Peat Slide Risk Assessment and Peat Management Plan have been produced for the Proposed Development, which show that areas of deep peat can be avoided and peat resources can be safeguarded.

The Proposed Development lies outwith any floodplain areas and, although a number of private water supplies are located nearby, no potential for interaction with proposed works has been identified with any supply. No sites designated for reasons associated with geology or hydrology have potential to be affected by the Proposed Development. Sustainable Drainage Systems (SuDS) have been proposed to ensure that the rate of runoff from the Site post-development is no greater than that prior to development and

would not therefore increase any downstream flood risk. The proposed SuDS allow the quality of water to be managed at source, prior to any discharge, thereby helping to prevent any reduction in water quality downstream.

Potentially groundwater-dependent terrestrial ecosystems have been identified within the Application Boundary and assessed on a case-by-case basis to determine their level of groundwater dependency and potential impacts from development. Location-specific mitigation measures are provided to manage potential impacts arising from construction activities where it has not been possible to avoid these areas.

Mitigation measures have been identified for all potential impacts, either through the design process or in accordance with good practice guidance. It has been shown, as a consequence of the Proposed Development design and embedded mitigation, that no significant impacts on geology, hydrogeology, hydrology and peat would arise as a result of the Proposed Development.

4.6 Archaeology and Cultural Heritage

The Archaeology and Cultural Heritage chapter (**Chapter 10**) of the EIAR considers the likely effects on cultural heritage interests arising from the Proposed Development. The assessment was designed to identify and evaluate potential direct impacts on any cultural heritage assets present within an Inner Study Area covering the Developable Area through the examination of desk-based resources and a Site visit, and to identify and evaluate impacts on the settings of heritage assets within an Outer Study Area extending to 10 km around the Proposed Development Site.

The baseline assessment has established that there are 26 known heritage assets within the Site largely related to post medieval agrarian activity. These assets have mostly been avoided by the design of the wind farm layout, where a direct effect is predicted on an area of relict cultivation (archaeological evidence of ploughing) and mitigation has been proposed that would address this.

Taking account of the current land-use and historic landscape character of the Site and its surroundings, it is assessed there is a low to moderate potential for further archaeological discoveries within the Site. Mitigation measures are proposed to address the possibility of direct effects on buried archaeological remains.

The assessment has considered the effect of the Proposed Development on the settings of heritage assets in the wider landscape. All impacts, affecting the settings of heritage assets in the surrounding landscape, would give rise to effects that are either of minor or negligible significance (not significant in EIA terms).

The effect of the Proposed Development in combination with other developments in the surrounding area has been considered. It is assessed that no significant cumulative effects on any heritage assets would arise.

4.7 Traffic and Transport

The Traffic and Transport chapter assesses the potential effects of the Proposed Development on the road network (in transport terms) and its users. The assessment detailed within **Chapter 11** of the EIAR includes worst-case assumptions made for the

purpose of forming a robust assessment of the Proposed Development within the parameters identified elsewhere within the EIAR, as well as a more realistic scenario.

A desk-based review of the impacts arising from the construction of the Proposed Development was undertaken, including the following:

- collection and analysis of available road traffic accident data over the Study Area;
- using a preliminary construction programme, quantifying construction phase trips based on the quantity of material required for the Proposed Development (including generation as a result of potential forestry removal, commercial or otherwise) and the duration of each specific construction phase activity;
- determination of a traffic baseline, taking account of measured existing traffic flow and other developments that have been identified for inclusion within the cumulative assessment; and
- quantification of the relative increases in traffic resulting from the construction phase of the Proposed Development.

At the request of THC during Scoping, the use of the threshold value for significance of 10%, rather than the 30% for the traffic and transport issues has been used for roads where THC is the Local Road Authority (LRA) (i.e., A863 and A850).

In summary, total traffic levels are within the IEMA thresholds of a 10% increase to traffic volumes, except along the A850 between the A87 and B836, and sections of the A863 between Sligachan and the Southern Site Access.

Along parts of the A87 and A850 between Sligachan and the Northern Site Access, as well as sections of the A863 between Sligachan and the Southern Site Access, the maximum and average daily increases in Heavy Goods Vehicle (HGV) trip generation are Significant, in terms of the EIA regulations. This is because current HGV traffic along these routes only makes up a small proportion of the recorded traffic flows for these sections of the local highway network.

