Coille Linne Wind Farm

Design and Access Statement

May 2025

EnergieKontor

CONTENTS

1 INTRODUCTION

Context

1.1 This Design and Access Statement has been prepared by Energiekontor UK Ltd ("the Applicant") to accompany an application under Section 36 of The Electricity Act 1989 (Section 36 Application) to Scottish Ministers for a wind farm consisting of up to 15 wind turbines and associated infrastructure ("the Proposed Development") located approximately 21.9km north of Lairg and 16km south-east of Altnaharra.

1.2 This Design and Access Statement explains the design rationale behind the layout, providing an explanation of the design principles and concepts that have informed the Proposed Development (as described in Chapter 3 of the Environmental Impact Assessment Report (EIAR)) and how transport and access issues have been taken into consideration.

The Applicant

1.3 Energiekontor UK Ltd (EK) is a renewable energy development company with offices in Glasgow, Edinburgh and Leeds. The company was formed in 1999 and develops small to medium-sized onshore wind farm and solar farms throughout the United Kingdom. The company operates seven existing wind farms in the UK and also has a number of other wind and solar projects at various stages of the development process throughout the UK.

1.4 EK is part of the Energiekontor Group. The parent company, Energiekontor AG, was established in 1990 in Bremerhaven in Northern Germany. It has since grown to become one of the leading wind energy companies in Europe, having built more than 118 wind farms in Europe.

Methodology

1.5 Design and Access Statements are not a statutory requirement for Section 36 applications, however, are seen as positive tools to assist understanding of the Design Evolution.

1.6 The process involved in formulating the design of the Proposed Development has been led by a combination of environmental design and engineering requirements. The aim has been to arrive at an appropriate layout in terms of energy yield whilst seeking to avoid or reduce environmental effects.

1.7 The EIA process also provides opportunities for positive design, rather than merely seeking to avoid adverse environmental effects. The Design and Access Statement is seen as having an important role in contributing to the design process through the clear documentation of design evolution. Wind farms are a sustainable form of development, and the potential environmental effects are usually associated with the construction period and the temporary effects during the operational period of wind turbines on landscape and visual amenity. The Proposed Development has therefore been developed with environmental considerations at the forefront of both site selection and site design.

The Application

1.8 The Coille Linne Wind Farm application is submitted in full and in addition to this Design and Access Statement is accompanied by the following documents which should be read together:

- EIAR Volume 1: Main Text;
- EIAR Volume 2: Figures
- EIAR Volume 3 : NatureScot Visualisations
- EIAR Volume 4: Technical Appendices
- EIAR Volume 5: The Highland Council Visualisations
- Environmental Impact Assessment Report Non-Technical Summary
- Pre-Application Consultation Report
- Planning Statement

2 SITE SELECTION

Introduction

2.1 This section of the Design and Access Statement describes the Site and the surrounding area before setting out the approach to site selection.

The Site

2.2 Spanning across approximately *661.8* hectares, the site is situated within the Caithness and Sutherland area in the Highlands, within an area of active commercial coniferous forestry. The site around 21.9km north of Lairg and 16km south-east of Altnaharra and lies within the administrative boundary of the Highland Council.

2.3 The topography of the site reaches a high point of 285m Above Ordnance Datum (AOD) at the summit of Meall Odhar in the northwest of the site.

2.4 There are no main settlements within 15km of the Site boundary and residences are limited to scattered properties clustered along the A838 with the closest property lying approximately 3km from the nearest proposed turbine.

2.5 There are a number of unnamed watercourses across the site which run in a generally easterly direction and drain into River Fiag. Continuing south, the River Fiag then drains into Loch Shin which lies approximately 1.2km from the Site boundary.

2.6 Strath Duchally Site of Special Scientific Interest (SSSI) and the Caithness and Sutherland Peatlands SAC, SPA and RAMSAR designations lie within the north-western section of the Site boundary. The SSSI, SAC and SPA designations are notified for the nationally important blanket bog habitat and breeding populations of dunlin, golden plover and greenshank. The Flow Country UNESCO World Heritage Site, inscribed in July 2024, is also within the boundary of the Caithness and Sutherland Peatlands designation. The area was nominated based the '*outstanding example of a blanket bog ecosystem*' and '*providing a globally significant natural habitat for an internationally important assemblage of specialist biodiversity*'[1].

2.7 The site will be accessed from the A838 which lies immediately to the south of the Site. The A838 is a major road in Sutherland, generally running northwest from the A836 in the Lairg Area at Laxford Bridge on the west coast of Scotland.

[1] https://whc.unesco.org/en/list/1722/documents/

2.8 Site Selection Criteria

2.9 The overall approach to wind farm site selection is to identify areas of land where the siting of a wind farm would result in minimal environmental effects, be free from overriding technical constraint and be viable on an economic basis. The criteria involved in the selection of Acheilidh Wind Farm were based on:

- A review of the planning context for renewables in Scotland and at the local authority level;
- Geographical Information System (GIS) constraints mapping;
- Analysis of wind speed data;
- Site access and transportation

2.10 These are discussed further below.

2.11 *GIS Constraints Mapping*

2.12 A Geographical Information System (GIS) "sieve mapping" exercise was carried out as part of the site selection process. This involved identifying and mapping constraints to wind farm development in order to identify potential sites. The various constraints considered as part of the site selection exercise for the Proposed Development included but were not limited to:

- Hydrological, geological, and hydrogeological constraints including effects on groundwater, water resources and local geology;
- Landscape designations including National Parks and Special Landscape Areas;
- Ecological designations including Ramsar sites, Special Protection Areas, Special Areas of Conservation and Sites of Special Scientific Interest;
- Cultural heritage designations – including Gardens and Designated Landscapes, Registered Battlefields, World Heritage Sites, Listed Buildings, Properties in Care, Conservation Areas, and Scheduled Monuments
- Aviation interests including local licensed aerodromes and visibility to radars, both military and civilian.
- The pattern of settlements; and
- Existing, approved, or proposed wind farms.

2.13 *Review of Planning Context*

2.14 Information on the planning context for renewables in the local planning authority of The Highland Council was reviewed as part of the site search exercise, which is set out fully in Chapter 5: Renewable Energy and Planning Policy and the Planning Statement which accompanies the application. Planning policy considerations include:

- National Planning Framework 4 (2023)
- Highland-wide Local Development Plan (HwLDP)(2012)
- Caithness and Sutherland LDP (2018)
- Onshore Wind Energy: Supplementary Guidance (2016) with addendum ((2017)

2.15 *Wind Speed Data*

2.16 The predicted wind resource in any given location is an important consideration in identifying potentially suitable wind farm sites. The electricity that can be generated by a wind farm is directly affected by the wind speed. Wind speed increases with height above ground level and the amount of electricity generated increases disproportionately with increases in wind speed. This in turn affects the carbon emission savings and the commercial viability of a site.

