Scottish & Southern Electricity Networks

TRANSMISSION

Consultation Document

Clash Gour Substation – Site Selection

May 2025

Scottish & Southern Electricity Networks

TRANSMISSION

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V2								
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GLOSSARY

Term	Definition
Amenity	The natural environment, cultural heritage, landscape and visual quality. Also includes the impact of SSEN Transmission plc's works on communities, such as the effects of noise and disturbance from construction activities.
Ancient Woodland	Areas of woodland that have existed since 1750 and are relatively undisturbed by human development. They are considered irreplaceable and have complex biodiversity that have accumulated over hundreds of years.
Ancient Woodland Inventory (AWI)	The Ancient Woodland Inventory (AWI) is a provisional guide to the location of Ancient Woodland and has three categories of woodland: i. Ancient Woodland (1a and 2a) - Interpreted as semi-natural woodland from maps of 1750 (1a) or 1860 (2a) and continuously wooded to the present day. If planted with non-native species during the 20th century they are referred to as Plantations on Ancient Woodland Sites (PAWS). ii. Long-established woodlands of plantation origin (LEPO) (1b and 2b) - Interpreted as plantation from maps of 1750 (1b) or 1860 (2b) and continuously wooded since. Many of these sites have developed semi-natural characteristics, especially the oldest ones, which may be as rich as Ancient Woodland. iii. Other woodlands on 'Roy' woodland sites (3) - Shown as unwooded on the 1st edition maps but as woodland on the Roy maps. Such sites have, at most, had only a short break in continuity of woodland cover and may still retain features of Ancient Woodland.
Annex I Habitat	A habitat under the body of surface water, defined under the EU Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
Area of Search	A broad geographical area within which possible sites might be capable of identification within approximately 2.5 km of the originally proposed substation location.
Biodiversity Net Gain (BNG)	BNG is a process which leaves nature in a better state than it started.
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.
Environmental Impact Assessment (EIA)	A formal process set down in Town and Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017 used to systematically identify, predict and assess the likely significant environmental impacts of a proposed project or development.
Groundwater Dependent Terrestrial Ecosystems (GWDTE)	Wetlands which critically depend on groundwater flows or chemistries.
Habitat	Term most accurately meaning the place in which a species lives but also used to describe plant communities or agglomerations of plant communities.
Holford Rules	Guidelines on overhead line routeing first formulated in 1959 by Sir William later Lord, Holford. The Holford Rules set out a hierarchical approach to routeing which advocates avoiding areas of high amenity value, minimises changes in direction, which takes advantage of topography, and which minimises visual interactions with other transmission infrastructure.
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.
Mitigation	Term used to indicate avoidance, remediation or alleviation of adverse impacts.

Term	Definition
Overhead line (OHL)	An electric line installed above ground, usually supported by lattice steel towers or poles.
Plantation Woodland	Woodland of any age that obviously originated from planting.
RAG Rating	A Red, Amber, Green rating provided to assess the potential impact of the proposed OHL.
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.
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 Protection Area (SPA)	An area designated under the Wild Birds Directive (Directive 74/409/EEC) to protect important bird habitats. Implemented under the Wildlife and Countryside Act 1981.
Stakeholders	Organisations and individuals who can affect or are affected by SSEN Transmission plc works.
Study Area	The area within which the appraisal of the substation options takes place. • Detailed Study Area - An area extending approximately 1 km from the substation Site Options within which the study takes place. • Wider Study Area - An area extending approximately 5 km from the substation Site Options within which the study takes place.
Substation	A node on the network to allow safe control of the electricity network. This could include convergence of multiple circuits, transformation of voltage or other functions to maintain and operate the electricity network.
Substation Site Area	Site area identified as necessary to deliver all the substation infrastructure requirements e.g. platform, access tracks, temporary construction area, drainage including SUDS, landscaping.
Volts	The international unit of electric potential and electromotive force.
Water Framework Directive (WFD)	The Water Framework Directive 2000/60/EC is an EU directive which commits European Union member states to achieve good qualitative and quantitative status of all water bodies (including marine waters up to one nautical mile from shore)

PREFACE

This Consultation Document has been prepared by WSP UK Ltd. on behalf of Scottish and Southern Electricity Networks (SSEN Transmission) to seek comments from all interested parties on the Clash Gour Substation Project.

The Consultation Document is available online at the project website:

https://www.ssen-transmission.co.uk/projects/project-map/clash-gour-wind-farm-connection/

One consultation event will be undertaken on 3rd June, at Edinkillie Hall between 2pm-7pm

Comments on this Consultation Document should be sent to:

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Email: gordon.gilfillan@sse.com

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All comments are requested by 17 July 2025.

EXECUTIVE SUMMARY

SSEN Transmission is a wholly owned subsidiary of the SSE plc group of companies. SSEN Transmission owns and maintains the electricity transmission network across the north of Scotland, and operating as Scottish Hydro Electric Transmission plc, holds a license under the Electricity Act 1989 to develop and maintain an efficient, co-ordinated and economical system of electricity transmission.

SSEN Transmission is proposing to construct a 275 / 132 kilovolt (kV) transmission substation and connection to the existing 132 kV Overhead Line (OHL) network, at approximately 12 km south of the town of Forres, Moray. The proposed project is in line with SSEN Transmission's commitment and licence obligation to facilitate the connection of renewables generators to the grid through an economical, efficient and coordinated approach to transmission reinforcement.