The impact of construction has been assessed for the following receptors:

- driver severance and delay;
- community severance and delay;
- noise;
- road safety;
- vulnerable road users; and
- wider disruption due to dangerous loads and dust and dirt.

An assessment of the cumulative effect of all relevant developments, including local wind farms (either in planning system or under construction) which may utilise the same access routes as the Proposed Development, has also been undertaken.

Given the temporary nature of the construction programmes and with the implementation of mitigation measures through a Construction Traffic Management Plan (CTMP) and Abnormal Load Traffic Management Plan (ATMP), all traffic and transport effects (including cumulative) can be effectively managed and are assessed to be minor or negligible. No significant residual effects would remain after mitigation measures have been implemented.

4.8 Noise

The noise that would be associated with the construction and operation of the Proposed Development has been assessed in line with national guidelines and current good practice, and in consultation with the Highland Council. Construction noise arises from vehicles accessing the Site and the construction of the key components and infrastructure. Operational noise arises from the operation of the Proposed Development including potential noise from the wind turbines as they rotate to generate power, the substation, and the battery energy storage facility. The significance of the noise impact depends on the relative levels arising from each element of the Proposed Development, the duration of the noise exposure (i.e., noise from construction activities is permitted to be higher than operational noise due to the short term nature of the impact), and the existing baseline noise levels.

Construction noise impacts were largely scoped out of detailed assessment, as the relevant noise limits referred to in relevant guidance (BS 5228-1:2009+A1:2014, Code of Practice for Noise and Vibration Control on Construction and Open Sites²) would be met at noise sensitive receptor locations in the vicinity of the Proposed Development. There may be temporary impacts associated with construction traffic accessing the Site which have been considered in the assessment. The overall construction noise impact is determined to be not significant. Noise during both construction phase scenarios would be controlled and minimised, as much as possible, by a Construction Environmental Management Plan which would be prepared in advance of construction.

Operational noise impacts have been assessed in line with ETSU-R-97, *The Assessment and Rating of Noise from Wind Farms*, and the associated guidance provided by the Institute of Acoustics (IOA) document, *A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise*³. Predicted operational noise levels have been compared with relevant noise limits for the Proposed Development, acting in isolation and in combination with other consented wind farms in the vicinity. Operational noise levels from the Site, operating alone and in conjunction with other wind farms, meet the relevant noise limits discussed and agreed with the Highland Council, and therefore, operational wind farm noise effects are determined to be not significant.

The potential noise impact associated with the substations and battery energy storage facility has been reviewed with reference to BS 4142:2014+A1:2019, *Methods for rating and assessing industrial and commercial sound*. Separation distances between the substations and battery storage facility and the nearest noise sensitive receptor are over 3 km, such that operational noise from these aspects would not be audible at noise sensitive receptors. Therefore, the noise impact is considered to be not significant.

4.9 Socioeconomic, Land Use, Recreation and Tourism

An assessment of the potential socio-economic effects of the Proposed Development and the likely significance of these on tourism, recreation, land use economic output, employment generation and other indirect effects was undertaken.

² UK Government (2002). British Standard 5228-1:2009+A1:2014. Code of Practice for Noise and Vibration Control on Construction and Open Sites.

³ Institute of Acoustics (2013). A Good Practice Guide to the Application of ETSU-R-97 for the Assessment and Rating of Wind Turbine Noise.

Based on the installed capacity, the assessment of the Proposed Development's socio-economic impact found that:

- the development expenditure during the construction phase would be approximately £97.2 million and approximately £2.5 million of this would be spent in Skye's local economy. £10.3 million would be spent in the Highland economy and approximately £24.3 million in Scotland as a whole.
- for construction Scenario 1, the Proposed Development would directly and indirectly support approximately 30 jobs in Skye, 119 jobs in The Highlands and 296 jobs nationally. Over the construction phase, the local economy would be boosted by a total of £2 million (net Gross Value Added – GVA), with the Highland economy boosted by £9.1 million and Scotland as a whole £20.5 million.
- for Scenario 2, the Proposed Development is expected to support, directly and indirectly, 40 jobs in Skye, 159 jobs in The Highlands and 395 jobs in Scotland as a whole. The local economy would be boosted by £2.7 million net GVA, the Highlands economy by £12.1 million and the Scottish economy as a whole by £27.3 million.
- the development expenditure during the operational phase is estimated to be approximately £3.6 million per annum. It is estimated that £0.2 million would be spent each year in the local economy, with £1.5 million per year in the Highlands and £2.1 million in Scotland as a whole.
- during operation, the Proposed Development is expected to directly and indirectly support 48 jobs in Skye, 429 jobs in the Highlands and 596 jobs in Scotland. The local economy would be boosted by £3.2 million of net GVA, the highlands would benefit by £28.4 million net GVA and the Scottish economy would benefit by £41.2 million net GVA.
- based on a total installed capacity of around 59.4 MW, the total community funding would be around £297,000 per year, which would equate to £10.4 million for a 35-year lifetime.

