Scottish & Southern Electricity Networks

TRANSMISSION

Consultation Document (Route Options)

Glendye Wind Farm Overhead Line Grid Connection

February 2024

REF: LT468/469

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GLOSSARY

Term	Definition
Alignment	A centre line of an overhead line, along with location of key angle structures.
Alignment (proposed)	An alignment taken forward to consent application. It comprises a defined centre line for the overhead line and includes an indicative support structure (tower or pole) schedule, also specifying access arrangements and any associated construction facilities.
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient Woodland Inventory (AWI)	The Ancient Woodland Inventory (AWI) is a provisional guide to the location of Ancient Woodland. It contains three main categories of woodland, all of which are likely to be of value for their biodiversity and cultural value by virtue of their antiquity: Ancient Woodland (1a and 2a); Long-established woodlands of plantation origin (LEPO) (1b and 2b); and other woodlands on 'Roy' woodland sites (3).
Biodiversity Net Gain (BNG)	Biodiversity Net Gain (BNG) is an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development. It focuses on the change in the biodiversity value of a site, comparing the pre and post construction biodiversity values to ensure a positive impact overall.
Conductor	A metallic wire strung from structure to structure, to carry electric current.
Consultation	The dynamic process of dialogue between individuals or groups, based on a genuine exchange of views and, normally, with the objective of influencing decisions, policies or programmes of action.
Corridor	A linear area which allows a continuous connection between the defined connection points. The Corridor may vary in width along its length; in unconstrained areas it may be many kilometres wide.
EA	When a Proposed Development is unlikely to give rise to significant environmental effects and is not considered an EIA development it would not be subject to an EIA and the preparation of an EIA Report. In this circumstance, an optional Environmental Appraisal (EA) detailing the results of surveys, and any appropriate mitigation, can accompany a consent application.
Environmental Impact Assessment (EIA)	Environmental Impact Assessment. A formal process codified by EU directive 2011/92/EU, and subsequently amended by Directive 2014/52/EU. The national regulations are set out in The Electricity Works (Environmental Impact Assessment) (Scotland) Regulations 2017. The EIA process is set out in Regulation 4(1) of the regulations and includes the preparation of an EIA Report by the developer to systematically identify, predict, assess, and report on the likely significant environmental effects of a proposed project or development.
Habitat	Term most accurately meaning the place in which a species lives, but also used to describe plant communities or agglomerations of plant communities.
Kilovolt (kV)	One thousand volts.
Listed Building	Building included on the list of buildings of special architectural or historic interest and afforded statutory protection under the 'Planning (Listed Buildings and Conservation Areas) (Scotland) Act 1997' and other planning legislation. Classified categories A – C(s).

Term	Definition
Micrositing	The process of positioning infrastructure to avoid localised environmental or technical constraints.
Mitigation	Term used to indicate avoidance, remediation, or alleviation of adverse impacts.
Overhead line (OHL)	An electric line installed above ground, usually supported by steel lattice towers or wood poles.
Plantation Woodland	Woodland of any age that obviously originated from planting.
Route	A linear area of approximately 1 km width (although this may be narrower/wider in specific locations in response to identified pinch points / constraints), which provides a continuous connection between defined connection points.
Route (proposed)	A route taken forward following stakeholder consultation to the alignment selection stage of the overhead line routeing process.
Routeing	The work undertaken which leads to the selection of a proposed alignment, capable of being taken forward into the consenting process under Section 37 of the Electricity Act 1989.
Route Options Area	The area containing the route options.
Scheduled Monument	A monument which has been scheduled by the Scottish Ministers as being of national importance under the terms of the 'Ancient Monuments and Archaeological Areas Act 1979'.
Semi-natural Woodland	Woodland that does not obviously originate from planting. The distribution of species will generally reflect the variations in the site and the soil. Planted trees must account for less than 30% of the canopy composition.
Sites of Special Scientific Interest (SSSI)	Areas of national importance. The aim of the SSSI network is to maintain an adequate representation of all natural and semi-natural habitats and native species across Britain.
Span	The section of overhead line between two structures.
Special Area of Conservation (SAC)	An area designated under the EC Habitats Directive to ensure that rare, endangered, or vulnerable habitats or species of community interest are either maintained at or restored to a favourable conservation status.
Special Landscape Area (SLA)	Landscapes designated by the Highland Council which are considered to be of regional/local importance for their scenic qualities.
Special Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 2009/147/EC) to protect important bird habitats.
Stakeholders	Organisations and individuals who can affect or are affected by SSEN Transmission works.
The National Grid	The electricity transmission network in the Great Britain.
Underground Cable (UGC)	An electric cable installed below ground, protected by insulating layers and marked closer to the surface to prevent accidental damage through later earthworks.
Volts	The international unit of electric potential and electromotive force.
Wayleave	An agreement entered into between SSEN Transmission and a landowner upon whose land an overhead line is to be constructed.

PREFACE

This Consultation Document has been prepared by ASH design+assessment Ltd. (ASH) on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission). SSEN Transmission, operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands. This document invites comments from all interested parties on the route options for a new 132 kV Overhead Line (OHL) supported by steel trident pole structures to connect the consented Glendye Wind Farm to the National Grid at the operational Fetteresso substation.

This Consultation Document is available online at the project website –

https://www.ssen-transmission.co.uk/projects/project-map/glendye-windfarm-connection/

Over the coming months, SSEN Transmission will be actively engaging with Statutory Consultees and stakeholders to further understand constraints and identify potential opportunities for the project. Public consultation events detailing the proposals described in this document will be held at the following times and locations:

- Tuesday 20 February - Strachan - Strachan Village Hall 10am-12pm
- Tuesday 20 February - Fettercairn - West Mearns Parish Church Hall 2pm-7pm
- Wednesday 21 February - Drumlithie - Public Hall 2pm-7pm

Comments on this Consultation Document should be sent to:

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Scottish and Southern Electricity Networks 200 Dunkeld Road, Perth PH1 3GH

All comments are requested by **20 March 2024**.

EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (SSEN Transmission) operating under licence held by Scottish Hydro Electric Transmission plc, is proposing to construct a new 132 kV Overhead Line (OHL) from the on-site substation at the consented Glendye Wind Farm, approximately 5 km northwest of Fettercairn, to the existing Fetteresso substation. Under our Network Operator's Licence this connection should be efficient, coordinated and economic, whilst having the least possible impact on the environment. The proposal is a single circuit 132 kV steel trident pole arrangement, supporting the OHL running over a distance of approximately 20 kilometres in length. Sections of 132 kV underground cable (UGC) will be required at either end of the OHL, of approximately 750 metres in total. A number of new permanent and temporary access tracks will also be required.

This Consultation Document describes the route options appraisal undertaken and the alternatives considered during the selection of route options for the Glendye Wind Farm Overhead Line Grid Connection project. It forms part of a consultation exercise to provide information on the project and seek comment from stakeholders and members of the public on the proposals. Further information in relation to public consultation events can be accessed on the project website: https://www.ssen-transmission.co.uk/projects/project-map/glendye-windfarm-connection/

In October 2023, Scottish Ministers granted consent under Section 36 of the Electricity Act 1989 for the construction and operation of Glendye Wind Farm. SSEN Transmission has a statutory duty under Schedule 9 of the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical transmission system in its licenced areas. SSEN Transmission has obligations to offer non-discriminatory terms for connection to the transmission system. In line with these duties and obligations, SSEN Transmission has entered into an agreement with the wind farm developer to provide a connection from the wind farm to the National Grid.

The approach to route selection is being informed by SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above' which provides a framework to ensure environmental, technical and economic considerations are identified and appraised at each stage of the routeing process. No Corridor options were identified due to the limited scale of the project and the identified connection points between the wind farm and the existing Fetteresso substation, which restrict the alternative Corridor options. For route options, a digital tool was used to help identify options which would enable connectivity between the Glendye Wind Farm and the transmission network by analysing a series of data sets on physical, technical and environmental constraints. This process generated five potential route options which were analysed and appraised by the project team including input from an experienced environmental consultant and SSEN Transmission OHL engineers. The five route options are split into three 'western route options' (1a, 1b and 1c) and two 'eastern route options' (2a and 2b), which are shown on Figure 1. Any of the western route options could join with either of the eastern route options through a central connection point, to form a complete connection between the consented Glendye Wind Farm on-site substation and Fetteresso substation.

The appraisal identified physical, technical and environmental constraints in all of the route options which were assessed. The principal findings of the appraisal in terms of key differences between the route options are summarised here and presented in more detail in the rest of this document.

Western Route Options (1a, 1b and 1c)

From an environmental perspective, the constraints are generally comparable across the western route options given that all options typically cross a mix of open moorland (to the west), with areas of Class 1 and 2 peatland, and forestry (to the east). There are however some differences across the options.

Route Option 1a has a number of environmental constraints. The route option contains the River Dee SAC, and a regionally significant cultural heritage site. Whilst avoidance of these constraints is likely to be possible, the combination of the constraints, together with the steep topography in this area, would create a narrow passage within the route for an OHL, if this route option were taken forward to the alignment selection stage. In addition, the route passes through Glen Dye, an attractive glen which also forms a key part of the setting from Clachnaben and comprises trails that are used for recreation. The Glen Dye Moor Restoration project also forms a constraint to the development of this route option as it seeks to restore peatland and create woodland within large parts of this route option, as well as furthering the recreational enjoyment of the area. The route also cuts through a large area of commercial forestry.

Many of the environmental constraints across Route Options 1b and 1c are comparable however there are noticeable differences between the two options in terms of terrain and elevation. Route Option 1b remains at a high elevation and crosses over gently rolling terrain with areas of deeper peat (predominantly in modified condition), whereas Route Option 1c is located across more steeply sloping ground. Both routes would have visibility from the Cairn O' Mount viewpoint. From Route Option 1c it would appear within the main field of view to the south, while from Route Option 1b it would be outwith the main field of view (to the north). Indirect effects on the Scheduled Monument Cairn o' Mount cairns (SM 4968) are also possible from both options, albeit the views from this Scheduled Monument are focussed south (toward Route Option 1c).

From an engineering perspective, Route Option 1a comprises good access opportunities throughout the route, whereas there is limited access available for Route Options 1b and 1c. Route Option 1c has issues with both the lack of access and the steep terrain which it would cross. The presence of peat is a consideration for all western route options and disturbance will need to be minimised through siting of both poles and access tracks during the alignment selection stage of the project.

Eastern Route Options (2a and 2b)

The eastern options are typically routed across a mix of forestry and lowland farmland. Route Option 2a crosses through the greatest extent of forestry, some of which includes areas of native and ancient (Long-established Woodlands of Plantation Origin, LEPO) woodland. The requirement for felling and the creation of an Operational Corridor could adversely affect the character of the area.

Route Option 2b passes through a more settled area compared with Route Option 2a, and an OHL within this route option would pass more closely to a number of dwellings, with potential for some effects on visual receptors. This would need to be considered further at the alignment selection stage.

From an engineering perspective, there are good access opportunities across both eastern options, but the terrain is steeper for Route Option 2a. Route Option 2b would pass closer to properties, and the clearance distance to wind turbines would need to be considered.

Next Steps

The appraisal of route options presented in this document will be reviewed taking account of feedback received from key stakeholders and from the public consultation. Following the outcome of the consultation, SSEN Transmission will confirm the proposed route for the OHL project. Potential alignment options will then be explored within the proposed route, with further appraisal and consultation to be carried out in the coming months. On identification of a proposed alignment, an application for consent under Section 37 of the Electricity Act 1989 will be submitted to the Scottish Government's Energy Consents Unit for the proposed OHL infrastructure.

All comments on the route options are requested by **20 March 2024**. A Report on Consultation (RoC) will be published after the consultation period has ended, which will document the consultation responses received, how these responses have been considered, and the decisions made in light of these responses.

1. INTRODUCTION

1.1 Purpose of Document

1.1.1 This document has been prepared by ASH design+assessment Ltd. (ASH) on behalf of Scottish and Southern Electricity Networks Transmission (SSEN Transmission). SSEN Transmission, operating under licence held by Scottish Hydro Electric Transmission plc, owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands. This document invites comments from all interested parties on the route options for a new 132 kV Overhead Line (OHL) supported by steel trident pole structures to connect the consented Glendye Wind Farm to the National Grid at the operational Fetteresso substation.

1.1.2 This Consultation Document describes the route options appraisal undertaken and the alternatives considered during the selection of route[1] options.

1.1.3 This document forms part of a consultation exercise to provide information on the Glendye Wind Farm Grid Connection project and seek comment from stakeholders and members of the public on the proposals. Further information in relation to public consultation events can be accessed on the project website: https://www.ssen-transmission.co.uk/projects/project-map/glendye-windfarm-connection/

1.2 Document Structure

1.2.1 This report is comprised of eight sections as follows:

1. Introduction – sets out the purpose of the Consultation Document and document structure.
2. Project Background and Need – describes the need for the proposals.
3. Project Overview – sets out the preferred technology solution, the alternatives considered and outlines the typical construction methods.
4. Route Selection - sets out the route selection process and methodology that has been applied to date.
5. Description of Routes – describes the route options that have been identified.
6. Environmental Baseline - describes the local context and baseline environmental and engineering conditions.
7. Comparative Appraisal – analyses each route option against a series of environmental, technical and cost considerations.
8. Summary and next steps – invites comments on the route assessment process and route options.