Options for substation site selection were identified, providing feasible areas for the construction of the new substation. From these Site Options, a Preferred Substation Site option can be identified that provides an optimum balance of environmental, technical and cost factors. This Consultation Document invites comments from all interested parties on the Site Option Assessment and the Preferred Site Option.

Moving forward, confirmation of the Preferred Site Option will be informed by this consultation exercise. Subject to the outcome of the consultation, the Preferred Site Option will then be referred to as the Proposed Site, which will be taken forward for detailed design. The outcome of the site selection process will be a development for which consent under the Town & Country Planning Act will be sought. Further public and stakeholder consultation will be undertaken to present the proposals ahead of submitting a planning application.

When providing comments and feedback on this Consultation Document, SSEN Transmission would be grateful for your consideration of the questions below:

- Has the requirement for the project been clearly explained?
- Based on the information provided do you have a Preferred Site Option for the Clash Gour substation?
- Are there any additional factors, or environmental features that you consider important and should be brought to the attention of the project team?

1. INTRODUCTION

1.1 Purpose of Document

1.1.1 This Consultation Document invites comments from all interested parties on the proposed substation extension to be developed (hereafter referred to as the Proposed Development). This document describes the Site Options identified, appraisal undertaken and the identification of the preferred Site Option. Comments are now sought from statutory authorities, key stakeholders, elected representatives and the public on the substation site selection process and the preferred site.

1.1.2 All comments received will inform further consultation of the preferred Site Option.

1.2 Document Structure

1.2.1 This report is comprised of seven sections as follows:

1: **Introduction** – setting out the purpose of the Consultation Document;

2: **The Proposals** – describes the need for the project and provides an overview of the proposals;

3: **Site Selection Process** – sets out the process that has been applied in the selection and appraisal of Site Options;

4: **Description of Options** – describes the substation Site Options that have been identified;

5: **Baseline** – describes the local context and detailed baseline within the Area of Search;

6: **Comparative Appraisal** – analyses each Site Option in detail against a series of environmental, engineering and cost considerations to arrive at a Preferred Site; and

7: **Consultation**– invites comments on the site selection process and identification of the preferred Site Option and outlines the next steps following the consultation events.

1.3 Next Steps

1.3.1 As part of the consultation exercise, comments are sought from members of the public, statutory consultees and other key stakeholders on the recommended preferred substation site. A Report on Consultation will be produced which will document the consultation responses received, and the decision made in light of these responses.

2. THE PROPOSALS

2.1 The Need for the Project

2.1.1 The Clash Gour development consists of a 210 megawatt (mW) Windfarm (including substation) which has been consented by Moray Council (ref ECU00000738) on the Altyre Estate, approximately 12 km south of the town of Forres, Moray. An application was submitted by Scottish and Southern Electricity Networks (SSEN Transmission) for a connection under s37 of the Electricity Act 1989, based on the developer's indicative substation location. As other transmission connections were required in the surrounding area, the SSEN Transmission was given the responsibility to deliver the Clash Gour Substation. Therefore, the Proposed Development involves construction of a substation to enable the connection from the substation to the SSEN Transmission grid.

2.2 Proposal Overview

2.2.1 The Proposed Development will include the following elements:

- A minimum working site area of approximately 450 m x 420 m, or 189,000m^2. This is estimated to be required to accommodate all temporary construction areas (including compounds) and tracks, as well as the permanent (operational) site;
- A permanent substation footprint of 156 m x 297 m;
  - Containing 3 x 132 kV metering circuit breakers with associated metering circuit breaker disconnectors to be installed; and
  - Containing 3 x 132 kV disconnectors and small sections of 132 kV busbar to connect the disconnectors to the new 132 kV busbar.
- A new OHL connection between the substation and the existing 132 kV network;
- Onsite welfare facilities;
- Construction laydown areas;
- Landscaping and biodiversity requirements; and
- Permanent access to the site dependent on the Site Option chosen.

Construction Activities

2.2.2 To facilitate the Proposed Development, the main construction elements associated with the development are anticipated to include:

- Establishment of a temporary construction compound and any temporary access track construction;
- Establishment of suitable laydown areas for materials;
- Ground works to achieve a level area at the site;
- Delivery of components and materials to site;
- Construction of the substation, and new connection to the existing 132 kV OHL;
- Construction of a control building;
- Construction of retaining walls around the proposed transformer compound;
- Landscaping; and
- Inspections and commissioning.

Access Track Installation

2.2.3 Sections of new access track may be required, the length of which depends on the Preferred Site Option. Temporary access tracks may be required for the construction of the Proposed Development.

Programme

2.2.4 The current programme for the Proposed Development is for submission of a planning application in February 2026, with construction commencing May 2027 and construction complete in October 2029.

2.3 Biodiversity Net Gain

2.3.1 Biodiversity Net Gain (BNG) is a process which aims to leave development sites in a better state for nature than pre-development. Although it is an internationally recognised process and tool within the development industry, it is not a term that is widely used or implemented in Scotland[1]. A small handful of business are making voluntary commitments to incorporating BNG into their projects, including SSEN Transmission. SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from its construction and operational activities on biodiversity. SSEN Transmission's commitment for new infrastructure project is 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 projects gaining consent in 2025 onwards; and
- Work with our supply chain to gain the maximum benefit during asset replacement and upgrades.