2.17 The information on unconstrained areas from the GIS sieve mapping exercise was therefore compared with data on wind speed to identify suitable locations for wind farm development. This was done using the then Department of Trade and Industry (DTI) wind speed database NOABL which provides annual mean wind speeds on a kilometre grid square basis.

Access Suitability

2.18 An assessment is required to ensure that appropriate access to a potential wind farm site is available for the transportation of wind turbine components. Further information on access can be found in section 5 of this Design and Access Statement.

Selection of Coille Linne Wind Farm

2.19 The information from the sieve mapping exercise was combined with relevant planning policy and wind speed data to identify suitable areas within the study area for potential wind turbine development. From the various land areas identified, Coille Linne Wind Farm was selected due to a number of factors, including:

- **Energy capture** – software modelling indicates that the Site offers a strong wind resource with few obstacles or

areas of pronounced topography close enough to interrupt wind flow.

- **Environmental designations** – the Strath SSSI and the Caithness & Sutherland SAC, SPA and RAMSAR designations lie partially within the Site Boundary however through careful siting and design, a sufficient distance from this designation has been maintained.
- **Residential separation distances** – the Site is able to provide separation distances of approximately 3km from the nearest residential property while having potential for a high installed capacity.
- **Landscape** – There are no landscape designations covering the Site. The Assynt – Coignach NSA is located approximately 9.5km west of the Site. This was recognised through the scoping process as the only NSA within 45km requiring further analysis and assessment. Efforts have been made throughout the design process to minimise visual effects of the proposed development from the NSA.
- **Transport infrastructure** – the Site benefits from suitable access for turbine component delivery.

3 DESIGN INFLUENCES

Introduction

3.1 Once a site has been selected, the design of the wind farm is optimised in order to produce a layout which maximises the use of land available for power generation, balancing this against the overall environmental, social, and economic effects of the development. Optimising the layout of a wind farm in this way depends on a range of technical, economic, planning, and environmental criteria.

Design Criteria

3.2 Technical requirements and constraints are parameters that can physically constrain wind farm design. For the Proposed Development these have included:

- **Energy capture** – the NOABL database indicates that the Site has a favourable wind resource.
- **Land availability** – as agreed with the landowner, the land available for the wind farm.

3.3 In addition to the technical requirements and constraints, a range of environmental considerations have also had an influence on the design of the wind farm. These include:

- **Landscape and visual** – the design of the Proposed Development seeks to match the scale of the turbines and the scale of the overall development with the scale of the landscape. Computer modelling was used as a tool to aid design and 3D model/wireframes were generated for views from key design views around the Site.
- **Ecology** – the layout takes account of the ecological interests of the Site and the surrounding area.
- **Archaeology** – all known on-site archaeological features have been plotted, assessed and avoided as far as possible.
- **Residential properties** – a minimum separation distance from residential properties of 1.2km was included in the design.
- **Deep peat** – turbine positions have been located to avoid areas of deep peat (>0.5m) present on the Site.
- **Hydrology** – all watercourses within the Site have been considered in the design, with appropriate buffers from all infrastructure provided in the design to safeguard the hydrogeology of the area.

3.4 In addition to the above considerations, planning guidance and discussions with statutory and non-statutory consultees and the local community have also had an influence over the evolution of the design. Views from the tenanted crofters have been taken into consideration when developing infrastructure design and turbine placement to ensure the proposed development is in keeping with existing land use and crofting activities.

Planning History

3.5 The EIA studies commenced at an early stage in the evolution of the proposed development, with the scoping process commencing in June 2024. These studies defined the environmental sensitivities, and constraints associated with the Proposed Development, the Site, and its surroundings.

3.6 There is no planning history of wind farm applications on this Site.

Design Guidance

3.7 The inherent nature of wind turbines as tall, modern structures means that the form of the wind farm as a whole is important. The appearance of the wind farm as an object or composition in the landscape has been a key factor in generating the layout. In this respect the design evolution has taken account of the following guidance:

- Siting and Designing Wind Farms in the Landscape, SNH (2014);
- Onshore Wind Energy Supplementary Guidance, The Highland Council (2016); and
- Spatial Framework for Onshore Wind Energy, August 2016 - Caithness and Sutherland LDP Area.

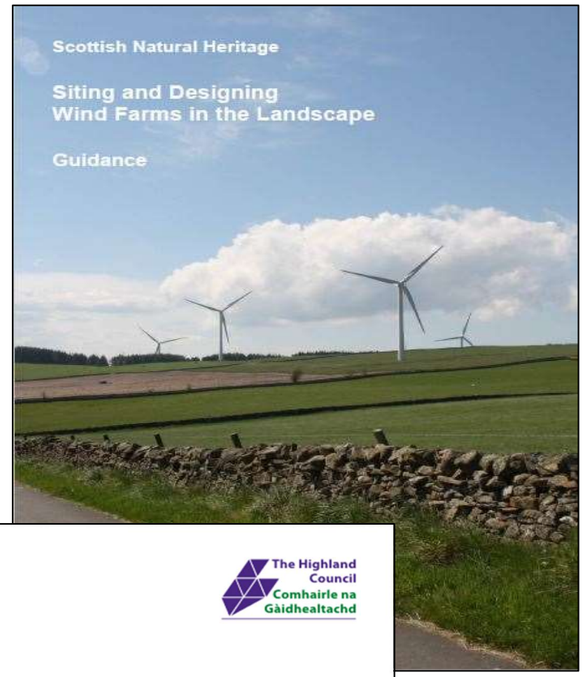
Design Consultation

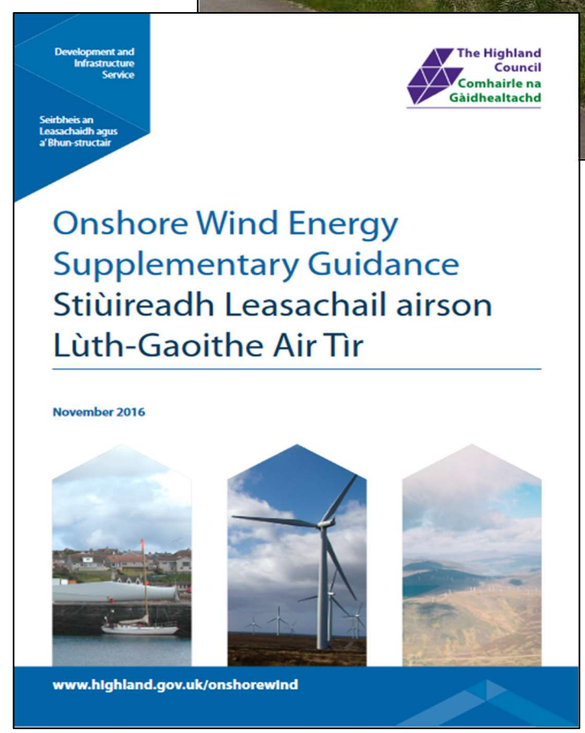
3.8 The Applicant has undertaken a programme of consultation prior to the submission of this planning application, which is detailed within the Pre-Application Consultation Report.