Overall, the Proposed Development is expected to have an overall beneficial (not significant) economic effect and no significant adverse effects on recreation, tourism and land use are predicted.

4.10 Aviation

The requirement is for the Proposed Development to have no significant residual impacts on aviation infrastructure. This has been addressed through consultation with all relevant stakeholders within the consenting process, together with detailed dialogue to agree appropriate mitigation.

An initial scoping assessment identified those stakeholders potentially affected by the Proposed Development. The assessment process involves considering all military and civil aerodromes in the wider area out to approximately 60 km; all radar installations out to the limit of their range; all navigational aids; air-ground-air communications stations and low flying activities.

There are no significant aviation impacts during construction or decommissioning, beyond the usual lighting of the cranes and notification of their use, as tall structures. The primary consideration in terms of effects and mitigation, arises from the operational phase of the development. Scoping responses identified two effects requiring management. These are the predicted impacts to the National Air Traffic Control Services (NATS) Tiree En-route radar and the requirement for aviation obstacle lighting.

The Applicant has engaged with NATS, to explore mitigation options with a view to contracting mitigation to allow NATS to approve the application, conditional upon the implementation of a radar mitigation scheme. Dialogue was ongoing at the time of submission.

Night time lighting is required under the legislation of the Air Navigation Order (ANO) and as a requirement of the Ministry of Defence (MOD) to mitigate night time low flying collision risk. As a result of the sensitivity of the area to light pollution, it is considered appropriate to implement a reduced lighting scheme, with only four turbines being lit.

The effects on low flying and the NATS radar would be mitigated. There would be no residual impacts and no cumulative impacts.

4.11 Telecommunications

Radio waves and microwaves are used in a variety of communications. Structures such as wind turbines have potential to interfere with their reception. As part of the EIA process, consultation was undertaken with bodies that are responsible for managing and maintaining telecommunications networks and buried infrastructure.

Several telecommunications links cross the Site; therefore, to mitigate against impacting the links and considering consultation responses received at Scoping, the Site layout was amended. The design change included the removal of one turbine and the micro-siting (small movement) of another to eliminate the potential impact on a broadcasting link and radio network.

One Joint Radio Company (JRC) ultra-high frequency (UHF) link, operated by SSE to enable the existing turbines at Ben Aketil to be operated remotely, could not be avoided by design. To mitigate potential effects on JRC's link and continue to allow the existing Ben Aketil Wind Farm to be operated remotely, the Applicant replaced the UHF link with a satellite uplink. Therefore, no effects on telecommunications are predicted.

4.12 Shadow Flicker

Shadow flicker can occur under certain combinations of geographical position and time of day when the sun passes behind the rotors of a wind turbine, casting a shadow over neighbouring properties. Rotating wind turbine blades can cause brightness levels to vary periodically at locations where they obstruct the sun's rays. As the blades rotate, the shadow flicks on and off, an effect known as shadow flicker.

To undertake a shadow flicker assessment, information on the Proposed Development, the location of potential residential receptors and other parameters are included in a computer model in order to predict and quantify the impact shadow flicker may have on receptors within the vicinity of the Proposed Development. In line with THC guidelines on shadow flicker assessments, 11 rotor diameters (c. 1.7 km) from each proposed wind turbine has been established as the shadow flicker Study Area. The assessment identified that no residential dwellings fall within the shadow flicker Study Area. This is confirmed by **Figure 16.2** of the EIA which illustrates the shadow flicker Study Area, therefore, no shadow flicker impact or effect on any residential receptors is predicted.