2.3.2 SSEN Transmission has developed a BNG toolkit for use across the business, their consultants and contractors, to enable a full assessment of BNG to ensure it meets the needs of SSEN Transmission's Scottish developments. 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.

2.3.3 BNG cannot be achieved where a project negatively affects statutory designated sites or irreplaceable habitats (e.g. blanket bog, ancient woodland)[2]; as such, this project will seek to avoid statutory designated sites and irreplaceable habitat. This project is required to attain a No Net Loss as a minimum.

1 CIEEM. 2019. Biodiversity Net Gain in Scotland. CIEEM Scotland Policy Group. https://cieem.net/wp-content/uploads/2019/06/Biodiversity-Net-Gain-in-Scotland-CIEEM-Scotland-Policy-Group.pdf

2 CIRIA, CIEEM, IEMA (2019). Biodiversity Net Gain: Good practice principles for development, A Practical Guide. https://cieem.net/wp-content/uploads/2019/02/C776a-Biodiversity-net-gain.-Good-practice-principles-for-development.-A-practical-guide-web.pdf

3. SITE SELECTION PROCESS

3.1 Background

3.1.1 The approach to site selection was informed by SSEN Transmission's guidance on 'Substation Site Selection Procedures for Voltages at or above 132 kV (July 2022)[3]. The guidance sets out the approach to identification and selection of new substation sites. The guidelines are developed based on Horlock Rules [4]& Holford Rules[5] principles, industry best practice and lessons learned. The Horlock Rules & Holford Rules are a set of principles used to minimise the environmental and visual impact of high-voltage OHLs and substations.

3.1.2 The guidance document helps SSEN Transmission to meet its obligations under Schedule 9 of the Electricity Act 1989, which requires transmission license holders:

- To have a regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interests; and
- To do what they reasonably can to mitigate any effect that the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects.

3.1.3 The guidance for site selection aims to balance environmental considerations with technical and economic considerations throughout the site selection process.

3.1.4 The Site Selection guidance splits a project into the following stages:

- Stage 0: Pre-Site Selection Activities – Strategic Connections Options Appraisal
- Stage 1: Initial Site Screening
- Stage 2: Detailed Site Selection
- Post Site Selection Activities – Consenting Process

3.1.5 The stages that are carried out for Site Selection 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. The Proposed Development is currently at Stage 2: Detailed Site Selection. The objective of which is to identify the Preferred Site Option when considering the technological, cost and environmental factors.

3.1.6 In consideration of the principles outlined in both the guidance documents, the method of identifying a preferred substation site has involved the following four key tasks:

- Identification of the baseline situation;
- Identification of Site Options;
- Analysis of Site Options; and
- Identification of a preferred Site Options.

3.2 Area of Search

3.2.1 Due to the required tie-ins of the Proposed Development to the existing OHL network, and consented Clash Gour windfarm development, the area of search was limited. The area of search was developed to encompass a range

[3] SSEN Transmissions (2022) *Substation Site Selection Procedures for Voltages at or above 132kV*.

[4] The Horlock Rules. Available at:https://www.nationalgrid.com/sites/default/files/documents/13796-The%20Horlock%20Rules.pdf

[5] The Holford Rules. Available at:https://www.nationalgrid.com/sites/default/files/documents/13795-The%20Holford%20Rules.pdf

of feasible Site Options within close proximity to the consented Clash Gour windfarm, as well as considering existing topographical and engineering constraints. The initial area of search that was considered for the location of the Substation was within a 2.5 km radius of the initial proposed substation option, as shown in **Figure 1**. The Study Area is limited to a 2.5 km radius, due to future requirement to connect into the Clash Gour Windfarm, at Turbine 1 (T1). Greater distance from the connection point at Clash Gour would result in potential greater environmental impact, and greater engineering, and cost constraints that would result in the proposed site being a significantly less viable option.

3.2.2 The key ecological constraints include woodland, peatland, and waterbodies. These key ecological constraints are shown in **Figure 2**. Cultural Heritage and Landscape & Visual constraints were also considered in the identification of substation options, including potential visual receptors, core paths, and heritage assets. These heritage and landscape constraints are shown in **Figure 3**. Additionally, agricultural constraints were considered, the best most versatile (BMV) agricultural land is shown in **Figure 4**. These features where considered to be the key constraints for the initial identification of site options.

3.2.3 The initial Area of Search was refined, based on avoidance of these. The revised study area was used to identify suitable substation Site Options.

3.2.4 In addition to the environmental constraints, there are technical constraints within the area of search which have informed the study area. The study area avoids the existing wind turbines of Logie Windfarm, and the consented Clash Gour Windfarm, and a 45 m buffer around the proposed Beauly-Peterhead 400 kV OHL that crosses the area of search, and existing 132 kV OHL line. A 210 m exclusion zone was used for Logie Wind Farm, as this accounts for the topple distance of the 200 m tall turbines. While a 200 m exclusion zone was used for the Clash Gour windfarm, as this is greater than the topple distance of the tallest turbines to be constructed at the site. These exclusion zones are shown in **Figure 3**.