3.9 A Scoping Report was submitted in June 2024 for a wind farm layout of up to 22 turbines up to 230m with subsequent public exhibitions held in August 2024 and January 2025 to introduce the proposals to the public.

3.10 Consultation with a range of stakeholders has also been ongoing since the submission of the pre-application enquiry and these have been documented within each of the assessment areas as detailed in Volume 1 of the EIA Report.

3.11 This process of consultation has identified a number of potential design constraints which the Applicant has subsequently sought to address as part of the EIA and design process. Further details are set out in the various stages of the design iterations below and relevant chapters of the EIA Report.





4 DESIGN EVOLUTION

Introduction

4.1 The wind farm layout in its proposed form takes account of stakeholder feedback received during pre-application discussions as well as environmental and technical constraints identified throughout the site selection and iterative design process. In designing a layout which is simple in composition and restrained in size, the final design results in a development which takes into account the constraints associated with the site and is sympathetic to its local and wider setting.

4.2 The overall design layout principle of the Proposed Development has been to achieve a coherent and compact design, which minimises direct and indirect adverse effects on the local and wider landscape, whilst balancing commercial considerations and maximising energy production.

Constraints Mapping

4.3 The starting point for the design of a wind farm is the preparation of a detailed constraints map which sets out all relevant buffer distances, key features and other factors that may constrain the location of wind turbines,

4.4 The process of EIA plays an important role in this as it enables all the technical constraints to be identified which could restrict the location of wind turbines. The evolution of design has as such been informed by matters including standoff distances to residential properties, ecological buffers, and separation distances between existing and proposed wind turbines.

Technical Constraints

4.5 The following technical considerations were taken into account in the design process:

- A minimum separation distance between the turbines of 3.0 rotor diameters in order to minimise turbulent interactions between wind turbines (wake effect);
- Distance from residential properties; and
- Civilian and military aviation radar coverage of the Site.

Relevant Planning Policies

4.6 The relevant policies identified in section 3 have been taken into consideration in the site selection process and also subsequently, where relevant, in the design of the Proposed Development.

Landscape and Visual

4.7 The principal design objectives of the Proposed Development has been to achieve a coherent and compact design, which minimises direct and indirect adverse effects on the local and wider landscape, and is designed in accordance with guidance set out by The Highland Council.

Noise

4.8 The wind farm design has been developed to ensure that a standoff distance of at least 1.2km can be achieved between wind turbines and residential properties.

Ecology and Ornithology

4.9 A full suite of ecological and ornithological studies has been undertaken which has allowed the layout to be designed around sensitivities such as the Strath Duchally SSSI, the Caithness and Sutherland Peatlands SAC, SPA and RAMSAR, and The Flow Country UNESCO World Heritage Site.

Archaeology and Cultural Heritage

4.10 Certain assets that are deemed to be of particular importance are given legal protection. The importance of heritage assets and the protection of these and their settings is recognised in legislation as well as national, regional and local planning policy.

4.11 There are no statutorily designated cultural heritage assets within the Site however Scheduled Monuments and listed buildings within 10km of the Site boundary have been taken into consideration and an assessment on setting effects have been carried out.

4.12 Careful siting and design has been undertaken to minimise potentially significant effects on these assets.

4.13 Design Iterations

4.14 The design process has been undertaken over a prolonged period and the proposal has been progressively revised and refined during this time to take account of the information arising from pre-application consultation and the findings of EIA assessments. As a result, the design and EIA process has been highly iterative and all aspects of the final design, including the location of the wind turbines, turbine compounds, the Site access, layout of the access tracks, the locations of the substation, construction compound and borrow pits have been influenced by various technical, environmental and planning considerations.

4.15 Design iterations were taken forward from the initial ideas expressed within the Scoping Proposal and subsequently refined through receiving baseline environmental data as described above. Details of some of the key iterations of this design process are outlined below.

Layout 1: Scoping Layout

4.16 The first design iteration consisted of 22 wind turbines of up to 230m in height to blade tip as illustrated in Figure 4.1.

4.17 This layout was the basis for the Scoping Report submitted on 25th June 2024 with the resultant Scoping Opinion provided by Scottish Ministers on 20th September 2024.

4.18 The Scoping layout presented a theoretical maximum number of turbines which could be accommodated on site and took account of the following environmental and technical constraints:

- *Application of a 50m buffer on watercourses;*
- *Application of a 2km residential buffer;*
- *Ornithological considerations relating to Greenshank and Golden Plover;*
- *Avoidance of ecological designations.*

4.19 At this stage of the project, a key focus of this design was to determine landscape suitability whilst considering the initial buildability of the turbine locations.

4.20 *This layout* was also presented at a public exhibition where feedback from the local community was gathered. Following feedback gathered from the public exhibition, the name of the proposed development was changed from Fiag Wind Farm to Coille Linne Wind Farm.