1.2.2 The main body of this document is supported by a series of Figures which are included at the end of this document.

[1] A linear area of approximately 1 km – 2 km width which provides a continuous connection between defined connection points.

2. PROJECT BACKGROUND AND NEED

2.1 The Need for the Project

2.1.1 The Glendye Wind Farm was granted consent by Scottish Ministers in October 2023. The wind farm would be constructed on the Glen Dye and Fasque Estate situated approximately 5 km northwest from the village of Fettercairn and 12 km west from the village of Strachan. The wind farm is anticipated to generate in excess of 104 megawatts (MW) and to comprise of 26 turbines which require connection to the electricity transmission network by late 2028.

2.1.2 SSEN Transmission has a statutory duty under Schedule 9 of the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical transmission system in its licenced areas. SSEN Transmission has obligations to offer non-discriminatory terms for connection to the transmission system.

2.1.3 SSEN Transmission are therefore required to provide a connection for the proposed wind farm. The proposed connection is in accordance with an agreement between SSEN Transmission, National Grid Electricity System Operator (as operator of the National Grid), and the wind farm developer.

2.1.4 The new connection would be routed between the consented Glendye Wind Farm on-site substation and the existing Fetteresso substation as shown in **Figure 1**.

2.2 National Planning Policy

2.2.1 Scotland's fourth National Planning Framework (NPF4) was published by the Scottish Government on 13th February 2023. NPF4 is a long-term strategy for Scotland (to 2045) that guides spatial development, sets out national planning policies, designates national developments and highlights regional spatial priorities. Alongside adopted local development plans, NPF4 now forms part of the statutory development plan for decision making in Scotland. In NPF4, transmission infrastructure is supported in both National Development ND3 'Strategic Renewable Electricity Generation and Transmission Infrastructure' and in Policy 11 Energy however proposals are required to be assessed against all relevant development plan policies.

2.2.2 The Proposed Development would form a vital element to deliver network and grid infrastructure required to deliver the UK and Scottish Government's legally binding targets for net zero emissions and renewable energy electricity generation objectives.

3. PROJECT OVERVIEW

3.1 Preferred Technology Solution

3.1.1 Use of steel trident poles is the preferred engineering solution for the OHL elements of the Proposed Development.

3.1.2 Two short sections of 132 kV underground cable (UGC), totalling approximately 0.75 km in length, would be required as the Proposed Development leaves Glendye Wind Farm on-site-substation, as well as on the final approach to Fetteresso substation, given the presence of wind turbines and electrical infrastructure at these points. A terminal structure (either a wooden trident pole or a steel tower) would be required to facilitate the transition between OHL and UGC.

3.1.3 The steel trident poles would have a nominal height of approximately 13 m (including insulators and support). The proposed trident pole would support three conductors (wires) in a horizontal flat formation. The spacing between poles would vary depending on topography and altitude. The specific distances would be determined after a detailed line survey but would be approximately 100 m apart. Photographs showing typical steel trident poles are shown in **Plate 2.1**.

Plate 2.1: Example Steel Trident H Poles

3.2 Alternative Options Considered

3.2.1 Trident wood poles were also an initial consideration however these have been discounted at an early stage due to the elevation of the site rendering them unsuitable for use. For a connection of this length and scale, an underground cable is not a feasible option due to costs involved during construction as well as ongoing maintenance problems associated with underground cables in remote areas including terrain, access, potential undesignated assets and peat.

3.3 General Construction Activities

3.3.1 To facilitate the connection, the main construction elements associated with the development are anticipated to include:

- establishment of one or more construction compounds;
- establishment of suitable laydown areas for materials;
- construction of stone tracks (both temporary and permanent) and other temporary access solutions as necessary;

- delivery of structures and materials to site;
- excavation and construction works associated with foundations, as necessary;
- assembly and erection of trident poles;
- stringing of conductors using hauling ropes and winches; and
- inspections and commissioning.

3.4 Underground Cable

3.4.1 An UGC Connection will be utilised for approximately 0.75 km in total at both the start and end of the connection.

3.4.2 It is anticipated that the installation of a UGC would involve the following tasks:

- Establishment of one or more construction compounds;
- Establishment of suitable laydown areas for materials;
- Establish a working corridor approximately 40 m wide;
- Installation of an access haul road and temporary bridges where/if required;
- Excavate a trench up to 2 m in depth and 1 m wide, widening through benching and battering where stability and safety concerns arise;
- Clear out all materials likely to damage cable ducts, e.g. clods, rocks, stones and organic debris, and employ use of pumps to remove any water;
- Installation of ducting within the trench, surrounded by engineered backfill in suitable layers for protection, with protection tile and warning tape placed above the cable line, reinstatement to sub-soil level;
- Excavation and formation of power cable joint bays with above ground electrical link pillars and associated demarcation; reinstate excavated surface layers in reverse order;
- Transportation of and installation of power cable;
- Mobilisation of jointing containers and jointing of power cable;
- Reinstatement of joint bays and installation of fencing at link pillar locations; and
- Reinstate excavated surface layers in reverse order.

3.5 Other considerations

Forestry Removal

3.5.1 Construction of the project may require the removal of sections of forestry, although detailed design would seek to minimise the impact of any removal. This would be undertaken in consultation with affected landowners. Scottish Forestry will be consulted, and the project will comply with the Scottish Government's Control of Woodland Removal Policy.[2]

3.5.2 An Operational Corridor (OC) of approximately 72 m would be required through commercial forestry plantations to enable the safe operation and maintenance of the UGC and OHL. In areas of woodland, the width of the OC could vary depending on the type of woodland (based on species present) in proximity to the UGC and OHL.

Access Strategy

3.5.3 Vehicle access is required to each pole location during construction to allow excavation and creation of foundations and pole installation. Existing tracks would be used where possible. Preference will be given to lower impact access solutions including the use of low pressure tracked personnel vehicles and temporary track solutions in boggy / soft ground areas to reduce any damage to, and compaction of, the ground. These journeys would be kept to a minimum to minimise disruption to habitats along the route. However, both temporary and

[2] Forestry Commission Scotland (2009) Control of Woodland Removal Policy

permanent stone tracks may be necessary in some areas depending on existing access conditions, terrain and altitude.

3.6 Programme

3.6.1 It is anticipated that construction of the project would take place over an approximately 18-month period following the granting of consents, although detailed programming of the works would be the responsibility of the Contractor in agreement with SSEN Transmission.

3.7 Biodiversity Net Gain

3.7.1 Biodiversity Net Gain (BNG) is an approach to development that aims to leave the natural environment in a measurably better state than it was pre-development. SSEN Transmission has developed a BNG toolkit based upon the Natural England metric[3], which aims to quantify biodiversity based upon the value of habitats for nature. It is an efficient and effective method for demonstrating whether development projects have been able to maintain or increase the biodiversity value of a development site after construction works.

3.7.2 The BNG toolkit would be applied to the project to quantify the overall potential biodiversity impacts; this includes a biodiversity baseline assessment, analysis of habitat losses due to temporary works and permanent infrastructure, and analysis of biodiversity gains following reinstatement of habitats in areas of temporary construction work.

SSEN Transmission's Biodiversity Ambition

3.7.3 SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, SSEN Transmission has made commitments within its Sustainability Strategy (2018)[4] , Sustainability Plan (2019)[5] and RIIO-T2 Business Plan[6], for new infrastructure projects to:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;
- Positively contribute to the UN and Scottish Government Biodiversity strategies by achieving an overall 'No Net Loss' on new infrastructure projects gaining consent in 2020 onwards and achieving Net Gain on all new projects gaining consent in 2023 onwards; and
- Work with their supply chain to gain the maximum benefit during asset replacement and upgrades.

3.7.4 The design and evolution of this grid connection project will be carried out in line with these commitments.

[3] Natural England Biodiversity Metric 3.1 https://publications.naturalengland.org.uk/file/5450039124819968

[4] Delivering a smart, sustainable energy future: The Scottish Hydro Electric Transmission Sustainability Strategy (2018) available at: https://www.ssen-transmission.co.uk/media/2701/sustainability-strategy.pdf

[5] Our Sustainability Plan: Turning Ambition into Action. (2019) SHE Transmission. available at: https://www.ssen-transmission.co.uk/media/3215/our-sustainability-plan-consultation-report.pdf

[6] A Network for Net Zero - SSEN Transmission (ssen-transmission.co.uk)

4. ROUTE SELECTION

4.1 Overview

4.1.1 The approach to route selection is being informed by SSEN Transmission's guidance 'Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above' which provides a framework to ensure environmental, technical and economic considerations are identified and appraised at each stage of the routeing process.

4.1.2 The guidance splits the routeing stage of a project into four principal stages, as follows:

- Stage 0: Routeing strategy development;
- Stage 1: Corridor Selection;
- Stage 2: Route Selection; and
- Stage 3: Alignment Selection;

4.1.3 Each stage is an iterative process and involves an increasing level of detail and resolution, bringing environmental, technical and cost considerations together in a way which seeks to achieve the best balance at each stage. The stages carried out can vary depending on the type, nature and size of a project and consultation is carried out at each stage of the process as appropriate.

4.1.4 The Proposed Development is currently at Stage 2: Route Selection, the objective of which is to identify an optimal route prior to commencing the alignment selection stage.

4.2 Stage 1: Corridor Selection

4.2.1 No corridor options were identified due to the limited scale of the project and the identified connection points between the wind farm and the existing Fetteresso substation, which constrain any alternative corridor options.

4.3 Stage 2: Route Selection

4.3.1 Route options were initially identified by SSEN Transmission utilising a digital tool which offers an approach to desktop optioneering studies for linear infrastructure such as route options for OHLs. Users can import geospatial data into the software to capture key geographic features, topography, existing assets and other relevant information about the project area. The digital tool then iterates through thousands of design options to find the least constrained ones based on the different datasets.

4.3.2 The digital tool has generated five potential route options, which have been analysed and refined where necessary by the project team including input from an experienced environmental consultant and from SSEN Transmission OHL engineers, taking into account physical and development constraints (see **Figure 1**). The area containing the route options is referred to as the 'Route Options Area' for the purpose of this Consultation Document.

4.3.3 In accordance with the steps outlined in the Holford Rules[7] and SSEN Transmission's guidance[8], the following principles have been taken into account as far as is practicable at this routeing stage and will be considered in more detail during Stage 3 (Alignment Selection):

- Avoid if possible major areas of highest amenity value (including those covered by national and international designations and other sensitive landscapes);
- Avoid by deviation, smaller areas of high amenity value;

[7] Scottish Hydro Electric Transmission Limited (SHETL). (October 2004). *The Holford Rules: Guidelines for the Routeing of New High Voltage Overhead Transmission Lines with NGC 1992 and SHETL 2003 Notes; Revision 1.01*

[8] SSEN Transmission (2020). Procedures for Routeing Overhead Lines and Underground Cables of 132 kV and above, Revision 2.0.

- Try to avoid sharp changes of direction and reduce the number of larger angle towers required;
- Avoid skylining the route in key views and where necessary, cross ridges obliquely where a dip in the ridge provides an opportunity;
- Target the route towards open valleys and woods where the scale of poles will be reduced and views broken by trees (avoid slicing through landscape types and try to keep to edges and landscape transitions);
- Consider the appearance of other lines in the landscape to avoid a dominating or confusing wirescape effect; and
- Approach urban areas through industrial zones and consider the use of undergrounding in residential and valued recreational areas.

4.3.4 Appraisal of the route options was undertaken against a number of environmental, engineering and cost criteria set out within the SSEN Transmission guidance:

Environmental Criteria

- Natural Heritage - designations, protected species, habitats, ornithology, hydrology, geology and hydrogeology;
- Cultural Heritage - designations and cultural heritage assets;
- People – proximity to dwellings;
- Landscape and visual – designations, landscape character and visual;
- Land Use - agriculture, forestry, recreation and infrastructure; and
- Planning – policy and proposals.

Engineering Criteria

- Infrastructure Crossings - major crossings (overhead lines, rail, river, navigable canal, gas or hydro pipeline) and road crossings;
- Environmental Design - elevation, contaminated land, pollution and flooding;
- Ground Conditions – terrain and peatland;
- Construction and Maintenance - access, angle support; and
- Proximity – clearance distance, windfarms, communication masts, urban areas, metallic pipes.

Economic Criteria

- Capital – construction costs; and
- Operational – inspections and maintenance costs.

4.3.5 A Red, Amber, Green (RAG) matrix was used for the appraisal, as shown in **Plate 4.1** below. The RAG rating applied to each topic takes account of opportunities and standard working practices that, if implemented, could overcome the identified constraint. This will ensure the most likely outcome is identified as opposed to the 'worst case'. The route options have then been compared, across the criteria, to examine which has the greatest and least potential to accommodate the Proposed Development.