3.3 Baseline Conditions

3.3.1 A baseline desktop study has been carried out to identify a broad range of potential constraints and opportunities within the Area of Search, and its adjacent context. This has involved the following activities:

- Identification of environmental designated sites and other constraints, utilising GIS datasets available via the NatureScot Site Link[6] and Scotland's Environment webmap[7];
- Identification of archaeological designations and other recorded sites, utilising GIS datasets available via Historic Environment Scotland and the Historic Environment Record[8,9];
- Scottish Environment Protection Agency (SEPA) Water Classification Hub[10] and interactive Flood Risk Mapping[11];

[6] NatureScot. (n.d.). *Site Link*. [online] Available at: https://sitelink.nature.scot/home# [Accessed 22 Jan. 2025]

[7] Scottish Government. (2019). *Map Scotland's environment web.* [online] Available at: https://map.environment.gov.scot/sewebmap/. [Accessed 22 Jan. 2025]

[8] Historic Environment Scotland Data Services. (2019). *Portal*. [online] Available at: http://portal.historicenvironment.scot/ [Accessed 22 Jan. 25]

[9] Royal Commission on Ancient and Historical Monuments of Scotland. (n.d.) *Canmore.* [online] Available at: http://canmore.rcahms.gov.uk/ [Accessed 22 Jan. 25]

[10] Scottish Environment Protection Agency (SEPA). (n.d.). *SEPA Water Classification Hub* [online] Available at: https://www.sepa.org.uk/data-visualisation/water-classification-hub/ [Accessed 22 Jan. 25]

[11] Scottish Environment Protection Agency (SEPA). (n.d.). *SEPA Flood Maps* [online] Available at: http://map.sepa.org.uk/floodmap/map.htm [Accessed 22 Jan. 25]

- Review of the Moray Council Local Development Plan (LDP) 2020[12] and the Highland-wide Local Development Plan 2020[13], to identify further environmental constraints and opportunities, such as regional level designations or other locations important to the public;
- Review of national and local landscape character assessments of relevance to the Area of Search[14];
- Review of Native Woodland Survey of Scotland and Ancient Woodland Inventory data sets[15];
- Review the Scotland's Soils National Scale Land Capability for Agriculture maps[16];
- 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;
- Identification of core paths in The Highland Council area, utilising the Highland Council Interactive Map of Core Paths[17];
- Extrapolation of OS Vectormap GIS data to identify further environmental constraints including locations of watercourses and waterbodies, and roads classifications;
- Review of other local information through online and published media such as tourism sites i.e. Outdoor Highlands[18].

Site Visits

3.3.2 Site Visits for Ecology, Cultural Heritage, and Landscape were conducted between 2nd – 4th April 2025. These site visits have helped inform an opinion on how the potential environmental effects identified during the baseline studies, could influence potential Site Options.

3.4 Site Identification and Selection Methods

3.4.1 In accordance with the steps outlined in SSEN Transmission's approach to substation site selection (July 2022) and having regard to the Holford Rules principles, the following considerations have been taken into account as far as is practicable at this stage and will be considered in more detail during subsequent assessments:

- Respect areas of high amenity value and take advantage of the containment of natural features such as woodland, fitting in with the landscape character of the area;
- Take advantage of ground form with the appropriate use of site layout and levels to avoid intrusion into surrounding areas;
- Use space effectively to limit the area required for development, minimising the effects on existing land use and rights of way;
- Alternative designs of substations may also be considered, e.g. 'enclosed', rather than 'open', where additional cost can be justified;
- Consider the relationship substation structures with background and foreground features, to reduce the prominence of structures from main viewpoints; and

[12] Moray Council Local Development Plan (2020) [online] Available at: http://www.moray.gov.uk/moray_standard/page_133431.html [Accessed 22 Jan. 25]

[13] The Highland Council. (2016). *Highland-wide Local Development Plan*. [online] Available at: https://www.highland.gov.uk/info/178/local_and_statutory_development_plans/199/highland-wide_local_development_plan [Accessed 22 Jan. 25]

[14] 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 [Accessed 22 Jan. 25]

[15] UK Government. (2019). *Find open data – data.gov.uk.* (online) Available at data.gov.uk [Accessed 22 Jan. 25]

16 Scotland's Soils National Scale Land Capability for Agriculture map. Available at: https://soils.environment.gov.scot/maps/capability-maps/national-scale-land-capability-for-agriculture/

[17] The Highland Council. (n.d.) *Core Paths Online Map Viewer*. Available at: https://www.highland.gov.uk/info/1225/countryside_farming_and_wildlife/161/outdoor_access/4 [Accessed 22 Jan. 25]

[18] The Highland Council. (n.d.). *Outdoor Highlands*. (online) Available at: https://www.highland.gov.uk/outdoorhighlands/ [Accessed 22 Jan. 25]

- When siting substations take account of the effects of line connections that will need to be made.

3.4.2 In addition, principles of BNG and the mitigation hierarchy have been considered to inform detailed site design decisions as the project progresses.

Site Selection

3.4.3 The minimum required size for each Site Option is a 450m x 420 m area (189,000 m^2). The proposed site for substation associated with the EDF Clash Gour Windfarm planning application is no longer feasible due to these size requirements. This previous Site Option is constrained by areas of Class 1 peatland (a priority habitat) and the proposed Beauly to Blackhillock to New Deer to Peterhead 400kV OHL (BBNP) exclusion zone buffer.