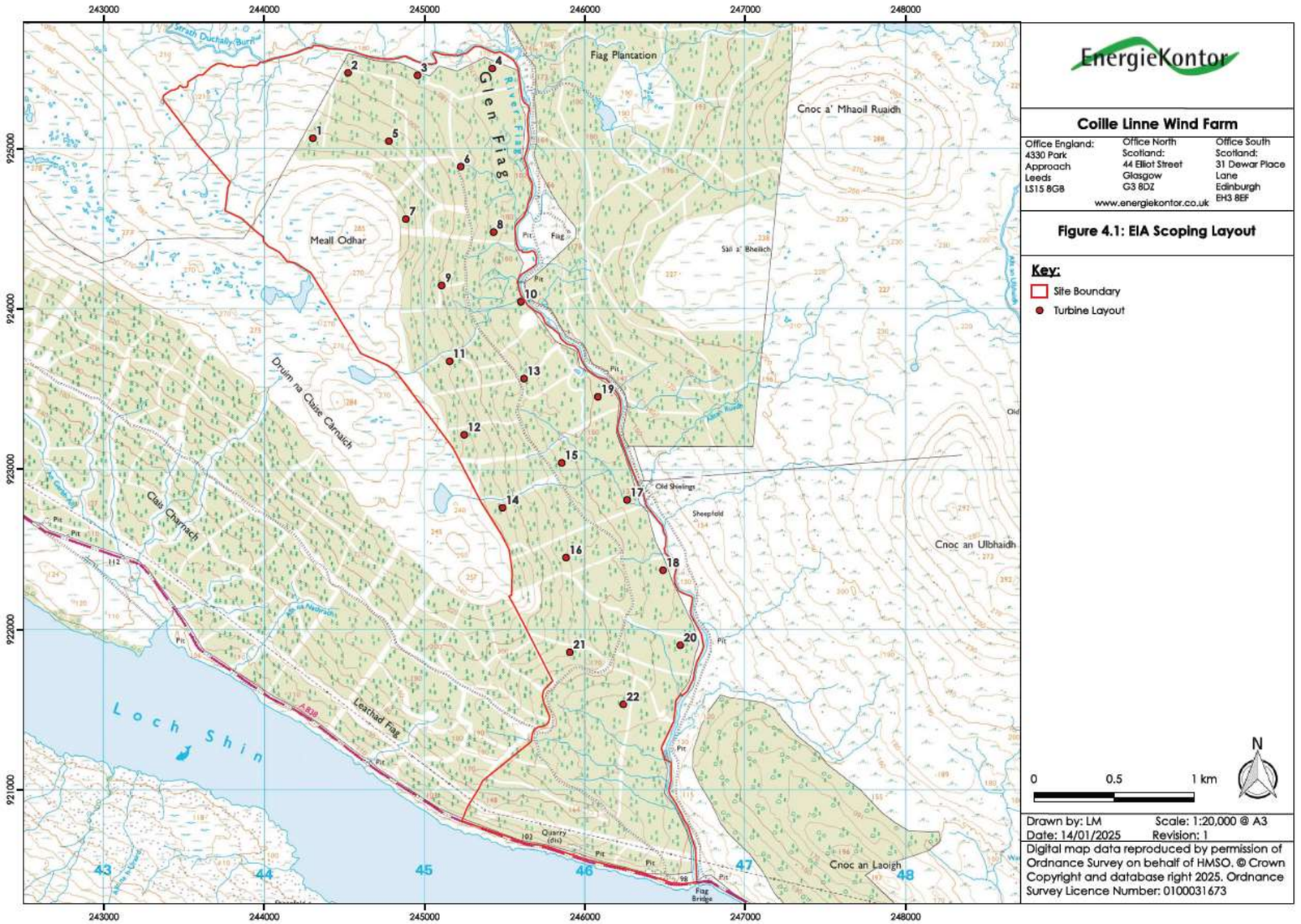


Figure 4.1: EIA Scoping Layout

Layout 2: Post Scoping Layout

4.22 Illustrated in Figure 4.2, the Second Iteration comprised 17 turbines wind turbines of up to 250m to blade tip with a total of five turbines removed from the design following scoping.

4.23 This reduced the appearance of stacking from viewpoints along the A838 such as Viewpoint (VP)1, VP4 and VP9 as a result of increased spacing around the turbines. The deletion of turbines also resulted in a reduced lateral spread, visible from Viewpoints 5, 6 and 12.

4.24 The extent of the Zone of Theoretical Visibility was taken into consideration for this design decision. From analysis, the increase in turbine tip height to 250m translated to a 0.5% increase in visibility across study area and from wireline analysis it was felt that this could be accommodated within the receiving landscape due to the coherent design created through careful turbine placement. This increase in turbine tip height to 250m also resulted in an increase in energy yield for the proposed development.

4.25 The layout saw the movement of turbines further away from buffers around watercourses and took account of ecological and ornithological onsite constraints as well as further analysis on wake effect. Following the survey works undertaken within the site boundary, the layout was amended to avoid areas of deep peat where possible.