4.13 Climate Change

In addition to the value that wind farms provide in terms of the renewable electricity they generate; they also provide an important mechanism for the reduction of carbon dioxide (CO₂) and other greenhouse gases into the atmosphere.

Operational wind farms achieve emissions savings by reducing the consumption of fossil fuel generated mains electricity. However, during their manufacture, construction and decommissioning, wind farms can result in the emission of greenhouse gases, particularly in such instances as where natural carbon stores such as forestry and/or peat are present and potentially impacted by the development.

The Scottish Government has prepared a carbon assessment tool for wind farms to help ensure such cases are avoided and this assessment tool has been applied to the Proposed Development.

The Proposed Development has been carefully designed to minimise disturbance of areas of peat to make way for turbines and infrastructure delivery and construction. As such, the carbon calculator confirms that the largest source of carbon emissions associated with the Proposed Development would stem from the manufacture, construction and decommissioning of turbines (53,511 tonnes of CO₂e), with total emissions, due to the Proposed Development estimated at 60,838 tonnes of CO₂e.

Once operating, the Proposed Development is predicted to save around 94,411 tonnes CO₂e per annum, compared against fossil-fuel mix electricity generation. Under this scenario construction phase carbon emissions would be offset within 0.6 years. A total carbon saving of around 3,243,547 tonnes of CO₂e is predicted over the lifetime of the wind farm (35 years), which is considered to be a significant positive effect.

4.14 Scoped Out

The following environmental factors have been scoped out of the EIA because of the limited potential for environmental effects to arise:

- *Air quality:* The main source of impact on air quality would be increased traffic flows on local roads during construction and emissions from construction activities. It is considered that air emissions associated with these activities would be transient and localised, and highly unlikely to have a significant effect on local air quality. Best practice measures would be applied to construction, forming an integral part of the Environmental Management Plan (EMP). There would be no emissions to air during operation.
- *Vulnerability of the Proposed Development to risks of major accidents and/or disasters (including climate change):* None of the following climate trends would affect the Proposed Development: increased temperature, changes in the frequency, intensity and distribution of rainfall events, increased windstorms and sea level rise. Braking mechanisms on turbines allow them only to be operated under specific wind speeds and, given the elevated location of the Site, flooding would not pose a significant risk. Furthermore, the Proposed Development would not contribute to flooding elsewhere.
- *Forestry:* The existing northern access track passes through commercial forestry. As this track will not require upgrading, forestry assessment in this area was scoped out. The only forestry which might be affected is present within the footprint of a contingency borrow pit (borrow pit 2) which may not be required if sufficient stone is extracted from the main borrow pit (borrow pit 1). Should borrow



pit 2 be required, the applicable stakeholders and consultees will be consulted and compensatory planting would be undertaken for any trees that may need to be felled. Due to the lack of potentially significant effects on forestry, this topic was scoped out of the EIA.

5 NEXT STEPS

The Scottish Government ECU will consider the findings of the EIA, of which this NTS forms a part, together with other documents submitted as part of the Section 36 application for the Proposed Development. Once the application has been submitted comments can be made to the Energy Consents Unit – see details below.

If Scottish Ministers were to grant consent for the Proposed Development, then it is envisaged that construction of the Proposed Development could begin in 2025.

5.1 Contact Details

Representations, expressions of support or opposition, and opinions on the Proposed Development should be sent to:

Energy Consents Unit
4th Floor, 5 Atlantic Quay
150 Broomielaw
Glasgow
G2 8LU

Email: representations@gov.scot

Website: www.energyconsents.scot/Register.aspx

5.2 Further Information

Further information can be found on The Repowered and Extended Ben Aketil Wind Farm project website at: <http://benaketilwindfarm.co.uk>