3.4.4 Six potential Site Options were identified, which avoided the previously mentioned constraints, as shown in **Figure 1**. These Site Options were reduced to two potential Site Options (see **Table 4.1** for justification), and confirmed with SSEN, prior to a comparative Site Option appraisal. The two Site Options to be appraised, are Site Options 2 and Site Option 3, shown in **Figure 1** as the site options with a red boundary**,** and **Table 4.1** below.

Table 4-1: Initial Assessment of the Potential Substation Locations

Site Option	Initial Assessment
EDF Clash Gour substation location	Not suitable – This original area is not large enough to accommodate the required 'working area' and expansion is constrained by the presence of Class 1 Peatland and existing and proposed transmission infrastructure.
Site Option 1	Not suitable – Due to proximity to existing Berryburn Substation, and consented substation extension.
Site Option 2	**Suitable – Within close proximity to original proposed site location. Adjacent to existing access road. Land consists of recently felled woodland.**
Site Option 3	**Suitable – In close proximity to the existing OHL. No significant constraints nearby.**
Site Option 4	Not Suitable – Location to the East of the Beauly to BBNP proposed alignment introduces difficulty for associated alignment connection into OHL network.
Site Option 5	Not Suitable – Due to proximity to receptors, Dunphail Distillery and residential.
Site Option 6	Not Suitable – Due to landowner requesting to avoid land north of existing access track, to be used for forestry.

3.4.5 Site visits were conducted at both proposed Site Options to further inform the baseline conditions further to an initial desk-based study and an environmental appraisal was carried out for both options, including provision of RAG Ratings.

3.5 Appraisal Method

3.5.1 Appraisal of substation Site Options has involved systematic consideration against the environmental, engineering and cost topic areas included in **Table 4.2**. **Table 4.2** is in line with the SSEN Transmission guidance "Substation Site Selection Guidelines for Voltages at or Above 132 kV".

Table 4.2: Topic Areas Considered for Substation Site Selection

Category	Sub-Topic
Environmental	
Natural Heritage	Designations
	Protected Species
	Habitats (including BNG)
	Ornithology
	Hydrology / Geology
Cultural Heritage	Designations
	Cultural Heritage Assets
Landscape and Visual	Designations
	Landscape Character
	Visual
Land Use	Agriculture
	Forestry and Woodland
	Recreation
Planning	Policy
	Proposals
Engineering	
Connectivity	Existing circuits / network
	Future development possibilities
	Interface with SSE Distribution and Generation
	DNO Connection
Footprint Requirements	Technology
	Adjacent Land Use
	Space Availability
Hazards	Unique Hazards
	Railway Interface
	Existing Utilities
Ground Conditions	Topography
	Geology – Superficial Deposits (Peat)
	Geology – site testing to verify properties
Environmental Conditions	Elevation
	Salt Pollution
	Flooding
	Carbon Footprint
	SF6
	Contaminated Land
	Noise (proximity to dwellings / residential properties)
Construction Access	Access Road

Category	Sub-Topic
	Transformer Delivery Road
Construction Safety	Customer access disruption during construction
Operation and Maintenance	Access
Cost	
Capital	Construction
	Diversions
	Public Road Improvements
	Felling
	Land Assembly
	Consent Mitigations
Operational	Inspections
	Maintenance

RAG Rating

3.5.2 A Red-Amber-Green (RAG) rating has been applied to each topic area within each section, indicating potential constraints to development. A high-level convention for assigning RAG ratings is shown in **Table 4.3** below.

Table 4.3: 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

Identification of a Preferred Site Option

3.5.3 Following review of the substation Site Options, these environmental, engineering and cost topics have been considered in combination to arrive at the preferred Site Option. The overall objective throughout the appraisal of Site Options has been to take full consideration of all factors to minimise any potential adverse impacts on the environment and to ensure the preferred Site Option is technically feasible and cost effective. Potential impacts which concern the population have also been considered under the umbrella of the environment and environmental conditions, e.g. potential impacts on visual amenity, recreational receptors, noise (proximity to dwellings) and flood risk.

4. DESCRIPTION OF OPTION

4.1.1 This section of the report describes the options that have been appraised for each element of the project. **Figure 6 & Figure 7** shows a detailed view of the substation Site Options.

Substation

4.1.2 The Site Options assessed are listed below and described in the following section:

- **Site Option 2** – This Site Option is located in the southern portion of the Study Area. The site option is ~1 km west southwest of T1 of the proposed Clash Gour windfarm. The Site Option is within 100 m west of the existing 132 kV network OHL. This site option benefits from an existing access track previously used for felling of forestry, during the land's previous use. The site lies southeast of Logie windfarm, and adjacent to the consented Berryburn substation extension Red Line Boundary (RLB) to the Site's southern extent.

- **Site Option 3** – This Site Option is located towards the north of the Study Area, adjacent to the existing 132 kV network OHL. This Site Option is ~1.3 km north northwest of T1 at the proposed Clash Gour windfarm. This Site Option is not located on an existing road and has intervening woodland and Class 1 peatland between the site and T1 of Clash Gour.