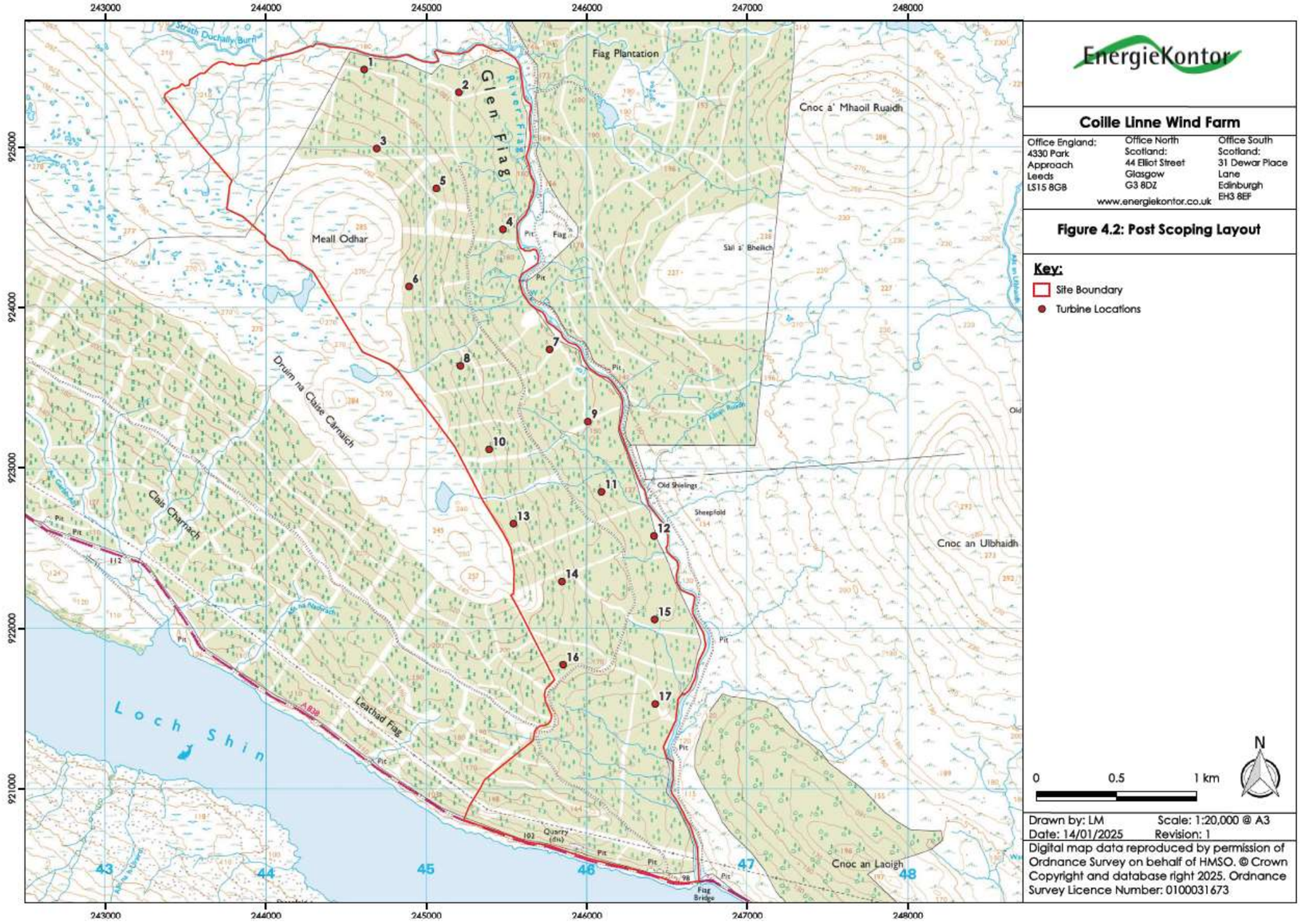


Figure 4.2: Post-Scoping Layout

Layout 3: Revised Layout 1

4.26 Illustrated in Figure 4.3, Layout 3 comprised of 15 wind turbines of up to 250m to blade.

4.27 Following further site design, an additional two turbines were removed from the design. The removal of turbines reduced wake effect across the site due to an increase in turbine spacing for a number of turbines. The design revision also improved the design from viewpoints along the A838, one of the key transport routes in the area, as well as views from Ben Klibreck and Ben More Assynt which are located in the Assynt-Coigach National Scenic Area and Wild Land Area 35. Ben Klibreck-Armine Forest, respectively.

4.28 The design principles for the proposed development included the placement of turbines in two loose rows, maximising the full extent of the site and utilising the linear shape of the Site to fit with the existing pattern of development. This can be seen in the design for the cumulative developments in close proximity to the proposed development which includes Shinness Wind Farm (in application) Sallachy Wind Farm (consented) and Creag Riabhach (operational).

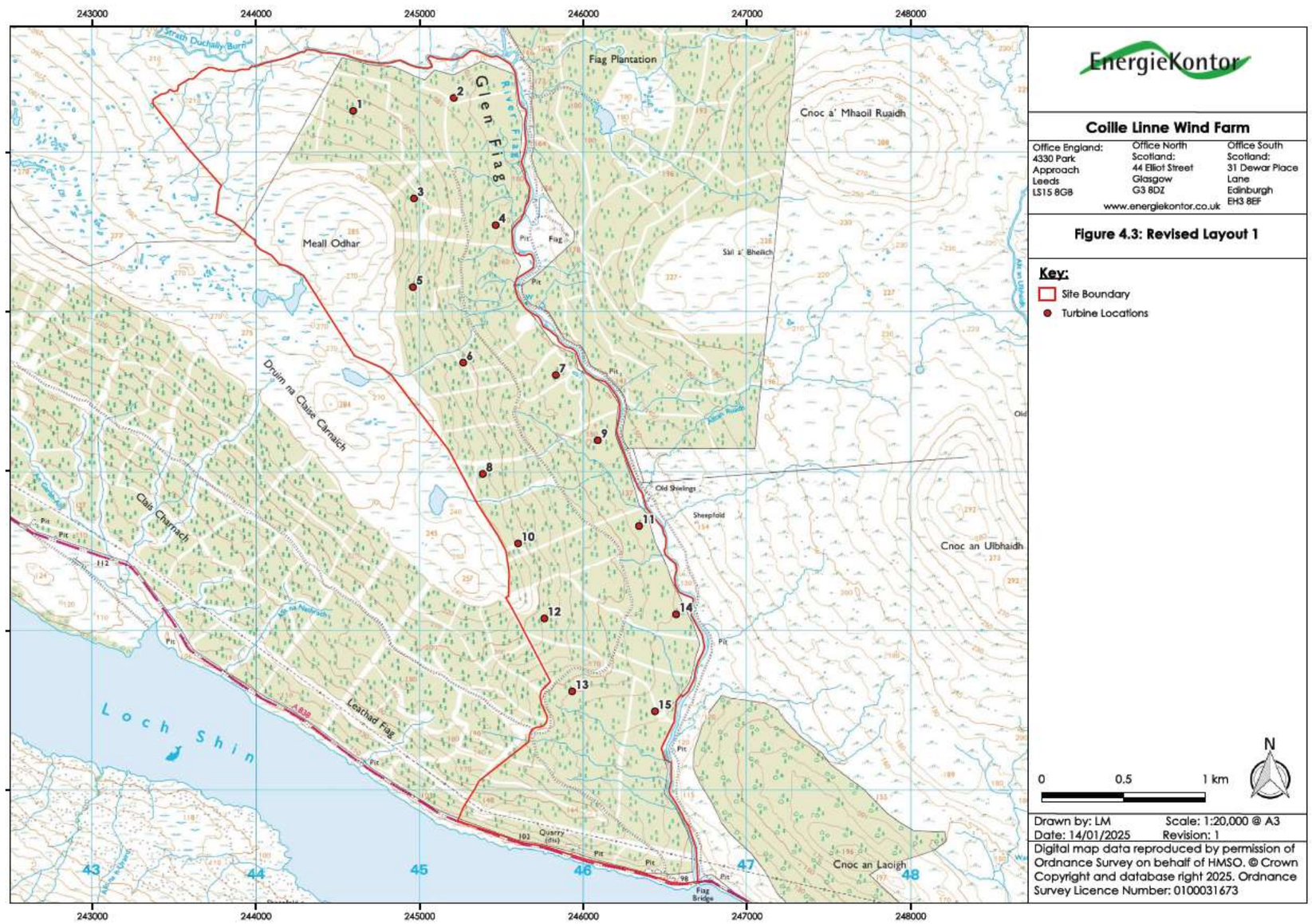


Figure 4.3: Revised Layout 1

Layout 4: Revised Layout 2

4.29 The placement of infrastructure prior to Phase 2 peat surveys was carried out to in order to progress more detailed site investigations, however an understanding of peat depths across the site was derived from existing Phase 1 peat data and NVC data.

4.30 Following the deletion of two turbines from the previous layout, a reconsideration of the proposed development included the significant movement of turbines away from areas of deep peat. When considering turbine movements, Turbine 4 was moved away from the closest watercourses and the deletion of turbines allowed Turbine 1 to be pushed further north and Turbine 2 moved further south.

4.31 In order to improve composition from certain viewpoints, a reduction in the spacing around a select number of turbines was carried out. This resulted in a more cohesive and compact layout, reduced the appearance of outliers and limited stacking.

4.32 The infrastructure design for this layout was developed at this stage. Access tracks were used to join turbine positions and turbine compounds followed contours and avoided gradients of greater than 12% in line with turbine manufacturer guidance and to minimise incursion into peat wherever practicable. Tracks were also designed for the turning radius of an up to 80m blade. The infrastructure design also sought to reduce the visual impact of onsite tracks, as well as considering other constraints such as watercourses with a 50m watercourse buffer applied except for watercourse crossings.

4.33 A key design consideration for infrastructure was to utilise the onsite forestry track as far as possible with spurs used to connect the turbines to the existing spine road and reduce the requirement for new track. The infrastructure design has also included two access options. One option utilises the existing track and branches to connect to T14 with the second options departing from the existing access route and connecting to T15. Whilst two options have been included within the infrastructure design it is likely that only one option will be built out. The lengths of both track options are detailed further in Chapter 3.