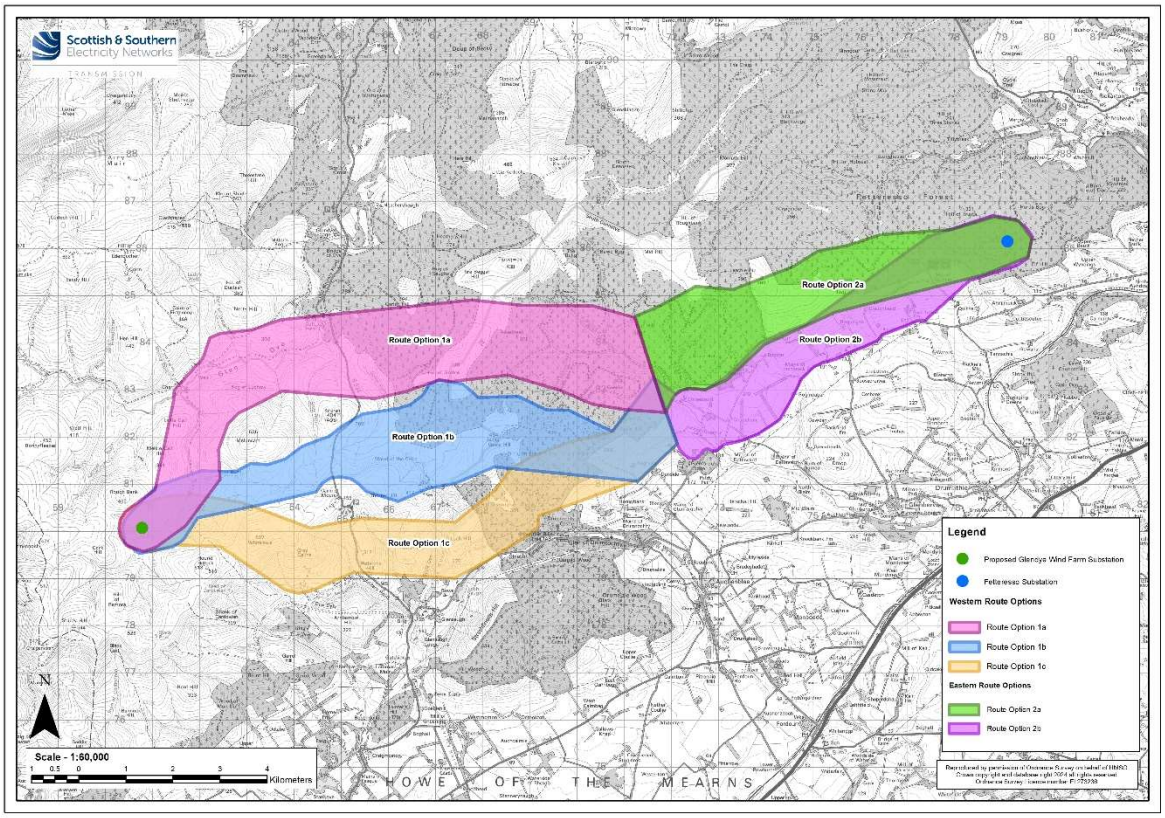
Plate 4.1: RAG Ratings

Performance	Comparative Appraisal
Most Preferred  **Least Preferred**	Low potential for the development to be constrained
	Intermediate potential for the development to be constrained
	High potential for the development to be constrained

5. DESCRIPTION OF ROUTES

5.1.1 The route options appraised for the Proposed Development are shown on **Plate 5.1** (see also **Figure 1)** and are described in this section of the report. There are five route options in total; split into three 'western route options' (1a, 1b and 1c) and two 'eastern route options' (2a and 2b). Any of the western route options could join with either of the eastern route options through a central connection point, to form a complete connection between the consented Glendye Wind Farm on-site substation and Fetteresso substation.

Plate 5.1: Route Options



5.1.2 A further eastern route option was considered to the south of Route Option 2b, but this was discounted at an early stage in the route option process given that a similar route option is also being considered and consulted upon for the Kintore – Fiddes - Tealing 400 kV Connection[9]. It was determined that the potential inclusion of an additional OHL for this project (i.e. the Glendye Wind Farm connection) within the same route as Kintore to Tealing would lead to challenging environmental and technical constraints, and therefore this option was removed from further consideration as part of this project.

Western Route Options

5.2 Route Option 1a

5.2.1 Route Option 1a would leave the Glendye Wind Farm substation and head in a north easterly direction through Glen Dye for approximately 5 km before passing over the B974 (Old Military Road). Beyond the B974 (Old Military Road) the route continues in an easterly direction for approximately 8 km through Drumtochty Forest. The route then progresses to the central connection zone where it would join with an eastern route option for onward connection to Fetteresso substation.

[9] Kintore-Fiddes-Tealing 400kV OHL Connection - SSEN Transmission (ssen-transmission.co.uk)

5.2.2 Photographs of Route Option 1a are shown in **Plate 5.2** below.

Plate 5.2: Route Option 1a Photographs

5.3 Route Option 1b

5.3.1 Route Option 1b would progress in an easterly direction from Glendye Wind Farm substation for approximately 4 km crossing open moorland prior to reaching the B974 (Old Military Road). From here, the route continues over a mix of open moorland and forestry within the vicinity of Goyle Hill prior to crossing areas of farmland upon approach to the central connection zone where it would join with an eastern route option for onward connection to Fetteresso substation.

5.3.2 Photographs of Route Option 1b are shown in **Plate 5.3** below.

Plate 5.3: Route Option 1b Photographs

5.4 Route Option 1c

5.4.1 Route Option 1c would progress east from the Glendye Wind Farm substation towards the B974, across areas of open moorland and steep ground. The hills of Whitelaws and Grey Cairns are located within the route option. After crossing the B974 (Old Military Road), the route would then progress a further 2 km over steep terrain in the vicinity of Redstone Hill, Birnie Hill and Loch Hill and Stack Burn. The route would then head northeast towards Drumtochy Forest. The route would then share the same route as Route Option 1b for the remainder of this route as it progresses though agricultural land before joining the central connection zone.

5.4.2 Photographs of Route Option 1c are shown in **Plate 5.4**.

Plate 5.4: Route Option 1c Photographs


Eastern Route Options

5.5 Route Option 2a

5.5.1 Route Option 2a commences at the central connection zone, and initially heads in a north easterly direction through approximately 2.6 km of Drumtochty Forest. The forestry within this part of the route is on rolling hills, comprising of Turf Hill, Cramla Bank and Scare Hill. The route would continue northeast over an area of open moorland, before re-entering the forestry within the vicinity of Hill of Bogjurga for approximately 4 km prior to reaching Fetteresso substation.

5.5.2 Photographs of Route Option 2a are shown in **Plate 5.5** below.

Plate 5.5: Route Option 2a Photographs


5.6 Route Option 2b

5.6.1 Route Option 2b passes over predominantly sloping lowland farmland for approximately 6 km, with rural residential dwellings and farm buildings located within or close to this route option. The route would then connect into Route Option 2a within the vicinity of Brae of Glenbervie to connect into Fetteresso substation.

5.6.2 Photographs of Route Option 2b are shown in **Plate 5.6**.

Plate 5.6: Route Option 2b Photographs

6. ENVIRONMENTAL BASELINE

6.1 Baseline Conditions

6.1.1 A baseline study was initially carried out to identify a broad range of potential constraints and opportunities within the Route Options Area, and its adjacent context. This has involved the following activities:

- Identification of environmental designated sites and other constraints, utilising GIS datasets available via NatureScot[10] Site Link[11];
- Identification of archaeological designations and other recorded sites, utilising GIS datasets available via Historic Environment Scotland[12,13] and Aberdeenshire Historic Environment Record (HER)[14];
- SEPA interactive Flood Risk Mapping and Future Flood Mapping[15][16];
- Review of the Aberdeen City and Shire Strategic Development Plan and the Aberdeenshire Local Development Plan (2023)[17] to identify further environmental constraints and opportunities, such as regional level designations or other locations important to the public;
- Review of landscape character assessments of relevance to the Route Options Area [18];
- Review of Native Woodland Survey of Scotland and Ancient Woodland Inventory data sets[19];
- Review of Ordnance Survey (OS) mapping (1:50,000 and 1:25,000 and online GIS data sources from OS OpenData) and aerial photography (where available) to identify other potential constraints such as settlement, properties, walking routes, cycling routes etc;
- Extrapolation of OS GIS data to identify further environmental constraints including locations of watercourses and waterbodies, roads classifications and degree of slope;
- Review of environmental information relating to wind farm or other relevant developments in the area, namely Fetteresso Forest Wind Farm, Glendye Wind Farm and Glen Dye Moor Restoration Project; and
- Review of other local information through online and published media such as tourism sites and walking routes.[20,21,22]

6.1.2 Desk-based studies were supplemented by high-level and targeted walkover surveys by the project team to obtain further site data and observations of localised constraints.

6.1.3 A summary of key environmental sensitivities and constraints present within the Route Options Area and relevant to the route options, are set out below.

6.2 Environmental Designations

6.2.1 The following natural heritage designations are present within the Route Options Area (see also **Figure 2**):

[10] Scottish Natural Heritage (SNH) became NatureScot on 24 August 2020
[11] SNH. SNHi Site Link. [online] Available at:: https://sitelink.nature.scot/home [last accessed 12/02/2024]
[12] Historic Environment Scotland Data Services. Portal. [online] Available at: http://portal.historicenvironment.scot/ [last accessed 12/02/2024]
[13] Royal Commission on Ancient and Historical Monuments of Scotland. Canmore. [online] Available at:: http://canmore.rcahms.gov.uk/ [last accessed 12/02/2024]
[14] Aberdeenshire Historic Environment Record (2023) (Online) Available at: https://online.aberdeenshire.gov.uk/smrpub/master/default.aspx?Authority=Aberdeenshire [last accessed 12/12/2024]
[15] Scottish Environmental Protection Agency. SEPA Flood Maps [online] Available at: http://map.sepa.org.uk/floodmap/map.htm [last accessed 12/02/2024]
[16] Scottish Environmental Protection Agency. SEPA Future Flood Maps [online] Available at: https://map.sepa.org.uk/floodmaps/FloodRisk/FutureFloodMaps#_3 [last accessed 12/02/2024]
[17] Aberdeenshire Local Development Plan (2023) (Online) Available at: https://www.aberdeenshire.gov.uk/planning/plans-and-policies/ldp-2023/ [last accessed 03/10/2024]
[18] NatureScot. (2019). Scottish Landscape Character Types Map and Descriptions [online] Available at: https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions [last accessed 12/02/2024]
[19] UK Government Open Data (online) Available at data.gov.uk [last accessed 12/02/2024]
[20] Munro Magic [online] Available at: http://www.munromagic.com/ [last accessed 12/02/2024]
[21] Walk Highlands [online] Available at: http://www.walkhighlands.co.uk/ [last accessed 12/02/2024]
[22] Scotways [online] Available at: https://www.scotways.com/ [last accessed 12/02/2024]

- The River Dee Special Area of Conservation (SAC); located within the northwest of the Route Options Area. The River Dee is a long, meandering river that flows through the north of Aberdeenshire to meet the North Sea at Aberdeen. The site is designated for the internationally important populations of freshwater pearl mussel (*Margaritifera margaritifera*) and Atlantic salmon (*Salmo salar*) and Otter (Lutra Lutra). Part of this SAC falls within the Route Options Area.
- Strathfinella Local Nature Conservation Site (LNCS) is situated within the Route Options Area. The LNCS is noted for its botanical interests, with the Slack of Birnie and the loch at within Glensaugh Research Farm being of particular note.

6.2.2 In addition, the following environmentally designated sites or LNCS are present within the wider area:

- Montrose Basin Special Protection Area (SPA), Site of Special Scientific Interest (SSSI) and RAMSAR; located between approximately 16 km and 18 km to the south of the Route Options Area. This is a European and nationally designated site supporting significant populations of wintering wildfowl, including migratory greylag and pink-footed goose.
- Gannochy Gorge SSSI lies approximately 6 km to the southeast of the Route Options Area. This is a nationally designated site with particular importance for mosses, liverworts and lichens rare beetles and exposure of rocks of a Devonian age.
- Feughside LNCS, is situated approximately 0.5 km northwest of the Route Options Area and is noted for its geomorphological interests representing the best part of a more extensive fluvio-glacial complex and locally rare plants in pinewood and mire.

6.2.3 Within the Route Options Area there are several areas included on the Ancient Woodland Inventory (AWI), defined as land that has been continually wooded, at least since 1750. Although these areas of woodland are not afforded legal protection, there is a presumption against their removal in planning policy.

Within the Route Options Area there are woodlands included on the AWI classified as being of both plantation, and semi-natural origin and long-established woodlands of plantation origin (LEPO). Ancient woodland is discussed further in **Section 6.7**.

6.3 Natural Heritage

Protected Species

6.3.1 European Protected Species (EPS) potentially present within the Route Options Area include bats which may roost in woodlands and trees, and likely use riparian corridors, woodland, woodland edges, tree lines and hedgerows for foraging and commuting. Areas of ancient woodland are likely to be of significant importance for bats. Other EPS species likely present within the Route Options Area include otter due to the presence of watercourses and burns that traverse across the Route Options Area, including the River Dee SAC, a qualifying feature of which is otter. Otter may use watercourse banks, woodlands and mature tree lines for denning and natal holts.