5. BASELINE

5.1 Local Context

5.1.1 The Area of Search is situated within Moray Council. The initial area of search was within 2.5 km of the initial proposed substation option, due to the future requirement to connect into the Clash Gour Windfarm. This initial area of search was refined, based on key environmental constraints and technical constraints and areas that contained them were ruled out of consideration. The revised study area was used to identify substation Site Options.

5.1.2 The Area of Search is located in a rural area, containing isolated scattered settlements, including private dwellings, farmland properties, private accommodation, the Dunphail Distillery, and the Logie Wind Farm & Trail Route.

5.1.3 Transport routes within the Area of Search consist of single-track roads. The road is accessible from the A940. Construction of access routes to the Site Options will be required, adjoining with the closest single-track gravel road.

5.2 Environmental Baseline

Natural Heritage

Designations

5.2.1 Four International statutory designated sites were identified within 10 km of the Site Options, a further two were identified when the search radius was extended to 20 km of wintering geese. The designated sites along with their reason for designation are detailed below in **Table 6.1**.

5.2.2 No National or Local statutory designated sites are located within 2 km of the Site Options. Additionally, no non-statutory designated were identified within 1 km of the Site Options.

Table 6.1 – Designated Sites

Designated Site	Distance from Site Option 2	Distance from Site Option 3	Reason for Designation
Lower Findhorn Woods SAC	~3.6 km west	~5 km west	Annex I habitats that are a primary reason for selection of this site comprise Tilio-Acerion forests of slopes, screes and ravines.
Moidach More SAC	~3.2 km south	~5.2 km south	Annex I habitats that are a primary reason for selection of this site include blanket bog.
Darnaway and Lethen Forest SPA	~5.5 km north-west	~5.2 km north-west	Qualifies under Article 4.1 by regularly supporting a breeding population of European importance of the Annex I species capercaillie. The site is estimated to support 23 individuals (mean 1999/2000, 2002, 2003), representing about 2.1 % of the GB population.
River Spey SAC	~8.6 km south-east	~9 km south-east	Annex II species that are a primary reason for selection of this site include: freshwater pearl mussel, sea lamprey, Atlantic salmon and otter.

Designated Site	Distance from Site Option 2	Distance from Site Option 3	Reason for Designation
Moray and Nairn Coast SPA	~11.3 km north	~10.7 km north	Qualifies under Article 4.2 by regularly supporting populations of European importance of the migratory species: pink-footed goose (1988/89 to 1992/93, winter peak mean of 7,538 individuals, 4% of the Eastern Greenland/Iceland/UK biogeographic population) and greylag goose (1988/89 to 1992/93, winter peak mean of 3,023 individuals, 3% of the Iceland/UK/Ireland biogeographic population). The SPA also qualifies under Article 4.2 by regularly supporting in excess of 20,000 individual waterfowl – including migratory geese, pink-footed geese and greylag geese.
Moray and Nairn Coast Ramsar			The Ramsar site qualifies under Ramsar Criterion 6 by regularly supporting 1% or more of the individuals in a population of the following waterbirds: pink-footed goose and greylag goose.

5.2.3 Within a 1 km radius of the Site Options, there are three woodland areas listed in the Ancient Woodland Inventory (AWI). These areas are category 2b Long-Established of Plantation Origin (LEPO), and as such are not considered irreplaceable habitat as per SSEN guidance[19]. Additionally, within 1 km of the Site Options, 34 areas of woodland are listed in the Native Woodland Survey of Scotland (NWSS)[20], largely comprising native pinewood as well as some pockets of upland birchwood and a single pocket of lowland mixed deciduous woodland. None of these woodland areas are present within the Site Option boundaries.

5.2.4 The Carbon and Peatland Map 2016[21] was consulted, and Class 1[22], Class 2[23], and Class 3[24] were identified within 1 km of the Site Options. Class 5 peatland habitat was identified within Site Option 2 whilst Site Option 3 was identified as being underlain by mineral soils.

Habitats

5.2.5 A UK Habitat Classification (UKHab) survey was completed in April 2025, following industry standard guidance[25].

5.2.6 In summary Site Option 2 was dominated by other coniferous woodland, recently felled and replanted with young saplings, in the centre and extending to the southern limit, with upland heathland and dry heaths were recorded within the southeastern edge of this Site Option.

19 SSEN Transmission (2023). BN-NET-ENV-501: Ancient Woodland – Approach to Assessment and Reporting.

20 Scottish Forestry (online). Native Woodland Survey of Scotland - Data Explorer. Available at: https://experience.arcgis.com/experience/aa6b4ff901294dea84dcff3205d48fab

21 Scotland's Soils (2016). Carbon and peatland 2016 map. Available at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/

22 Class 1 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas likely to be of high conservation value

23 Class 2 - Nationally important carbon-rich soils, deep peat and priority peatland habitat. Areas of potentially high conservation value and restoration potential

24 Class 3 - Dominant vegetation cover is not priority peatland habitat but is associated with wet and acidic type. Occasional peatland habitats can be found. Most soils are carbon-rich soils, with some areas of deep peat

25 UKHab Ltd (2023). UK Habitat Classification Version 2.0 (at https://www.ukhab.org)

5.2.7 Beyond the Site Option boundary, a mosaic of degraded blanket bog in the northern edge, including bog pools, and other wetlands was recorded to the north. Conifer plantation continued to the north west and south west, with dry heaths to the north, broadleaved woodland and further coniferous woodlands to the east, agricultural grasslands and a continuation of both dry and upland heaths to the south east.