4.34 The approach to infrastructure also included placing the substation close to the entrance of the site. This was done to minimise the distance to connect into the existing grid infrastructure and was located on relatively flat land whilst maintaining a topple distance buffer of rotor diameter +10% from the turbines. The main construction compound (and eventual location for battery storage) was placed on similar nearby ground.

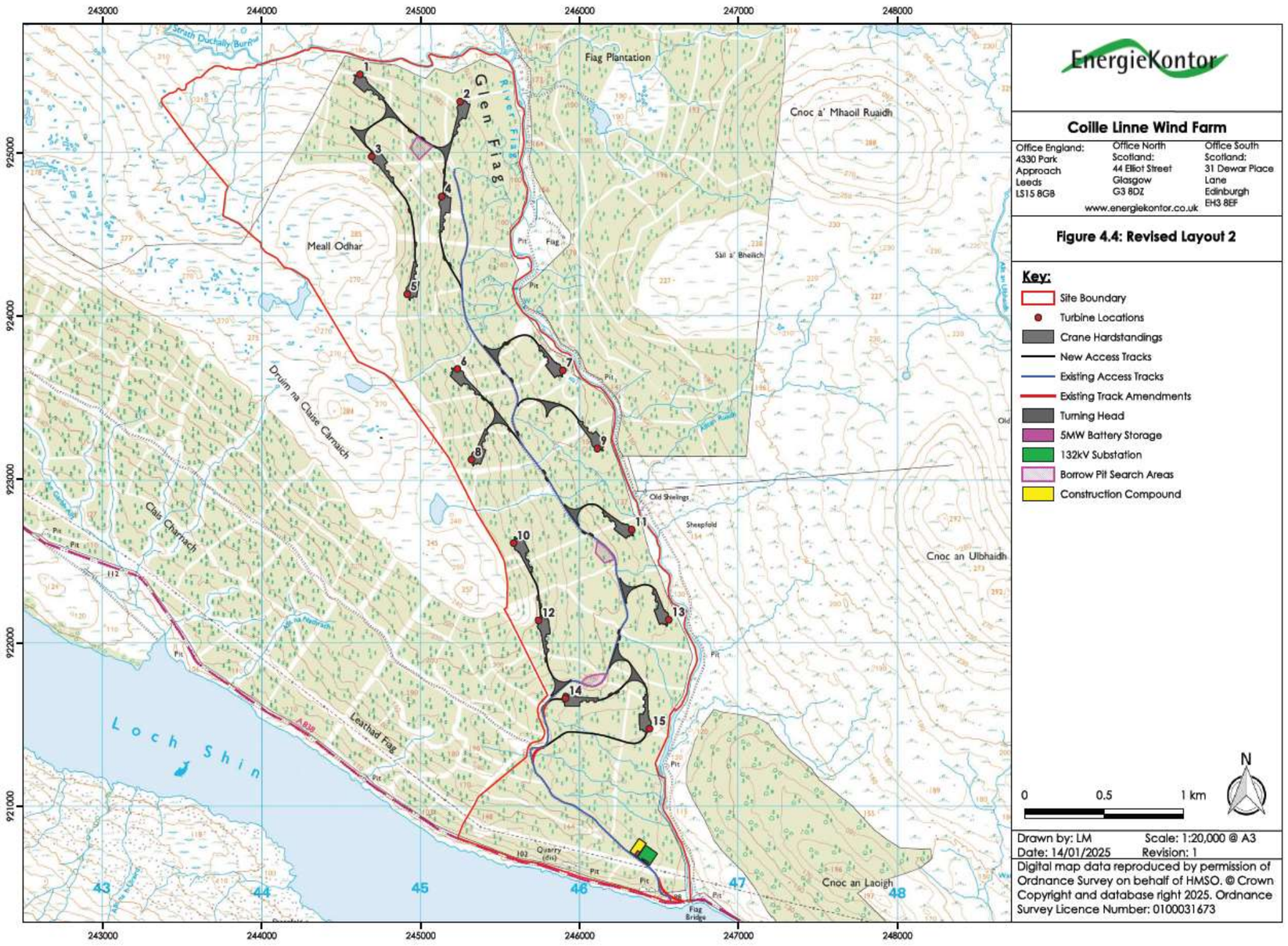


Figure 4.4: Revised Layout 2

Layout 5: Application Layout

4.35 Following the completion of Phase 2 peat probing, minor amendments were made to the infrastructure of the site. As shown in Figure 4.5, the changes have included the movement of Turbine 2 and the deletion of a turning head connecting Turbine 2 and 4 to avoid an area of peat which was found to be greater than 1.5m in depth. The movement of this track also led to an overall reduction of track length. In addition to the movement around Turbine 2, the track connecting Turbine 6 and 8 was realigned to follow the contours in order to reduce the amount of cut and fill which would be required.

4.36 The minor movement of turbines still maintained the design principles of Layout 4 which focused on the development of a clear design from key transport routes and hilltop views.

4.37 An additional turning head was also added to the road between Turbines 10 and 12 in order to facilitate the delivery of turbines components.