6.3.2 Other EPS are considered likely absent from the Route Options Area, including Scottish wildcat and beaver as their current extent across Scotland is limited and unlikely to be present within this area.

6.3.3 Other protected species may include water vole, red squirrel, pine marten, badger, reptiles, deer, and mountain hare.

Habitats

6.3.4 The predominant habitat types present across the Route Options Area comprise areas of plantation woodland, open moorland and open farmland. The plantation woodland is predominantly coniferous forestry plantation of low ecological importance. Some areas of woodland listed on the AWI are located within the Route Options Area itself, however the majority of these are of plantation origin.

6.3.5 The open moorland is comprised of areas of heathland and acidic/semi-improved grasslands and potential bog habitat that may qualify as Scottish Biodiversity List (SBL) habitats. Where areas of bog habitat may be present on areas of deeper peat, preliminary survey and review of aerial photography has indicated that these are likely to be generally modified bog due to its apparent poor condition, though areas of blanket bog in better condition / less modified may be present within the mosaics. As is typical in upland areas of Scotland, many habitats occur in mosaics of wet and dry heath, acid grassland, flush and blanket bog.

6.3.6 A number of Annex 1 habitat types may be present, including Tilio-Acerion forests, old sessile oak woods, Caledonian forest and alluvial forest, though these areas are generally of small extent in isolated patches across the Route Options Area.

Peatlands

6.3.7 Carbon and Peatland mapping is illustrated on **Figure 3.** This illustrates that the western extent of the Route Options Area is located within areas designated as Class 1 and Class 2 peatland. Class 1 and Class 2 peatland are considered nationally important carbon-rich soils, deep peat and priority peatland habitat which are considered to be of high conservation value. However, as discussed in paragraph 6.3.5, the peatland condition in this area is generally in poor condition, comprising of generally modified bog.

Water and Soils

6.3.8 There are numerous watercourses within the Route Options Area, including the tributaries of the Water of Dye, Luther Water, Bervie Water, Cowie Water and Carron Water to the northwest, southwest, centre, northeast and southeast respectively (see **Figure 4**). The Water of Dye is part of the River Dee SAC which has been designated for Atlantic salmon, freshwater pearl mussels and otters.

6.3.9 The Scottish Environment Protection Agency (SEPA) floodplain mapping shows that floodplains associated with the larger watercourses are largely confined to the watercourse corridors.

6.3.10 No Private Water Supply (PWS) data is currently available, however, given the rural location of the Route Options Area, it is likely that properties within the area are supported by PWSs. SEPA has records of several CAR[23] authorisations in the Route Options Area.

<u>Habitat Management Plans</u>

6.3.11 A Peat and Habitat Management Plan (PHMP) has been prepared for the consented Glendye Wind Farm, given the wind farm is located within an area of priority peatland habitat, and the construction of the development will require the excavation and management of peat soils. The PHMP comprises of targeted gully restoration and the restoration of open ground using boulder berms and peat infill, over a widespread area. As all western route options are required to cross areas included within the PHMP, SSEN Transmission will liaise with the wind farm developer and the Estate to minimise impacts on the restoration areas.

6.3.12 A Habitat Management Plan (HMP) was also produced post-consent as part of the Fetteresso Wind Farm Project. The principle aim of this HMP is to protect regional and local protected mammals including bats and protected wood ants. Further detail is to be provided by the wind farm developer to confirm how and where the HMP will be implemented.

[23] CAR authorisations are detailed water environment activities regulated by SEPA under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended).

Glen Dye Moor Restoration Project

6.3.13 Glen Dye Moor Restoration Project[24] (shown on **Figure 8**) consists of approximately 15,700 acres of land situated to the eastern edge of the Grampian mountains and is partially located within the west of the Route Options Area. The project is aimed at woodland creation and peatland restoration. The project will be designed and implemented by Scottish Woodlands over an anticipated 5-year period. It is anticipated that 3,000 acres of the estate will be designated as plant-able land, which will be developed over the life of the project. Woodland within the site will consist of two-thirds native woodland and one-third commercial crops, aimed at replicating, as near as possible the type of natural woodland habitat that would be found within the local area. In addition to woodland creation, up to 1,800 hectares of degraded peatland will be restored as part of the project. The project also focuses on employment and recreational opportunities for the local area.

Ornithology

6.3.14 Numerous bird species are present within the Route Options Area and have previously been recorded in the local area. This includes Schedule 1 raptor species. Wintering birds may also commute over the area, of which may include geese species associated with the Montrose Basin (SPA) to the south. A number of other SBL species likely use the woodlands, tree lines and hedgerows for nesting and foraging. Ground nesting birds are also likely to be present in areas of open moorland.

6.4 Cultural Heritage

6.4.1 Designated heritage assets include those protected by statute (Scheduled Monuments, Listed Buildings, Conservation Areas), or included in national (or international) inventories (World Heritage Sites, Inventory Gardens and Designed Landscapes, and Inventory Historic Battlefields). The following designated heritage assets are present within the Route Options Area:

- There are seven Scheduled Monuments within the Route Options Area. These include Bronze Age burial cairns, prehistoric field systems, a medieval deer park, and medieval/post-medieval farmsteads and field systems, and a WWII defensive 'stop-line'.
- There are ten Listed Buildings (two of Category A, three of Category B, and five of Category C) within the Route Options Area. These include Drumtochy Castle, St Palladius Episcopal Church, as well as stables, a limekiln, and farm buildings and road bridges.

6.4.2 Other cultural heritage assets include those that are not protected by statute or included in national (or international) inventories, but which nevertheless have archaeological of historic interest and are valued at national, regional, or local levels. Records of these assets are held within the Local Authority Historic Environment Record (HER).

6.4.3 There are 234 non-designated heritage assets within the Route Options Area. These include:

- Five classed in the Aberdeenshire HER as being 'Regionally Significant'; and
- 229 classed as being of 'Standard' (Local) significance (including nine that are artefact findspots only).

6.4.4 These non-designated assets cover a wide range of monument types from a variety of archaeological periods; from stone circles and burial cairns of likely late Neolithic/early Bronze Age date, hut circles and settlement remains of later Bronze Age and Iron Age date, to farmsteads and field systems of medieval or post-medieval date. Also recorded are military aircraft wreck sites and other military sites related to WWII defences. Nine sites are recorded as findspots: eight are of prehistoric artefacts and one is of medieval date. Artefact findspots are not a constraint but hint at archaeological potential in the vicinity.

[24] Glen Dye Moor Restoration Project (online) available at: https://glendyemoor.com/ (last accessed 07/12/2023)

6.5 People

Proximity to Dwellings

6.5.1 Within the eastern and southern areas of the Route Options Area, there are a number of scattered properties and farm steads. The nearest town out with the Corridor is Stonehaven, which lies approximately 6.5 km to the east. The villages of Drumlithie and Glenbervie, lie approximately 2 km to the southeast of the Route Options Area, and the village of Auchenblae lies approximately 1 km south of the Route Options Area. Other individual properties or groups of properties are located to the southeast of the Route Options Area, predominantly within the Brae of Glenbervie. Strachan is situated approximately 6.5 km to the north of the Route Options Area.

6.6 Landscape Character and Visual Amenity

Protected and Designated Landscapes

6.6.1 The Route Options Area is partially located within two Special Landscape Areas (SLA) identified by Aberdeenshire Council. These are the Braes of the Mearns SLA and Clachnaben and the Forest of Birse SLA. A summary of the SLA designation characteristics provided in the Aberdeenshire LDP[25] has been provided in **Table 6.1** below.

Table 6.1: Summary of Key SLA Characteristics

SLA	Summary
Braes of the Mearns	• Strong contrast between the distinctive flat Howe and the dramatic ridge of the Mounth to the north. • Clear expression of the Highland Boundary Fault, where Highland and Lowland Scotland meet. • Intact farmed landscape of the Howe of the Mearns, with a strong structure of beech woodland and avenues along the foot of the slopes. • Cairn O' Mount scenic viewpoint, a popular stopping place on the hill road with views across the Howe. • Strath Finella, an intimate wooded glen leading into the hills. • Wooded estate landscapes including Fasque, Fettercairn and Drumtochty. • Well known literary associations of the Howe of the Mearns including the work of Lewis Grassic Gibbon.
Chlachnaben and the Forest of Birse	• Strong, rolling relief of the upland landscape, including highly distinctive hill profiles the most recognisable of which is the crag of Clachnaben. • High wildness qualities including a virtual absence of habitation, limited access and rugged terrain. • Uninterrupted natural landcover of heather moorland across most of the area, with forestry on fringes. • A widely visible landscape, forming the backdrop to Deeside to the north, and with the landmark of Clachnaben seen from miles around. • Expansive area which continues seamlessly westwards into the Glen Tanar Forest area in the Cairngorms National Park. • Clachnaben is a popular hill summit, with views across the whole of this landscape and beyond. Remote Mount Battock is

[25] Aberdeenshire Local Development Plan (2021) Appendix 13 – Aberdeenshire Special landscape Areas available at: https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/Appendix13AberdeenshireSpecialLandscapeAreas.pdf

SLA	Summary
	the most easterly of the Corbetts (hills over 2500 feet), and there are several hill ascents accessible from Ballochan.

Landscape Character Types (LCTs)

6.6.2 The Landscape Character Assessment of Scotland, undertaken by NatureScot[26] identifies two Landscape Character Types within the Route Options Area. To the north, the Route Options Area falls within LCT 29 (Summits and Plateaux – Aberdeenshire) and to the east the corridor progresses horizontally through the LCT 24: Coastal Farmed Ridges and Hills – Aberdeenshire.

Potential Visual Receptors

6.6.3 Visual receptors within the Route Options Area comprise three different types:

- Views from built properties including residential areas and places of work;
- Views from routes including roads and recreational routes; and
- Views from other outdoor locations where the view is considered of recreational importance.

6.6.4 Settlement is mostly focused to the southwest of the Route Options Area around Fettercairn and the central eastern part of the Route Options Area where the villages of Glenbervie and Auchenblae are situated. Small clusters of residential dwellings and agricultural buildings are dispersed around agricultural land to the south of the Route Options Area.

6.6.5 Views may be obtained from a number of narrow, single-track, unnamed roads which cross the Route Options Area. These would be predominantly in the south with the exception of the B974, crossing the central northern part of the Route Options Area from north to south. The Cairn O'Mount viewpoint is located along the B974 and affords extensive views of the surrounding landscape.

6.6.6 Views may also be obtained by recreational users of Core Paths, Scottish Hill Tracks and more informal trails and recreational routes within the area, all of which may be sensitive to views of the Proposed Development. Recreation is discussed further in **Section 6.9**.

6.7 Forestry

6.7.1 The land to the northeast and centre of the Route Options Area is predominantly used for Forestry within the Drumtochty and Fetteresso Forest, consisting of mainly coniferous woodland. The Drumtochty and Fetteresso Forest are owned and managed by Forestry and Land Scotland.

6.7.2 Both Drumtochy and Fetteresso Forest are productive forests both managed through the Mearns Management Plan[27], where recreational activities, heritage and biodiversity play significant contributions to the plan.

6.7.3 Throughout the Route Options Area there are a number of relatively small and scattered patches of Native Woodland, with some classified as being open land habitat. Native Woodland is defined as woodlands where the canopy cover is composed mainly of native species (i.e. over 50 %). Native Woodland is identified through the Native Woodland Survey of Scotland (NWSS): a survey of all native woodland areas, nearly native woodlands and non-native Plantations on Ancient Woodland Sites (PAWS) in Scotland. NWSS within the Route Options Area include areas of PAWS with Native Pinewood featuring and other native woodland

[26] Scottish Natural Heritage. (2019). Scottish Landscape Character Types Map and Descriptions [online] Available at: https://www.nature.scot/professional-advice/landscape/landscape-character-assessment/scottish-landscape-character-types-map-and-descriptions

[27] Forestry and Land Scotland : Mearns Forestry Plan (online) available at: https://forestryandland.gov.scot/images/corporate/design-plans/moray-aberdeenshire/mearns-land-management-plan-text.pdf

categories. The concentrations of NWSS within the Route Options Area occur to the centre and south, within areas of scattered woodland.

Ancient Woodland

6.7.4 In Scotland, Ancient Woodland is defined as land that is currently wooded and has been continually wooded since at least 1750[28], generally based on the Roy maps. Within the Route Options Area there are several areas of AWI present which overlaps with NWSS in many of these areas. Most of the woodland identified within the Route Options Area is Long Established Plantation Origin (LEPO) woodland and Other Woodlands on Roy (see **Figure 7**). These types of woodland generally do not exhibit ancient characteristics due to the plantation nature and have impoverished habitat diversity.

6.8 Agriculture

6.8.1 Areas of agricultural land are classified by The Macaulay System of Land Capability for Agriculture[29] which ranks land based on its potential for productivity and cropping flexibility. There are seven classes in total, where Class 1 has the highest potential for agriculture and Class 7 has the lowest.