5.2.8 Site Option 3 was dominated by other coniferous woodland- predominantly young and middle-aged plantation forest, and other Scot's pine woodland (plantation) in the western edge. Beyond the Site Option boundary conifer plantation continued to the west, north and east and the blanket bog extended between forestry blocks in the west and south, underneath the existing overhead line. Blanket bog and wetland habitat were identified in the north and south east of the Study Area, beyond the Site Option Boundary. Small pockets of heathland, other Scots pine woodland, upland birchwood and scrub were also identified within the Study Area. **Table 6-2** and **Table 6-3** below describes the Primary and Secondary habitats recorded within the Site Options (and associated 250 m ecology survey buffer) as well as their status as priority habitat. The UKHab survey results are shown on **Figure 5**.

Table 6-2: Site Option 2 Habitat Summary

UKHab Primary Habitat	UKHab Secondary Habitat	Priority Status	Located inside Site Option or outside
f1a5 - blanket bog	-	Annex I habitat[26] Scottish Biodiversity List (SBL) priority habitat[27,28]	Outside – to northeast
f1a6 - degraded blanket bog	-	Annex I habitat SBL priority habitat Notable feature – bog pools	Outside – to northeast
f2f - other wetlands	32 scattered trees	-	Outside – to northeast
g1b6 - other upland acid grassland	10 scattered scrub 13 scattered dwarf shrubs 510 bare ground 801 road verge or island 14 scattered rushes 32 scattered trees	North East Scotland Biodiversity Partnership's (NESBiP) Important Habitats for Biodiversity: Grasslands[29]	Outside – to northeast and south
g3c - other neutral grassland	14 scattered rushes 32 scattered trees	NESBiP's Important Habitats for Biodiversity: Grasslands	Outside – to east
g4 - modified grassland	10 scattered scrub 14 scattered rushes 15 rushes dominant 100 grazed	NESBiP's Important Habitats for Biodiversity: Grasslands	Outside – to east

[26] Annex I of the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora)

[27] Scottish Minister (2012). Scottish Biodiversity List. Available at: https://www.nature.scot/doc/scottish-biodiversity-list

[28] It should be noted that the SBL has now been superseded by the Scottish Biodiversity Strategy (SBS) to 2045 which sets out an ambition for Scotland to be Nature Positive by 2030 and to have restored and regenerated biodiversity by 2045. The SBS to 2045 refers to a series of overarching targets and indicators. Notwithstanding, the SBL can still be referred to as a useful indicator of species importance.

[29] NESBiP (2019). Grasslands. Available at: https://www.nesbiodiversity.org.uk/wp-content/uploads/2019/10/Grasslandsv1.pdf

UKHab Primary Habitat	UKHab Secondary Habitat	Priority Status	Located inside Site Option or outside
h1b - upland heathland	14 scattered rushes 100 grazed 510 bare ground	SBL priority habitat NESBiP's Important Habitats for Biodiversity: Upland Heathland[30]	Inside –along southeastern edge, and beyond
h1b5 - dry heaths, upland	32 scattered trees	Annex I habitat SBL priority habitat NESBiP's Important Habitats for Biodiversity: Upland Heathland	Inside –along southeastern edge, and beyond
r2b – other rivers and streams	48 freshwater - heavily modified 50 ditch 516 active management		Outside – to southeast
u1b - developed land, sealed surface	-	-	Outside – to south
u1c - artificial unvegetated unsealed surface	32 scattered trees	-	Outside – to south
u1d - suburban mosaic of developed/natural surfaces	-	-	Outside – to northeast
u1e - built linear features	839 track	-	Outside – to north, east and south
w1h - other woodland, mixed	29 plantation	NESBiP's Important Habitats for Biodiversity: Woodlands31	Outside – to east
w2b - other Scot's pine woodland	29 plantation 214 fallen dead wood abundant	SBL priority habitat NESBiP's Important Habitats for Biodiversity: Woodlands	Outside – to east
w2c - other coniferous woodland	29 plantation 206 felled	NESBiP's Important Habitats for Biodiversity: Woodlands	Inside and extending to north, west, south and east

[30] NESBiP (2020).Upland Heathland. Available at: https://www.nesbiodiversity.org.uk/wp-content/uploads/2020/12/UplandHeathlandv1.1-blanket-bog-cairngorm-edit.pdf

[31] NESBiP (2019). Woodlands. Available at: https://www.nesbiodiversity.org.uk/wp-content/uploads/2019/10/Woodlandsv1-1.pdf