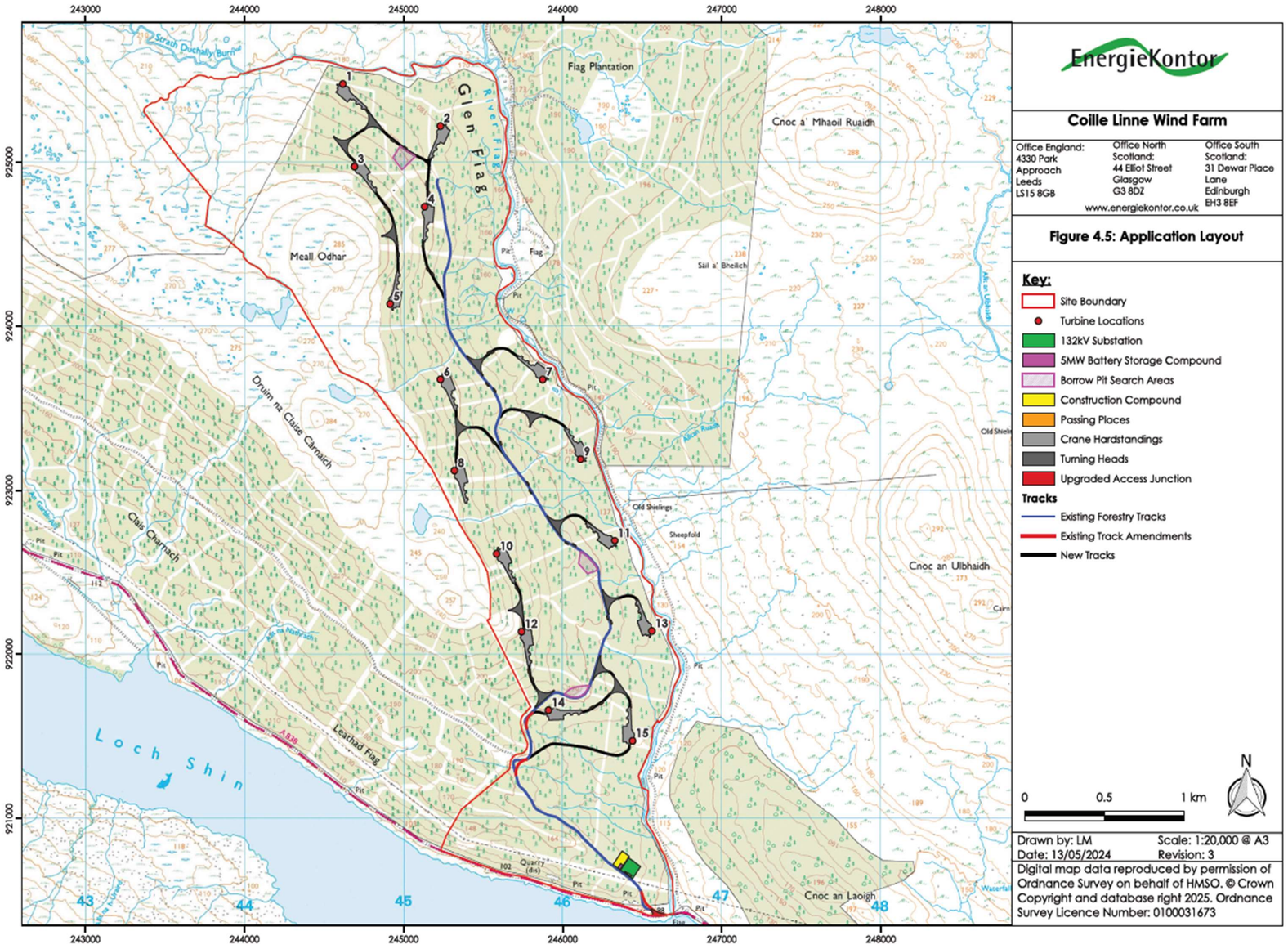


Figure 4.5: Application Layout

5 THE PROPOSED DEVELOPMENT

Introduction

5.1 The Proposed Development consists of the construction, 35-year operation and subsequent decommissioning of a wind farm consisting of 15 wind turbines together with associated infrastructure.

5.2 The wind farm would provide circa. 108MW of generating capacity with an additional 5MW of battery storage, depending on the final turbine selection. This would be made following the grant of consent and be subject to a competitive tendering exercise.

5.3 The planning application includes an allowance for potential micro-siting of the wind farm infrastructure. If consent is granted, the Applicant would commission detailed ground investigations and geotechnical surveys to determine the overall ground conditions.

5.4 It is possible that there may be a requirement for micro-siting of other infrastructure following these investigations and any other pre-construction environmental surveys. Consequently, the planning application boundary seeks a potential micro-siting allowance of 100 metres for turbines and associated development such as tracks and crane pads.

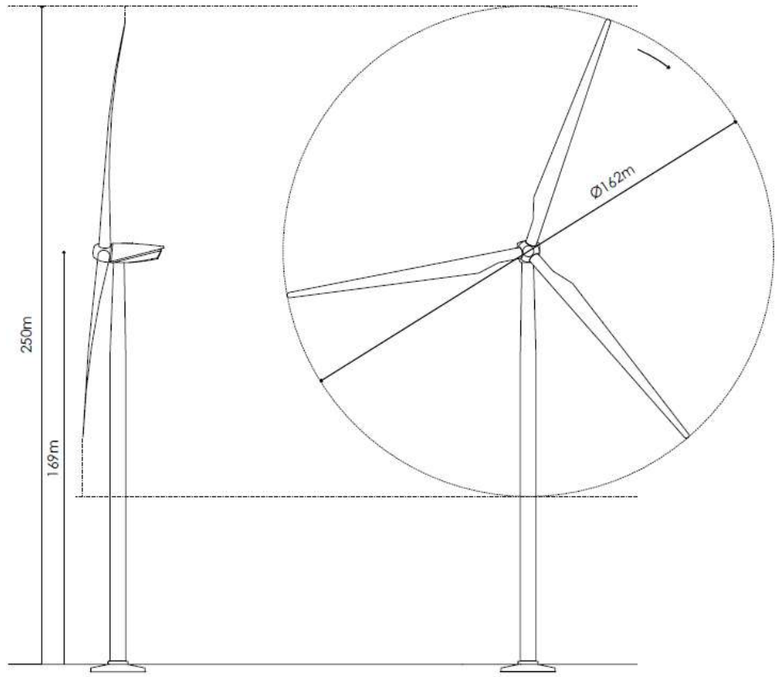
Key Elements of the Proposal

5.5 The principal elements of the Proposed Development include:

- **Wind turbines** – up to 15 wind turbines.
- **Turbine foundations** – The foundations could be either reinforced concrete gravity structures or piled foundations. This would be dependent on the ground and hydrological conditions at the turbine locations would also determine the overall size of the support structure.
- **Crane hardstandings** – To provide a level and firm base for the cranes at the location of each turbine and would be surfaced with coarse aggregate. A typical crane hardstanding layout would occupy an area of approximately 0.72 hectares (ha); however, this is dependent on the turbine model chosen;
- **Site tracks** – To provide access for construction and maintenance vehicles from the site access to the substation and wind turbines. These would be constructed at the commencement of the construction phase and would remain until the end of the decommissioning phase. They would have a running width of 6m, the final width dependent on turbine supplier requirements. The tracks would feature local widening on corners and would be surfaced with coarse aggregate.
- **Borrow Pits** - Up to three borrow pits would be utilised as a source of aggregate for the construction of the Proposed Development infrastructure, including access tracks, hardstandings, turbine foundations etc. The final location of the three borrow pits within the search areas (shown in EIA Report Volume 2, Figure 3.1) will be confirmed following final geological investigation.
- **High voltage and control cables** – To form power and control circuits linking each turbine to the on-site substation, cables would be placed in trenches (dimensions to be determined by the ground conditions, but typically 0.5m x 1m deep) routed alongside the tracks.
- **Substation / switchgear housing building** – A 90mx90m space would be required for the construction of a 132kV substation
- **Energy Storage Compound**- The energy storage equipment would be housed within ISO shipping containers with a 2.4m high palisade fence in a compound 17.5m by 31.9m. Battery containers will be positioned a minimum of 2.5m apart to facilitate access to all sides Battery energy storage equipment will be factory assembled and delivered to site in standard 12.2m long x 2.4m wide ISO shipping containers. A plan is presented as figures 3.9. Figure 3.1 shows the construction compound area that this would be housed within.
- **Construction compound/storage area** – The construction compound is to facilitate construction of the Proposed Development, and would also provide a storage area for plant and materials and is temporary during the construction phase. A typical construction compound is set out in Figure 3.6.
- **Site access** – The proposed access point to the Site is via the A838, which lies immediately to the south of the Site, approximately 21.9km north of Lairg village.