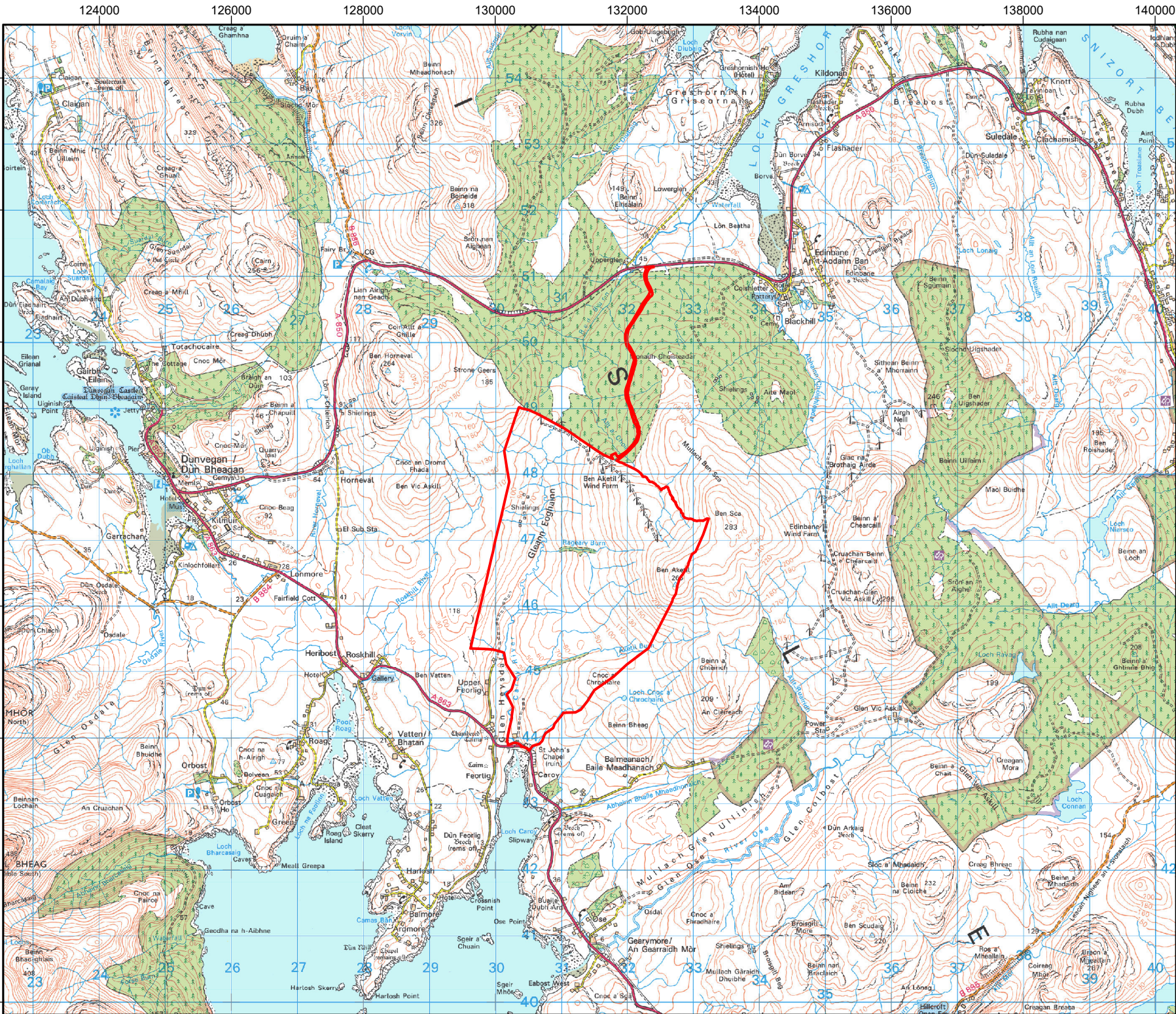
5.2.1 Should you wish to request any further information, please contact via the webform: <https://benaketilwindfarm.co.uk/contact/> or write to:

Ben Aketil Wind Farm Extension
c/o JMC Communications
32A Union Road
Inverness
IV2 3JY

6 FIGURES

Figure 1: Site Location

Figure 2: Proposed Site Layout



Legend:

The Site

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Ben Aketil Wind Farm

RSK

Renantis

Renewables

TITLE: Figure 1:
Site Location

09/05/2023

First Draft

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Date	Description	Drm	Chk	App
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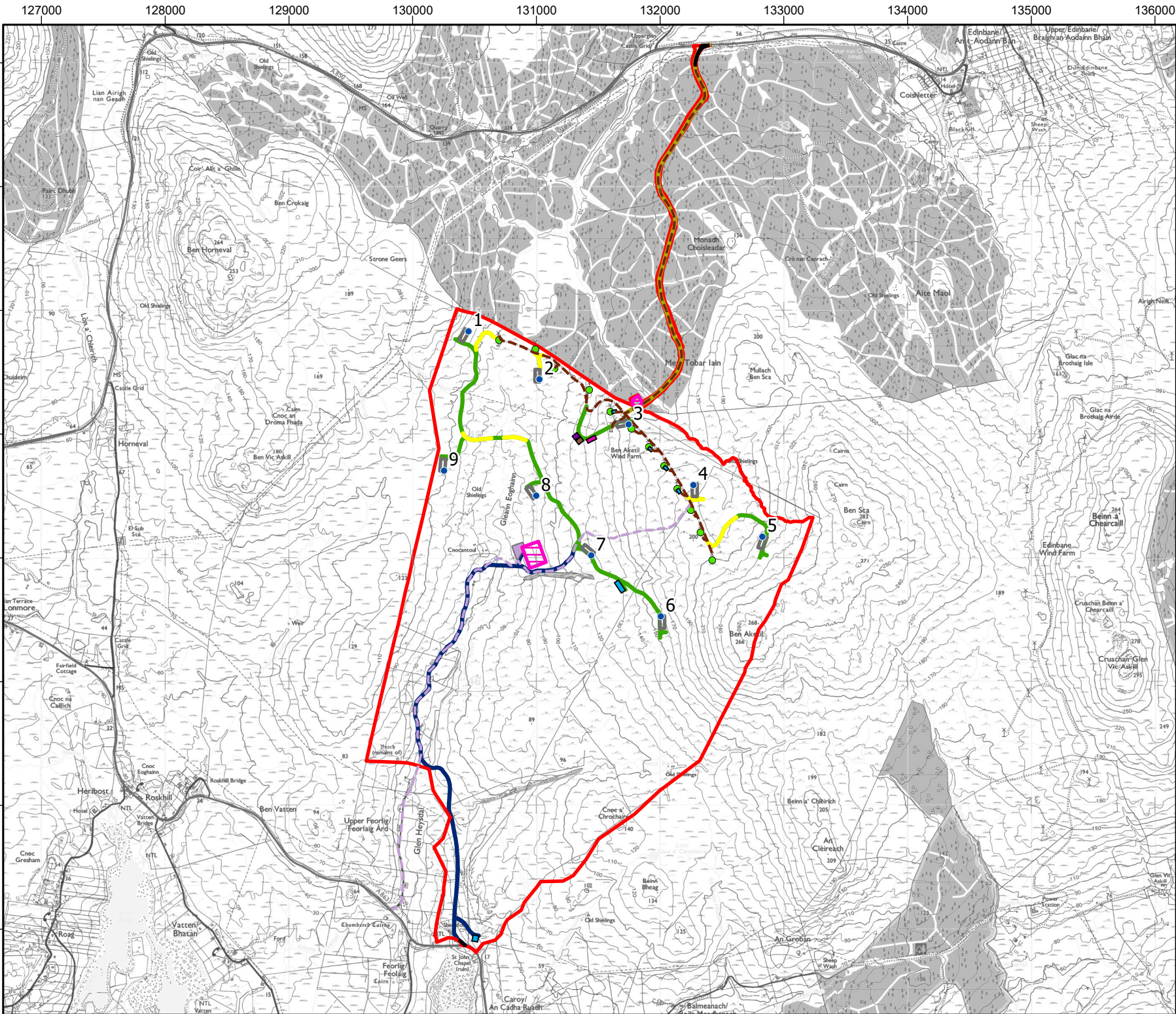
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Legend:

- The Site
- Proposed New Turbine Locations
- Existing Turbine Layout
- Hardstanding
- Existing Access Track
- Existing Crofters' Track
- Bell mouth junction modification
- Floating Access Track
- Wind Farm Access Track
- Northern Access Track
- Southern Access Track
- Construction Compound
- Substation and Compound Area (Repower)
- Substation and Compound Area (Extension)
- Borrow Pit
- Storage Bund
- Battery storage

Coordinate System: British National Grid
Projection: Transverse Mercator
Datum: OSGB 1936
Units: Meter

Ben Aketil Wind Farm

RSK Renantis Folk Renewables

TITLE: Figure 2: Site Layout

09/05/2023 First Draft DL DB DB

Date	Description	Drm	Chk	App

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