6.8.2 The majority of the land to the west of the Route Options Area, is Class 6.3, which is land capable of rough grazing only. There are areas of land capable of use as improved grassland (5.1 and 5.2) towards the north west and centre of the Route Options Area. Towards the southeast of the Route Options Area, the land is capable of supporting mixed agriculture (Class 3.2) which is capable of producing a moderate range of crops.

6.9 Recreation

6.9.1 Recreational interests in the area include Core Paths, Scottish Hill Tracks and more informal trails and recreational routes. To the west, these comprise trails through Glen Dye and other routes that provide access to surrounding hills, including the summit of Clachnaben. In the central and eastern parts of the Route Options Area, there are a number of Core Paths, such as the Mid Kinmonth Circular and the Auchenblae Monboddo Link, and other walking routes such as the Strathfinella walking route. Longer distance trails in the form of the Strachan to Auchenblae and Strachan to Glenbervie Scottish Hill Tracks also pass through the central and eastern parts of the Route Options Area. Fetteresso Forest also comprises walking and mountain biking trails that are used recreationally.

6.9.2 Drumtochy and Fetteresso Forests are used for recreation as they promote forest walks and mountain bike trails, located across the northeast, central and southwest areas of the Route Options Area. The forest was historically associated with 19th Century Drumtochty Castle, which is located within the southern extent of the Route Options Area and offers itself as a wedding venue and luxury accommodation.

6.9.3 Glensaugh Research Farm is one of The James Hutton Institute's research facilities, and is situated to the southwest of the Route Options Area. The farm is one of 11 UK sites in the Environmental Change Network (ECN) which measures the long-term changes in dry and wet aerial deposition, water quality, soil characteristics, vegetation, and wildlife. The farm aims to become climate positive[30].

6.9.4 Shooting and deer stalking activities occur on Glen Dye Estate. The estate is currently utilised for recreational and educational purposes by local scout clubs, with future plans for the estate to facilitate research work by local schools, colleges and universities. It is anticipated that footpaths will be improved across the estate to allow for further community access as part of the Glen Dye Moor Restoration Project.

[28] NatureScot (2011). A guide to understanding the Scottish Ancient Woodland Inventory (AWI). Available at: https://www.nature.scot/guide-understanding-scottish-ancient-woodland-inventory-awi

[29] The James Hutton Institute. (2020). *Land Capability for Agriculture in Scotland*. [Online] Available at: https://www.hutton.ac.uk/learning/exploringscotland/land-capability-agriculture-scotland

[30] James Hutton Institute (online) available at: https://openscience.hutton.ac.uk/dataset/spatial-datasets-for-glensaugh-research-farm

6.9.5 The River Dee is situated to the northeast of the Route Options Area, which is popular for salmon fishing, although there are no designated fishing spots within the vicinity.

6.10 Planning Proposals

6.10.1 The identification of planning proposals has focussed primarily on those within the Route Options Area to identify those where the potential for direct impacts as a result of the Proposed Development may occur.

Current Planning Applications

6.10.2 A search of the Aberdeenshire Council planning portal has identified a number of current applications for planning permission within or adjacent to the route options under consideration. These are generally applications related to residential dwelling alterations.

Consented Wind Energy Development

The following recently consented wind energy developments have been identified within a 5 km radius of the Route Options Area (shown on **Figure 8**);

- Fetteresso Wind Farm, located to the north of the Route Options Area within Fetteresso and Drumtochty forestry, and adjacent to the existing Mid Hill wind farm development. Comprises the erection of ten wind turbines (amended from twenty-seven) and associated ancillary infrastructure, and granted consent in September 2022 (ref: ECU00001851);
- Herscha Hill 2, located approximately 2.5 km to the southeast of the Route Options Area, and approximately 0.5 km to the northwest of the A90 motorway near Upper Criggie. Granted consent in March 2018 (ref: APP/2018/0073); and
- Glendye Wind Farm, related to this grid connection project and located on the Glen Dye and Fasque Estate, situated approximately 5 km northwest from the village of Fettercairn and 12 km west from the village of Strachan. The application was submitted to the Energy Consents Unit (ECU) of the Scottish Government in October 2018 and was granted consent in October 2023 (ref: ECU00000676).

Other Relevant Developments

6.10.3 As the Transmission Network Owner for the north of Scotland, SSEN are proposing a range of projects across the northeast[31] and east coast[32] of Scotland. Based on the requirements outlined in National Grid Electricity System Operator (ESO) Pathway to 2030 Holistic Network Design, SSEN have developed proposals for a new 400 kV OHL between Kintore and Tealing. This requires two new 400 kV substations to be constructed to connect to this new OHL, one in Fetteresso Forest (Hurlie)[33] and one near Tealing (Emmock)[34] in Angus to enable required future connections and export routes to areas of demand. Together, these projects form part of the East Coast 400 kV Phase 2 projects.

6.10.4 The Kintore to Tealing 400 kV OHL project is currently at the routeing stage. Following a consultation exercise, a Report on Consultation was produced in December 2023[35] on the proposed route options to be taken forward to alignment selection stage. Of these route options, Route Option D4 and D5 fall within the Route Options Area of this connection project. Works are also proposed at the existing Fetteresso substation to upgrade the substation to operate at 400 kV[36].

[31] North East - SSEN Transmission (ssen-transmission.co.uk)
[32] East Coast - SSEN Transmission (ssen-transmission.co.uk)
[33] Hurlie Substation – SSEN Transmission (ssen-transmission.co.uk)
[34] Tealing (Emmock) Substation – SSEN Transmission (ssen-transmission.co.uk)
[35] Kintore-Fiddes-Tealing 400kV OHL Connection - SSEN Transmission (ssen-transmission.co.uk)
[36] Fetteresso 400kV Upgrade - SSEN Transmission (ssen-transmission.co.uk)

6.10.5 As noted in paragraph 6.3.13, the Glen Dye Moor Restoration Project is partially located within the west of the Route Options Area and is aimed at woodland creation and peatland restoration. The restoration project interacts with the western route options.

7. COMPARATIVE APPRAISAL

7.1.1 This section provides a summary of the potential environmental, technical and economic constraints identified for each route option following the topic areas as outlined in section 4.3.4. Reference should also be made to **Figures 2 to 8**.

Environmental Topic Areas

7.1 Natural Heritage

Designations

7.1.1 European designated sites that may present a constraint to the development include Montrose Basin SPA and the River Dee SAC. Though the Montrose Basin SPA is located over 12 km south of the Route Options Area at its closest point, due to it being designated in part for its geese species (which commute long distances), this designation is considered to be within potential connectivity distance to the Proposed Development. The SPA may therefore pose a constraint to Route Options 1a, 1b and 1c. Due to the SPA being over 20 km from Route Options 2a and 2b, it is unlikely to present a constraint to these options.

7.1.2 The River Dee SAC is designated for freshwater pearl mussel, Atlantic salmon and otter. The SAC lies partly within the Route Options Area, and intersects with Route Option 1a, thus presenting a constraint to this option in terms of its presence and the potential for direct and indirect effects, albeit there are opportunities within the route option to avoid the SAC and mitigate effects were this option taken forward to alignment selection stage. Route Options 1b, 1c and 2a all lie within 5 km of the SAC and may be within its zone of influence and so indirect effects may also be possible for these route options whereas, Route Options 2b does not lie within the zone of influence of any European designated sites.

7.1.3 There are no further designated sites within the Route Options Area, or within 5 km. Strathfinella Local Nature Conservation Site (LNCS), a non-statutory site, is located within the Route Options Area and is designated for its botanical interest. This site may pose a constraint to Route Option 1b and 1c in particular as it lies within these options. Route Option 1a lies within 2 km of this site, but constraints are unlikely at this distance. All other route options are unlikely to be constrained by this site.

7.1.4 Areas of ancient woodland are present within all route options, but they are generally of small scale. Route Options 1a, 1c and 2a support the largest areas of ancient woodland. These areas are predominantly classed as LEPO, with small pockets of semi-natural woodland (Class 1a or 2a). There would be opportunities to minimise interaction with ancient woodland for the most part, although it should be noted that were Route Options 1a and 2a selected as the proposed route then avoidance of ancient woodland (LEPO) may not be possible due to the location of ancient woodland connecting between these two option areas.

7.1.5 Given opportunities to avoid interaction with, or mitigate, potential effects on designated sites (including ancient woodland), an **Amber** RAG rating is applied to Route Options 1a, 1b, 1c and 2a. It should be noted however that Route Option 1a would be constrained more than other options given the presence of the River Dee SAC within this route option and the potential for direct and indirect effects, albeit there are opportunities to avoid and mitigate effects. The connection between Route Option 1a and 2a does also present greater constraints in terms of the potential for ancient woodland (LEPO) loss. Route Option 2b has been allocated a **Green** RAG rating as it is not likely to be constrained by designated sites.

Protected Species

7.1.6 All route options pass through, to varying degrees, a mix of woodland and / or open moorland habitats that could support protected species such as bat, badger, pine marten and red squirrel, and would cross a number

of watercourses that could support otter and water vole. The potential for constraint at this stage across all route options is comparable, and therefore all route options have been allocated a RAG rating of **Amber** for protected species. Minimising effects on habitats of importance to protected species will need to be reviewed during the alignment selection stage.

Habitats

7.1.7 There is potential for Annex 1 habitats to be present across all route options.

7.1.8 For the western route options, potential Annex 1 habitats typically comprise small pockets of Caledonian forest, old sessile oak woodland and Tilio-Acerion forests, although these areas should be relatively easy to avoid during the alignment selection stage. There may be potential for blanket bog to be present within the moorland areas of all western route options, however given the human and climatic derived pressures, and apparent eroded nature of the habitat, the habitat composition may align with Annex 1 species assemblage but may not be of the quality or extent to be classed as Annex 1. All western route options may also support larger areas of SBL habitats including areas of heathland and acidic/semi-improved/unimproved grasslands, as well as potential bog habitats that may qualify as SBL habitats. Given these potential constraints but acknowledging the opportunities for micro-siting to minimise potential impacts, all western route options are assigned an **Amber** RAG rating.

7.1.9 To the east, Route Option 2a comprises mainly forestry plantation and lowland farmland of arable and pastoral fields but does have potential for areas of (Annex 1) Caledonian Forestry, and Old Sessile Oak Woodland to be found within the route option. These areas are anticipated to be small in size, and through design and micro siting it is anticipated that these would be avoidable. On this basis a **Green** RAG rating has been applied to this route option.

7.1.10 Route Option 2b comprises mainly lowland farmland of arable and pastoral fields. It does however have potential for areas of Annex 1 habitats such as Caledonian forest, alluvial forest, and old sessile oak woodland to be found in both the western and eastern extents of this route option. In particular, the strip of alluvial forest at the western most part of this route option traverses north to south across the whole route option. Further investigation is required here to establish if the sections of alluvial forest is of Annex 1 habitat quality. At present an **Amber** RAG rating has been applied to this route option, but this could potentially increase depending on habitat quality and alignment chosen.

Ornithology

7.1.11 All of the route options are presented with potential constraints as a result of birds. Though presence/absence of species is not known at this stage, suitable habitats are present in all route options to support sensitive bird species. The route options with the greatest potential for constraints as a result of nesting birds includes Route Options 1a, 1b, 1c, and 2a due to the proportion of woodland in these areas. However, smaller areas of woodland are present in Route Option 2b, which may present constraints to a lesser extent. Route Options 1a, 1b and 1c in particular may present constraints due to potential presence of ground nesting birds and loafing/foraging birds within open moorland habitats. All route options are assigned an **Amber** RAG rating for ornithology.

Geology, Hydrology and Hydrogeology

7.1.12 Priority peatland mapping highlights that Route Options 1a, 1b and 1c would pass through areas of Class 1 and 2 peatlands. Route Option 1b crosses the largest amount of priority peatland, whilst Route Option 1c would cross through the least. Targeted peat depth probing, and geomorphological mapping has been undertaken to inform western route options, focussing on Route Options 1a and 1b given they cross greater extents of peatland habitats, and engineering constraints associated with Route Option 1c. Within Route Option 1a, the

more steeply sloping valleys of the Water of Charr results in peat being present on shallower slopes or in the flatter areas. To the east of the B974, peat is also present in flatter areas, and there is an extensive area of peat to the north of Hill of Gothie. Within Route Option 1b, extensive areas of peat exist, with areas of deep peat, and extensive peat hagging and erosional features between the Glendye Wind Farm substation and the B974. Beyond the B974, extensive areas of peat and blanket bog also exist within the route. There are also shallower areas of peat and mineral soils which offer opportunities to avoid or minimise interaction with the deeper areas of peat present.

7.1.13 For western route options, it will be necessary to confirm the presence of peat and its condition through further survey effort during the alignment selection stage of the project and review this data with other environmental and engineering constraints in order to identify a suitable alignment.

7.1.14 None of the eastern route options cross through any priority peatland.

7.1.15 Watercourse crossings would be necessary for all route options, and all permanent structures would need to be set back from the watercourse channel to protect against exposure from natural processes leading to watercourse meandering and migration.