Wind Turbines

5.6 It is proposed to erect up to 15 wind turbines on the Site. They would be of a typical modern design comprising a three bladed rotor hub mounted on a rotatable nacelle (containing a gearbox and a generator), a tower and foundation.



6 ACCESS

Introduction

6.1 This section of the Design and Access Statement sets out the issues and options considered during the development of the proposals to ensure that the transport and construction of the Proposed Development causes the minimum disruption to the highway network and highway safety.

6.2 The site access point and accompanying internal track layout have been designed to accommodate the range of vehicles anticipated during the construction and operation of the Proposed Development.

Existing Highway Environment

6.3 The preferred option for access for turbine components to the Site is detailed in Chapter 12 of the EIA Report. Although the vehicles used to deliver turbine components are large, the delivery route is considered suitable for commissioning of the Site.

6.4 The main transport movements during the construction phase would be associated with the movements of Heavy Goods Vehicles (HGVs) to and from the Site. Vehicle movements would be associated with delivering turbine components, concrete and the travel of workers to and from the Site.

6.5 The traffic generated by construction of the Proposed Development (over an 18-month period) will result in a temporary increase in baseline traffic levels. With mitigation in place, the potential traffic and transport related environmental effects during construction are considered to be not significant in line with the EIA regulations.

6.6 Once the development is operational, it is envisaged that the amount of traffic would be minimal. Occasional visits may be made to the Site for maintenance activities. The vehicles used for these visits are likely to be a 4x4 or similar and there may be occasional need for a HGV to access the Site for maintenance and repairs.

Access to Site

6.7 The preferred option for access for turbine components to the Site is detailed in Chapter 12 of the EIA Report. Although the vehicles used to deliver turbine components are large, the delivery route is considered suitable for commissioning of the Site.

6.8 To determine appropriate access routes to the Site, detailed consideration and assessment of the surrounding road network has been undertaken in the form of a comprehensive desk-based study. This established that the most likely route for general construction HGV traffic is from the A9 trunk road network to the A838 corridor via the A836 and A839.

6.9 The proposed route is indicated below in Figure 6.1.

Access Design Process

6.10 Swept Path Analysis assessments were undertaken to identify whether the delivery route could accommodate the swept path of the abnormal load delivery vehicles carrying components such as the turbine blades and nacelle. This type of analysis is consequently used to identify any necessary works.

6.11 The design of the Proposed Development has taken into consideration the movement and subsequent access of vehicles involved with the construction and operation of the wind farm. The initial site selection considered potential access restrictions associated with the movement of vehicles required to transport large turbine components.

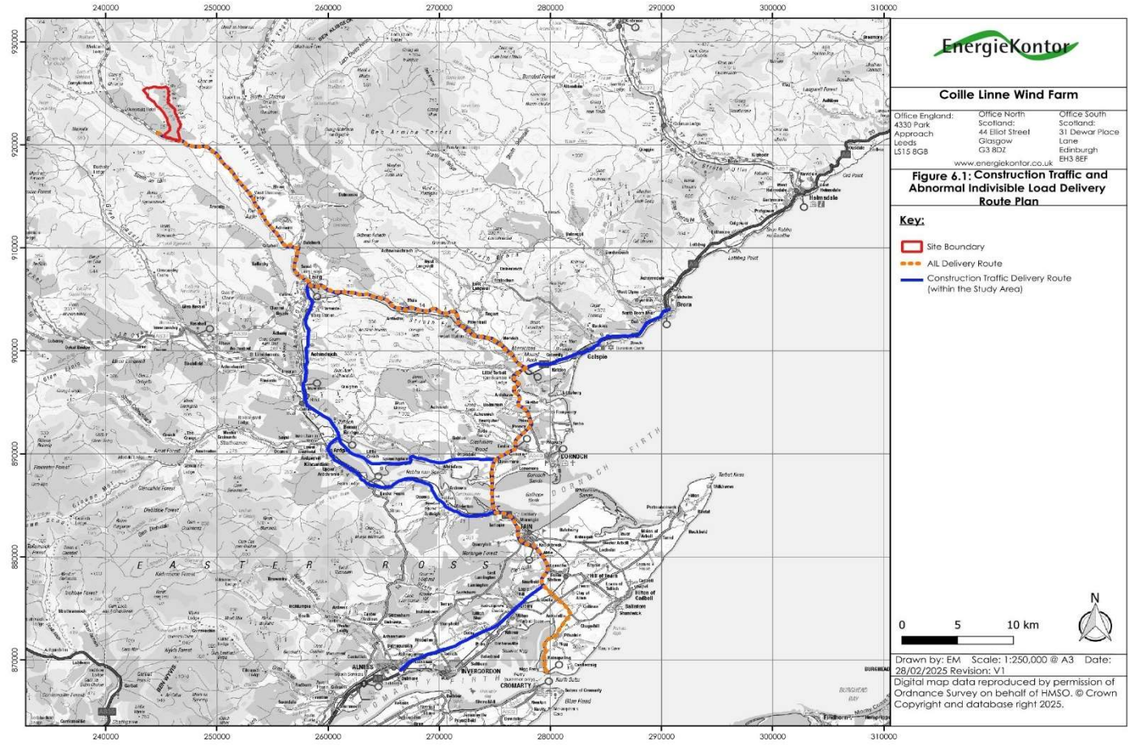


Figure 6.1: Construction Traffic and Abnormal Indivisible Load Delivery Route Plan

Site Junction Design

6.12 An upgraded access junction from the A838 will be constructed to allow access to the Site. The upgraded access junction will accommodate abnormal load deliveries from the east and will then join with the existing junction and forestry track, utilising the current infrastructure as far as possible. An indicative access area has been provided on plans; however, a detailed site access junction has been provided in Figure 12.5, located in Volume 2 of the EIAR.

6.13 All overrun areas will be constructed with crushed stone with all track and over-run surfacing within the limits of road adoption to be surfaced to adoptable standards. The existing junction will be resurfaced, and an asphalt strip will also be incorporated. Once abnormal load deliveries have been completed, the additional widening required for overrun surfacing will be removed.

6.14 The site access point and accompanying internal track layout have been designed to accommodate the range of vehicles anticipated during the construction and operation of the proposed development.

Figure 6.2: Proposed Site Access Junction

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