7.1.16 SEPA floodplain mapping shows flood extents are generally confined to the watercourse Route Options Area. Potential for flood risk during the construction stage and the siting of construction related infrastructure would need to be given appropriate consideration for all route options.

7.1.17 All route options have been allocated a RAG rating of **Amber** for Geology, Hydrology and Hydrogeology.

7.2 Cultural Heritage

Cultural Heritage Designations

7.2.1 There are no Scheduled Monuments within any of the route options and only Route Option 1a comprises a Listed Building (a late 18th century road bridge crossing the Spital Burn in Glen Dye) at the northern edge of the route option, but this should not constitute a constraint. All route options are therefore rated **Green** for designated heritage constraints.

7.2.2 In terms of designations within 1 km of the route options, the only designated heritage asset where an impact on its setting is likely to be a potential constraint, is Cairn o' Mount, cairns (SM 4968). This pair of Bronze Age burial cairns is set in a prominent position adjacent to the B974 (Old Military Road) and is a recognised viewpoint. There are wide ranging views from the monument, principally to the south, and the larger of the two cairns is prominently visible on the skyline in views from the south. It is also a heritage asset recognised as contributing to the character of the Braes of Mearns SLA and the management recommendation for that SLA advises that 'Impact of development at both long and short ranges towards the Cairn o' Mount scenic viewpoint should be carefully considered to ensure that any negative impacts to the view are not disproportionate or disrupted'. In this regard, careful consideration will need to be given to this asset if routeing an alignment through either Route Option 1b or Route Option 1c is taken forward. Assuming an appropriate alignment can be achieved that minimise these effects, the RAG rating would remain as **Green**. This would need to be considered further at the alignment selection stage.

Cultural Heritage Assets

7.2.3 For non-designated heritage assets, there is little to distinguish between most of the route options in terms of the character of the assets within them. Most sites are of post-medieval date and mainly relate to farming activities.

7.2.4 Route Option 1a is rated as **Amber** for potential impacts on non-designated assets due to the presence of regionally significant depopulated townships along Glen Dye, which also have other remains of depopulated farming settlement close by. These sites together create a pinch point, narrowing the area within Route Option 1a where avoidance of direct impacts on these assets is readily achievable.

7.2.5 For all other route options, a **Green** RAG rating is applied.

7.2.6 Potential impacts on the settings of non-designated heritage assets are not generally a material constraint, except in cases where those heritage assets are potentially of schedulable quality, such that would warrant their elevation to the status of designation as Scheduled Monuments. In terms of such a possibility, the 'Regionally Significant' depopulated townships in Glen Dye (Route Option 1a) could reasonably be anticipated to qualify as being of schedulable quality. This should be taken into account when weighing the suitability of routeing an OHL alignment through Route Option 1a as opposed to other alternatives.

7.3 People

Proximity to Dwellings

7.3.1 For the western route options, the presence of residential properties and buildings is typically sparse. There are no residential properties or buildings (apart from a bothy) located within Route Option 1a, whilst there is only one building in Route Option 1b and several buildings in Route Option 1c. There are clusters of buildings and properties just outwith Route Options 1b and 1c. All western route options are allocated a **Green** RAG rating.

7.3.2 For eastern route options, Route Option 2a does not pass over any buildings or residential properties, albeit there are some buildings located to the south of the route. This has been allocated a **Green** RAG rating. Route Option 2b has a number of buildings scattered throughout the route, with additional buildings in close proximity to the route, predominantly to the southwest. There are opportunities to avoid close proximity to dwellings within Route Option 2b, and therefore an **Amber** RAG rating is allocated to this route option.

7.4 Landscape and Visual

Landscape Character

7.4.1 Considering the three western route options, which are predominantly situated within LCT 29: Summits and Plateaux – Aberdeenshire, Route Option 1a would affect more sensitive landscapes as it stretches through Glen Dye towards Clachnaben. Route Option 1a has been allocated an **Amber** RAG rating given these sensitivities. However, Route Options 1b and 1c have also been allocated an **Amber** RAG rating due to their potential to affect the simpler landscape to the west, and particularly around the B974 where the landform is characterised by steeper topographic changes.

7.4.2 Route Option 2a stays entirely within LCT 29 while both Route Option 2b would go through LCT 29 and LCT 24: Coastal Farmed Ridges and Hills – Aberdeenshire. Although Route Option 2a is located further east in LCT 29, where the landscape is generally less sensitive low-lying land, it interacts with a larger portion of Fetteresso Forest. Given the potential for felling associated with a wayleave to adversely affect the character of the area, an **Amber** RAG rating has been allocated for Route Option 2a.

7.4.3 Route Option 2b is split almost evenly between LCT 24 and 29 crossing back and forth over the borders of the two characteristic regions as it continues from west to east towards Fetteresso Substation. The route largely avoids the more forested parts of LCT 29, passing through the characteristic rolling lowlands. The route is influenced by existing infrastructure within the wider area, although the rolling landscape limits this, and the introduction of an OHL has the potential to distract from the existing character. An **Amber** rating has therefore been applied.

Visual

7.4.4 Route Option 1a would cross the B974 and the Strachan to Auchenblae trail, which could lead to briefly obtained views from these routes. Other trails exist within or close to this route option as it crosses through Glen Dye Estate, including a trail through Glen Dye itself which runs alongside the Water of Charr and Water of Dye. There would also be potential for views to be obtained from the popular hill summit of Clachnaben as the route descends into Glen Dye, although it is considered that there is potential for an alignment to be found which minimises views from the summit. The route would also cross a section of the peatland restoration and woodland creation project planned for the Glen Dye Estate. An alignment through this area would limit the potential for mixed native and productive confer woodland creation within Glen Dye. Given these constraints, an **Amber** RAG rating.

7.4.5 Although opportunities to minimise potential visual effects from recreational receptors for Route Options 1b and 1c exist there may be some scattered properties where potential views of an alignment would be obtained, however mature vegetation and undulating topography would likely limit these. Both routes would have visibility from the Cairn O'Mount viewpoint on the B974. Route Option 1c would appear within the main field of view south from the viewpoint, while Route Option 1b it would be to the north, outwith the main field of view from the viewpoint. An **Amber** rating has been applied for both Route Options 1b and 1c.

7.4.6 Although potential visual receptors within Route Option 2a are limited, there are a number of recreational routes and trails through the forested areas that could be subject to adverse visual effects as a result of an OHL within this route option, and associated felling. It is anticipated however that an alignment could be achieved that minimises these effects, and as such a **Green** RAG rating has been applied.

7.4.7 Due to the more settled nature of the surrounding area, Route Option 2b comprises a number of dwellings within its vicinity, including three that fall within the route option itself. There is potential for some effects on visual receptors but given the presence of similar infrastructure in the wider area the introduction of a trident steel pole is unlikely to be dominant or notably intrude in views, and the rolling nature of the landscape may further limit potential views. Thus, an **Amber** RAG rating has been applied.

7.5 Land Use

Agriculture

7.5.1 All western options comprise areas of Class 5.1, 5.2 and 6.3 agricultural land, which is deemed to be suitable for improved grassland and rough grazing only. As such, a RAG rating of **Green** has been allocated to all western route options for impacts on Agriculture.

7.5.2 For eastern options, Route Option 2a does pass through some areas of lowland farmland but this is typically improved grassland (Class 5.1 and 5.2), and land that is capable of producing a narrow range of crops (4.1). No grade 1, 2 or 3 agricultural land present and therefore this route option is assigned a **Green** RAG rating.

7.5.3 Route Option 2b would pass through land capable of producing a narrow range of crops (4.1), with some areas of land capable of producing a moderate range of crops (Class 3.2). As this route option would typically affect lower quality agricultural land (3.2 and below), a **Green** RAG rating has been applied.

Forestry

7.5.4 Route Option 1a cuts through commercial forestry plantations on both private (Glen Dye Estate) and publicly-owned land (Drumtochty Forest; FLS). Areas of native woodland and AWI (LEPO) are also located within this route option. This route option would cross over areas of land targeted within the Glen Dye Moor Restoration project for forestry regeneration. Given that the route would unavoidably cut through commercial forestry and

has the potential to impact upon areas of native woodland and LEPO, as well as the future plans on Glen Dye Estate, a **Red** RAG rating is applied.

7.5.5 Whilst similar constraints exist for Route Options 1b and 1c, the forestry and woodland areas are fewer than Route Option 1a, and there are greater opportunities to minimise effects. As such, an **Amber** RAG rating has been applied to Route Options 1b and 1c.

7.5.6 For eastern options, Route Option 2a passes through large areas of forestry within Fetteresso Forest. Areas of native woodland are also found within the route, including upland oakwood, birchwood and native pinewoods and would appear to be unavoidable. Furthermore, approximately 110 ha of woodland identified on the AWI as LEPO (2b) are to be found within this option. Given the extent of commercial forestry that would likely require felling to accommodate an OHL within this route option, and the presence of AWI and NWSS, this route option has been given a **Red** RAG rating.

7.5.7 Impacts on forestry for Route Options 2b are more limited, and typically restricted to where the routes enter forestry around Fetteresso substation. Whilst impacts are limited, some effect on forestry would be likely and therefore an **Amber** RAG rating has been applied to this route option.

Recreation

7.5.8 Constraints on recreational interests for the western route options are typically focussed on trails and walking routes within the upland areas, which provide access to remoter areas and popular hill tops within the vicinity. Other interests include the River Dee and shooting activities on Glen Dye Estate. The estate is currently utilised for recreational and educational purposes by local scout clubs with future plans for the estate to facilitate research work by local schools, colleges and universities. The Glen Dye Restoration Project located within the estate includes plans to improve access across the estate, with a particular focus within Glen Dye itself. All route options are similarly constrained by these recreational constraints, both in terms of short-term disruption during construction and longer-term visual effects from these routes. However, Route Option 1a is likely to be the most constrained given the current use and importance of this area through Glen Dye, and the future plans of the estate as part of the Glen Dye Moor Restoration Project. Nevertheless, all western route options are allocated an **Amber** rating for recreational purposes. Route Options 1b and 1c would also pass over Glensaugh Research Farm, but it is anticipated that there would be opportunities to minimise interaction with, or disruption to, the farm.

7.5.9 Of the eastern route options, Route Option 2a is situated within Fetteresso Forest, which is popular for walkers, mountain bikers and horse riders. An OHL within this route option would therefore have potential for short term and minor disruption, especially within proximity of recognised walking. Whilst opportunities to minimise effects on recreational users are likely, given the presence of recreational routes an **Amber** RAG rating has been applied. There are fewer recreational interests within Route Option 2b and opportunities to minimise any potential effects are present. As such, a **Green** RAG rating is applied to this route.

7.6 Planning Context

Policy

7.6.1 This development would be recognised in NPF4 as a National Development under ND3 ‘Strategic Renewable Electricity Generation and Transmission Infrastructure’ and would therefore receive strong in-principle support from NPF4. The Proposed Development forms a vital element to deliver network and grid infrastructure required to deliver the UK and Scottish Government’s legally binding targets for net zero emissions and renewable energy electricity generation objectives.

7.6.2 Compatibility with NPF4 and Aberdeenshire Local Development Plan policies will in large part depend on avoiding or minimising potential constraints noted, particularly in relation to potential impacts on the natural environment given presence of designated sites, areas of peatlands and ancient woodland and areas of landscape importance.

7.6.3 All route options have been allocated an **Amber** RAG rating to recognise the potential constraints noted, but also acknowledging the opportunities to mitigate these during the alignment selection and EIA / EA stages of the project, as well as the status of the project as National Development in NPF4.

Proposals

7.6.4 All western route options would cross the Glen Dye Moor peatland restoration and woodland creation project within the Glen Dye Estate, but Route Option 1a crosses this project to a greater extent. Should Route Option 1a be taken forward to alignment selection stage, discussion would need to be held with Scottish Woodlands and the Estate to see how an OHL alignment could be accommodated alongside the project proposals. It is anticipated that opportunities exist to minimise impacts on the restoration project for Route Options 1b and 1c. These options have therefore been allocated an **Amber** RAG rating, whereas Route Option 1a has been allocated a **Red** RAG rating. Route Option 1a would also cross the southern extent of the proposed Fetteresso Wind Farm, and a sufficient buffer distance between the proposed OHL and this wind farm would need to be maintained.

7.6.5 For eastern route options, Route Option 2a also crosses the southern extent of the proposed Fetteresso Wind Farm, and therefore an Amber RAG rating has been applied to this route option. Route Option 2b is not impacted by any planning proposals, and therefore a Green RAG rating has been applied.

7.7 Engineering Topic Areas

Infrastructure Crossings

Major Crossings

7.7.1 Major infrastructure crossings[37] can present many obstacles when designing and constructing an OHL and therefore, it is advantageous to avoid multiple crossings if possible.

7.7.2 None of the western route options have any major crossings. However, both eastern route options would involve two pipeline crossings. Therefore, a **Red** RAG rating has been assigned to all eastern route options, while all western route options have received a **Green** RAG rating.

Road Crossings

7.7.3 All route options are situated within a mix of upland moorland, agricultural and forestry land and would involve crossing multiple tracks, ranging from 6-10 tracks per route. Route Options 1a, 1b and 1c would also cross one B class road, the B974. Therefore, all route options have been assigned an **Amber** RAG rating.

Environmental Design

Elevation

7.7.4 The elevation on which an OHL is constructed can have a significant effect in terms of influencing both wind and ice loading. Although the altitude of the route options is above 200 m AOD they are still at elevations which are constructable with steel pole trident structures.

[37] Major infrastructure crossings include high voltage transmission lines, rail lines, wide rivers (greater than 200 m), navigable canals, gas pipelines, and hydro pipelines

7.7.5 The altitude along all of the route options (using a centreline for the purposes of this assessment) would be greater than 200 m AOD, and therefore all route options have been allocated a **Red** RAG rating.

Contaminated Land

7.7.6 Desk based studies have confirmed that there are no known unexploded ordnance (UXO) in the areas surrounding the route options. Also, there were no known areas of contaminated land found during this assessment and a **Green** RAG rating has been allocated to all route options.

Flooding

7.7.7 There are three types of flooding which must be considered; Coastal, Surface and River. Potential for flood risk has been based on SEPA publicly available data to determine if less than 80% of the width for less than 2% of the length of any route options was found to be within the 1:200 year flood zone.[38][39]

7.7.8 Desk based review indicated that all of the route options have a low (1%) chance of river and coastal flooding. Therefore, all route options have been assigned a **Green** RAG rating.

Ground Conditions

Terrain

7.7.9 Unfavourable terrain can lead to many design and construction related challenges for new OHL builds. Steep slopes, mountainous terrain and / or cliffs create difficult obstacles for OHLs to cross and it is therefore preferred to limit construction in this terrain where possible. Another consideration is pinch points and areas within the Route Options Area with limited options to achieve a potential route.

7.7.10 All of the western route options (1a, 1b and 1c) pass through mountainous terrain near the consented Glendye Wind Farm. Route Options 1a and 1b then continue through forestry land with high elevation, while Route Option 1c continues in high elevation terrain with steep slopes for approximately 10 km.

7.7.11 Route Option 2a progresses through forestry with high elevation and steep slopes throughout the route until it arrives at Fetteresso Substation. Route Option 2b has a lower maximum slope of 19.5%, and initially progresses through agricultural land before proceeding through forestry terrain with increasing elevation until reaching Fetteresso Substation. Route Option 2b has therefore been assigned an **Amber** RAG rating, while all remaining route options have been assigned a **Red** RAG rating.

Peat

7.7.12 Construction in areas of peat can pose engineering challenges during both the design and construction stages of an OHL build. In addition, construction in peat can lead to increased construction and maintenance costs and therefore, should be reduced or avoided where possible. The route options are located within Class 1 and Class 2 peatland. The exact extents of the lengths and depth of the peat will be determined upon carrying out the site investigation works.

7.7.13 RAG ratings are **Red** for all western route options, and **Green** for both eastern route options.

Construction / Maintenance

7.7.14 Constructability is an important consideration for all OHL developments considering the wide-ranging terrain and multiple obstacles that are often encountered. Therefore, consideration of access routes and the number of

[38] Scottish Environmental Protection Agency. *SEPA Flood Maps* [online] Available at: http://map.sepa.org.uk/floodmap/map.htm

[39] Scottish Environmental Protection Agendy SEPA Future Flood Maps [online] Available at: https://map.sepa.org.uk/floodmaps/FloodRisk/FutureFloodMaps#_3

critical angle poles to be used on this OHL is important for the construction and future maintenance requirements of the line.

Access

7.7.15 Adequate access is an important consideration for both construction and maintenance activities. Positioning an OHL in close proximity to existing public roads and networks of tracks will provide ease of access and can greatly reduce costs associated with the construction stage.

7.7.16 For Route Options 1a and 2a, forestry and estate access tracks are present which provide opportunities for use (subject to upgrading) to facilitate construction of the OHL. Therefore, a **Green** RAG rating has been applied for both route options. Route Option 2b is located in agricultural land with access available from nearby tracks and public roads and is also allocated a **Green** RAG rating. Route Options 1b and 1c cross mountainous terrain, with some sections along the route difficult to access from existing tracks, these routes therefore have been rated an **Amber** RAG rating.

Angle Poles

7.7.17 Angle poles are important components of an OHL as they are primarily used in 'stringing' operations and failure containment. Due to the nature of angle poles, higher loads are required to be designed into the structures and larger foundations and more complex installations are often required.

7.7.18 At this stage, it is anticipated that Route Option 2a will require significantly less angle supports in comparison to the rest of the route options. The western route options are anticipated to need a large number of angle poles, due to undulating terrain and steep topography of the landscape within these route options. Consequently, Route Option 2a has been assigned a **Green** RAG rating, while the rest of the route options have been assigned an **Amber** RAG rating.

Proximity

7.7.19 The location of an OHL relative to structures and settlement of people is an important consideration when selecting a proposed route. OHLs must be an adequate distance from buildings in order to ensure electrical clearance limits are achieved, but also in order to reduce the impact on households of the construction of a piece of key infrastructure in their vicinity. From an operability and maintenance viewpoint, wind turbines near OHLs have been found to potentially increase the occurrence of conditions suitable for aeolian vibration leading to the premature wear of the conductor through fatigue. Potential structural failure of wind turbines leading to collapse onto an OHL is also a consideration.

Clearance Distance

7.7.20 Assessment of the route options was undertaken to determine the clearance distances available between buildings and dwellings.

7.7.21 All western route options have low proximity to buildings, with 1 farm located within Route Options 1b and 1c, and 1 non-residential building within Route Option 1a. There are no buildings or properties that come within a 100 m of distance of Route Option 2a. Route Option 2b has two farms within the route with residential and non-residential buildings, however the route is narrow and passes between some residential buildings in more than one location which may create potential issues when considering an alignment for the OHL. These pinch points would require close and careful consideration at alignment selection stage should this option be progressed. As such, Route Option 2b has been allocated an **Amber** RAG rating, while the remaining route options have been allocated a **Green** RAG rating.

Proximity to Wind Farms

7.7.22 Wind farms pose a risk to OHLs due to disruption of airflows which can cause wake on OHL conductors. Due to the wake effect, there are chances of increased conductor vibrations which cause fatigue in conductors and eventually results in the breaking of conductor strands. Therefore, to achieve the desired life of the conductor it is standard practice to keep the OHL's outwith a three-rotor-diameter buffer of any turbines wake effect.

7.7.23 Upon leaving the proposed Glendye Wind Farm substation, all western route options would fall within a three-rotor-diameter of the Glendye Wind Farm turbines. An underground cable section would likely be required with all route options on approach towards Glendye Wind Farm Substation. Excluding the proposed Glendye Wind Farm, no wind farm crossings occur in the proximity of Route Options 1b and 1c.

7.7.24 Route Option 1a and 2a travel through the consented Fetteresso Wind Farm, with the closest wind turbines estimated to be more than 1 km from the routes' central line. Route Option 2a also contains the operational East Town wind turbine within its route, anticipated to come within 750 m of the route central line. Considering the width of the route options though (between 1 km and 2 km), it is anticipated that an alignment that maintains the required buffer distance from these turbines should be achievable. The operational Chapelton Farm wind turbine and the operational East Town wind turbine are located within Route Option 2b.

7.7.25 Consequently, all western route options (1a, 1b, 1c) have been assigned a Green RAG Rating. Due to Route Option 2b falling within a 3-rotor diameter of existing and/or proposed wind farms, a **Red** RAG rating has been applied, while Route Option 2a has been assigned an **Amber** RAG Rating.

Communication Masts

7.7.26 There are no communication masts along any of the route options, therefore the line of sight from masts will not constrain any structure locations in these route options and they have therefore been assigned a **Green** RAG rating.

Urban Environments

7.7.27 No urban developments are found in close proximity to any of the route options. All route options pass through the countryside and while there are some settlements along each route option, there are no urban environments within them. Therefore, the RAG rating given to all route options is **Green**.

Metallic pipes

7.7.28 Metallic pipes have to be avoided by individual supports, as they are often expensive to reroute.

7.7.29 No known metallic pipes have been identified within the vicinity of the western route options, which have all been assigned a **Green** RAG rating. However, pipelines are present in the eastern route options and would require two crossings for each route. Consequently, a **Red** RAG rating has been applied to all eastern route options.

7.8 Cost Topic Areas

7.8.1 There are a number of factors that can contribute to cost constraints. The major cost constraints are the overall route length, forestry felling and associated compensation and construction of new access. After undertaking the cost appraisal of all the route options, all route options are of similar length, but impacts on forestry and the associated land assembly costs does drive some differences between route options. The majority of route options are within similar proximity to existing public highways and the construction of new access is unlikely to be significant when comparing individual routes, albeit Route Options 1b and 1c have limited access which would contribute to a higher cost option. Overall, there is minor cost variance between each route option, and all routes have been allocated a **Green** RAG rating for cost and operation.

7.9 Comparative Analysis Discussion and Summary

7.9.1 **Table 7.1** and **Table 7.2** provide a summary of the environmental, engineering and cost appraisal RAG ratings for the route options considered.

Table 7.1: Environmental RAG Ratings

Category	Sub-Topic	Route Option 1a Rating	Route Option 1b Rating	Route Option 1c Rating	Route Option 2a Rating	Route Option 2b Rating
Natural Heritage	Designations					
	Protected Species					
	Habitats					
	Ornithology					
	Geology, Hydrology and Hydrogeology					
Cultural Heritage	Designations					
	Cultural Heritage Assets					
People	Proximity to Dwellings					
Landscape and Visual	Designations					
	Character					
	Visual					
Land Use	Agriculture					
	Forestry					
	Recreation					
Planning	Policy					
	Proposals					

Western Route Options

7.9.2 From an environmental perspective, the constraints, and therefore the RAG ratings, are generally comparable across the western options given that all options typically cross a mix of open moorland (to the west), with areas of Class 1 and 2 peatland, and forestry (to the east). There are however some differences across the options.

7.9.3 Route Option 1a has a number of environmental constraints. The route option comprises the River Dee SAC, and a regionally significant cultural heritage site. Whilst avoidance of these constraints is likely to be possible, the combination of the constraints, together with the steep topography in this area, would create a narrow passage within the route for an OHL, if this route option were taken forward to the alignment selection stage. In addition, the route passes through Glen Dye, an attractive glen which also forms a key part of the setting from Clachnaben and comprises trails that are used for recreation. The Glen Dye Moor Restoration project also forms a constraint to the development of this route option as it seeks to restore peatland and create woodland within large parts of this route option, as well as furthering the recreational enjoyment of the area. The route also cuts through a large area of commercial forestry.

7.9.4 The RAG ratings for Route Options 1b and 1c are comparable across all environmental topic areas. There are however noticeable differences between the two options in terms of terrain and elevation. Route Option 1b remains at a high elevation (circa 400 m) and crosses over gently rolling terrain with areas of deeper of peat (typically modified and in poor condition), whereas Route Option 1c is located across more steeply sloping ground, with elevation ranging from circa 200 m to circa 500 m. Both routes would have visibility from the Cairn

O' Mount viewpoint. From Route Option 1c it would appear within the main field of view to the south, while from Route Option 1b it would be outwith the main field of view (to the north). Indirect effects on the Scheduled Monument Cairn o' Mount cairns (SM 4968) are also possible from both options, albeit the views from this Scheduled Monument are focussed south (toward Route Option 1c).

Eastern Route Options

7.9.5 The eastern options are typically routed across a mix of forestry and lowland farmland**.** Route Option 2a crosses through the greatest extent of forestry, some of which includes areas of native and ancient (LEPO) woodland. The requirement for felling and the creation of an OC could adversely affect the character of the area.

7.9.6 On review of the environmental RAG ratings, Route Option 2b is the least constrained of the eastern route options. The route does pass through a more settled area compared with Route Option 2a, and an OHL within this route option would pass more closely to a number of dwellings, with potential for some effects on visual receptors. This would need to be considered further at the alignment selection stage.

Table 7.2 Engineering and Cost RAG Ratings

Category	Sub-Topic	Route Option 1a Rating	Route Option 1b Rating	Route Option 1c Rating	Route Option 2a Rating	Route Option 2b Rating
Infrastructure Crossings	Major Crossings (132 kV, 275 kV, Rail, 200+m wide river, navigable canal, gas or hydro pipeline)					
	Roads Crossings					
Environmental Design	Elevation					
	Contaminated Land					
	Flooding					
Ground Conditions	Terrain					
	Peat					
Construction / Maintenance	Access					
	Angle Poles					
Proximity	Clearance Distance					
	Proximity to Windfarms					
	Communication Masts					
	Urban Environments					
	Metallic pipes					

Category	Sub-Topic	Route Option 1a Rating	Route Option 1b Rating	Route Option 1c Rating	Route Option 2a Rating	Route Option 2b Rating
Capital	Construction, Diversions, Public Road Improvements, Felling, Land Assembly and Consent Mitigations					
Operational	Inspections and Maintenance					

Western Route Options

7.9.7 From an engineering perspective, Route Option 1a comprises good access opportunities throughout the route, whereas there is limited access available for Route Options 1b and 1c. Route Option 1c has issues with both the lack of access and the steep terrain which it would cross. The presence of peat is a consideration for all western route options and disturbance will need to be minimised through siting of both poles and access tracks during the alignment selection stage of the project.

Eastern Route Options

7.9.8 From an engineering perspective, there are good access opportunities across both options, but the terrain is steeper for Route Option 2a. Route Option 2b would pass closer to properties, and the clearance distance to wind turbines would need to be considered. Potential pinch points exist in this regard with Route Option 2b that would require close consideration during the alignment selection stage of the project.

8. SUMMARY AND NEXT STEPS

8.1.1 SSEN Transmission is required to provide a connection for the consented Glendye Wind Farm to the existing transmission network at Fetteresso substation. The proposed connection would comprise a new 132 kV OHL supported by steel trident pole structures. Short sections of UGC will be required at either end of the OHL to facilitate connection at both substations.

8.1.2 This Consultation Document summarises the environmental, technical and economic appraisal of the potential route options.

8.1.3 Comments are sought from stakeholders on the route options considered. When providing your comments and feedback, SSEN Transmission would be grateful for your consideration of the questions below:

1. **Has the requirement for the project been clearly explained?**
2. **Are there any additional factors, or environmental features, that you consider important and should be brought to the attention of the project team?**
3. **Do you have any comments about any of the route options?**
4. **Following a review of the provided information, how would you describe your understanding of the Glendye Wind Farm Connection Project?**
5. **Do you have any community benefit opportunities you would like us to consider, or are there any local initiatives you would like us to support?**

8.1.4 Consultation events will be held on 20 February 2024 at Strachan and Fettercairn, and 21 February 2024 at Drumlithie. The responses received from these events, and those sought from statutory consultees and other key stakeholders, will inform further consideration of route options.

8.1.5 All comments on the route options and route selection process are requested by **20 March 2024**. Following consultation events and a review of consultation responses, a Report on Consultation will be produced which will document the consultation responses received, and the decisions made in light of these responses to inform the selection of a proposed route.

8.1.6 Following the identification and confirmation of a proposed route, further technical and environmental surveys will be undertaken to identify alignment options, after which further consultation will be carried out.

Scottish & Southern Electricity Networks
TRANSMISSION

Route Option 1a
Route Option 1b
Route Option 1c
Route Option 2a
Route Option 2b

HOWE OF THE MEARNS

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

Project No:	LT468/469
Project:	Glendye Wind Farm Overhead Line Grid Connection
Title:	Figure 1 - Route Options
Drawn by:	AW/UM/CG 07/02/2024
Drawing:	123008-D1-RCD-1.0.0

Scottish & Southern Electricity Networks
TRANSMISSION

River Dee SAC

HOWE OF THE MEARNS

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Designated Site

- River Dee SAC
- Feughside Local Nature Conservation Site (LNCS)
- Strathfinella Local Nature Conservation Site (LNCS)

Ancient Woodland Inventory (AWI)

- Ancient Woodlands (Class 1a and 2a)
- Long-established woodlands of plantation origin (LEPO) (Class 1b and 2b)
- Other woodlands on 'Roy' woodland sites (Class 3)

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

Project No:	LT468/469
Project:	Glendye Wind Farm Overhead Line Grid Connection
Title:	Figure 2 - Sites Designated for Nature Conservation and Ancient Woodland
Drawn by:	UM/CG 07/02/2024
Drawing:	123008-D2-RCD-1.0.0

Scottish & Southern Electricity Networks
TRANSMISSION

Route Option 1a
Route Option 1b
Route Option 1c
Route Option 2a
Route Option 2b
Fetteresso Forest
HOWE OF THE MEARNS

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Peat Classification*

- 1 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value.
- 2 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas of potentially high conservation value and restoration potential.

** Peatland classification information sourced from SNH (NatureScot) carbon rich soils and priority peatland habitat mapping - consultation anaylsis report (2016).*

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:75,000

Project No:	LT468/469
Project:	Glendye Wind Farm Overhead Line Grid Connection
Title:	Figure 3 - Carbon and Peatland Map
Drawn by:	CG 07/02/2024
Drawing:	123008-D3-RCD-1.0.0

Scottish & Southern Electricity Networks
TRANSMISSION

River Dee SAC

Cowie Water - Fetteresso Forest

Route Option 2a

Carron Water

Water of Dye - lower catchment

Route Option 1a

Route Option 1b

Route Option 2b

Route Option 1c

Bervie Water - lower catchment

Luther Water (Dowrie Burn to North Esk Confluences)

Gannochy Gorge SSSI

Legend

- Fetteresso Substation
- Proposed Glendye Wind Farm Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b
- Site of Special Scientific Interest (SSSI)
- Special Areas of Conservation (SAC)
- Nested Waterbody Catchment
- Watercourse
- Waterbody
- SEPA CAR Authorisation
- River Flood Extent (2085)

N

0 0.5 1 2 Kilometres

Scale - 1:70,000 @ A3

Project No: LT468/469

Project: Glendye Wind Farm Grid Connection

Title: Figure 5 - Local Hydrology

Drawn by: PW Date: 08/02/2024

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TRANSMISSION

LB16223

LB9311

SM6437

SM4968

SM4842

SM7881

SM7882

SM4960

LB9632

LB9634

LB9664

LB9662

LB10741

SM4778

LB50009

HOWE OF THE MEARNS

Fetteresso Forest

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Cultural Heritage Designations

- Listed Building (Category A)
- Listed Building (Category B)
- Listed Building (Category C)
- Scheduled Monuments (SM)
- HER Asset (Regional Significance)
- HER Asset (Standard Significance)

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

Project No:	LT468/469
Project:	Glendye Wind Farm Overhead Line Grid Connection
Title:	Figure 5 - Cultural Heritage
Drawn by:	CG 14/02/2024
Drawing:	123008-D5-RCD-1.0.0

Scottish & Southern Electricity Networks
TRANSMISSION

River Dee
B974
A957
A90
B966
Core Path 503.02: Mid Kinmonth Circular
Core Path 501.03: Auchenblae Monboddo Link
Glen Farquhar Lodge
Drumtochty Castle
Cairn O'Mount Viewing Point
Glenbervie
Auchenblae
Fetteresso Forest
HOWE OF THE MEARNS

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Landscape and Visual Constraints

Special Landscape Areas (SLA)

- Braes of the Mearns (SLA)
- Clachnaben and Forest of Birse (SLA)

Visual Receptors

- Building Receptor

Recreational Interests

- Drumtochty Castle
- Glensaugh Research Farm
- River Dee - Salmon Fishing River
- Strathfinella Walking Route
- Core Path
- Cycle Route
- Old Military Road

Scottish Hill Tracks

- Strachan to Glenbervie by the Stock Mounth (Track 197)
- Cryne Corse Mounth (Track 198)
- Elsick Mounth (Track 199)
- Strachan to Auchenblae by the Builg Mounth (Track 196)

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

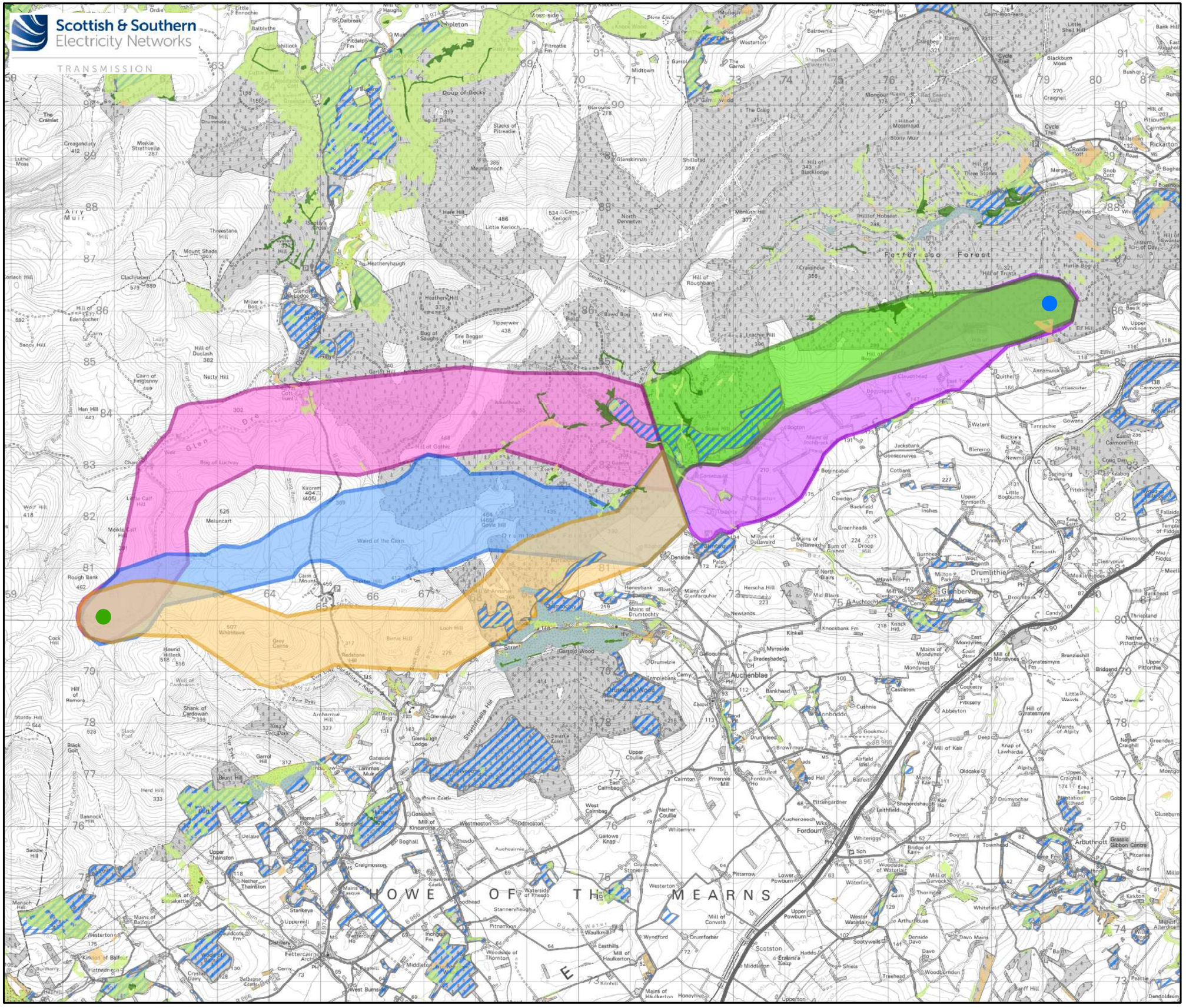
Project No: LT468/469

Project: Glendye Wind Farm Overhead Line Grid Connection

Title: Figure 6 - Landscape Designations, Visual Receptors and Recreation

Drawn by: UM/CG 14/02/2024

Drawing: 123008-D6-RCD-1.0.0



Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Forestry and Woodland

Native Woodland Survey of Scotland (NWSS)

- Native woodland
- Nearly-native woodland
- Open land habitat
- PAWS

Ancient Woodland Inventory (AWI)

- Ancient Woodlands (Class 1a and 2a)
- Long-established woodlands of plantation origin (LEPO) (Class 1b and 2b)
- Other woodlands on 'Roy' woodland sites (Class 3)

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

Project No: LT468/469

Project: Glendye Wind Farm Overhead Line Grid Connection

Title: Figure 7 - Forestry

Drawn by: UM/CG 07/02/2024

Drawing: 123008-D7-RCD-1.0.0

Scottish & Southern Electricity Networks

TRANSMISSION

Legend

- Proposed Glendye Wind Farm Substation
- Fetteresso Substation
- Glen Dye Moor Restoration Project

Western Route Options

- Route Option 1a
- Route Option 1b
- Route Option 1c

Eastern Route Options

- Route Option 2a
- Route Option 2b

Existing Infrastructure (within 5 km buffer)

- Chapelton Farm (Operational)
- Clochnahill (Operational)
- Droop Hill (Operational)
- Hillhead of Auquhirie (Operational)
- Herscha Hill (Operational)
- East Town (Operational)
- Jacksbank (Operational)
- Mid Hill Wind Farm (Operational)

Planned Infrastructure (within 5 km buffer)

- Fetteresso Wind Farm (Consented)
- Glendye Wind Farm (Consented)
- Herscha Hill 2 (Consented)

Proposed new Kintore 400 kV OHL Project - Close Proximity Route Options

- TKUP - Route Option D4
- TKUP - Route Option D5

SSEN Transmission Network

- Existing 132kV OHL
- 275kV OHL (Currently being upgraded to 400 kV)

N

0 0.5 1 2 3 4 Kilometers

Scale - 1:70,000

Project No: LT468/469

Project: Glendye Wind Farm Overhead Line Grid Connection

Title: Figure 8 - Existing or Planned Infrastructure

Drawn by: UM/CG 07/02/2024

Drawing: 123008-D8-RCD-1.0.0