Table 6-3: Site Option 3 Habitat Summary

UKHab Primary Habitat	UKHab Secondary Habitat	Priority Status	Located inside Site Option or outside
f1a5 - blanket bog	32 scattered trees	Annex I habitat Scottish Biodiversity List (SBL) priority habitat	Outside- to south, east and north
f1a6 - degraded blanket bog	-	Annex I habitat Scottish Biodiversity List (SBL) priority habitat	Outside – to north
f2f - other wetlands	-	-	Outside – to north
h1b - upland heathland	-	SBL priority habitat NESBiP's Important Habitats for Biodiversity: Upland Heathland	Outside – to west and southwest
h3h - mixed scrub	15 rushes dominant 521 unmanaged 801 road verge or island	NESBiP's Important Habitats for Biodiversity: Woodlands	Outside – to west
u1e - built linear features	839 track	-	Outside – to west
w1e - upland birchwoods	29 plantation 524 invasive non-native species	SBL priority habitat NESBiP's Important Habitats for Biodiversity: Woodlands Notable feature – rhododendron, an INNS, was identified within the woodland understory.	Outside – to southeast
w2b - other Scot's pine woodland	29 plantation	SBL priority habitat NESBiP's Important Habitats for Biodiversity: Woodlands	Inside- along western edge, continuing outside to west, with further locations outside to northeast, and south
w2c - other coniferous woodland	29 plantation	NESBiP's Important Habitats for Biodiversity: Woodlands	Inside – and continuing outside in all directions

Protected species

5.2.9 Within 2 km of a centre point between the Site Options (NGR: NJ 04984 48431), records of the following protected or notable species were identified using NBN Atlas[32][33]:

- Common frog – two records identified over 1 km to the west and southwest of the Site Options.

5.2.10 Site Option 2 comprises suitable habitat to support the following species:

- Terrestrial Invertebrates – Habitats within the Site Option could support a variety of invertebrate species which favour heathland, providing foodplants and in turn these habitats will rely on insects for pollination including flies, butterflies, moths, bees and wasps. During the field survey large dead tree stumps were identified beyond the Site Option boundary, and in numerous woodland stands, dead standing and lying wood was also noted all of which could support saproxylic invertebrates. Grassland and woodland habitats located outside of the Site Option boundary could also support a variety of invertebrate species.
- Bats – There are limited opportunities for roosting bats within the Site Option due to the absence of suitable trees or structures. A sheep fold in good condition, constructed from stone, approximately 1.5 m in height was identified outside of the Site Option boundary, to the south of the Site Option and has potential to be used by roosting bats. Broadleaved woodland beyond the Site Option, may also contain trees with bat roosting features. Additionally, bats could use linear features within the wider area (ditches, watercourses and woodland edges) for foraging and commuting.
- Badgers – The mosaic of woodland, and heathland habitats within the Site Option could offer suitable sett building habitat for badgers as well as commuting habitat. The heathland could also support foraging badger albeit the extent of this habitat is predominantly out with the Site Option boundary, located in land to the north and east of the Site Option.
- Amphibians – There are limited opportunities for amphibians within the Site Option due to the absence of suitable habitats for breeding or sheltering. Small bog pools were recorded within the degraded blanket bog located outwith Site Option 2, with further wetland areas of grassland / heathland that could support breeding common frog and common toad, and one young common frog was observed in the blanket bog areas surrounding Site Option 2. A single pond is present within 500 m of the Site Option, located beyond harvested plantation woodland making the surrounding terrestrial habitat sub-optimal for newts such as great crested newt to commute across to reach the pond, the presence of breeding amphibians is unlikely. The mosaic of habitats within the Site Option, and beyond provides some suitable areas for foraging, commuting and hibernating amphibians.
- Reptiles – The heathland and woodland could support widespread reptile species, with suitable basking areas available on surrounding hard standing and stone, and bare ground/ stumps. Additionally, an old sheep fold and piles of stone were recorded beyond the Site Option and could be used by reptiles for sheltering and potentially hibernating. During the field survey, common lizard was seen in the north of the Site Option. The site is within the species range for adder[34], slow worm[35], and common lizard[36], with recent records of both adder and common lizard within most 10 km grid squares in the surrounding area.
- Wildcat – Wildcats typically live in woodland edges, in the margins of mountains and moorlands, with rough grazing and generally avoid high mountain areas, exposed coasts and intensively farmed lowlands[37]. The habitats within the Site Option comprise harvested woodland and heathland making it sup-optimal for wildcat and therefore they are unlikely to support a wildcat den. However, if present in

32 NBN Atlas (online). Available at: https://nbnatlas.org/

33 All datasets on the NBN Atlas require a licence. Only those which are available for commercial use are used in the desk study. This includes Open Government Licence (OGL), Creative Commons No rights reserved licence (CC0) or Creative Commons licence with attribution (CC-BY).

34 Amphibian and Reptile Conservation (online). Adder. Available at: https://www.arc-trust.org/adder

35 Amphibian and Reptile Conservation (online). Slow worm. Available at: https://www.arc-trust.org/slow-worm

36 Amphibian and Reptile Conservation (online). Common lizard. https://www.arc-trust.org/common-lizard

37 NatureScot (online). Wildcats. Available at: https://www.nature.scot/plants-animals-and-fungi/mammals/land-mammals/wildcats

the local area, it is possible that they could commute and hunt throughout the survey area including the Site Option to reach more suitable habitat where that exists beyond the Site Option and survey area.

- Other – Two brown hare were recorded within the survey area beyond the Site Option boundary during the field surveys. The heathland located within the Site Option and beyond, plus the agricultural grassland located beyond the Site Option provide suitable habitat for the species to shelter, breed and forage.
- Pine marten – The coniferous plantation woodland areas inside the Site Option boundary were typically unsuitable for construction for pine marten dens, and from the walkover survey there were limited alternative (i.e. non - tree) opportunities for shelter for this species. The Site Option has some connectivity to a wider woodland network and so this species could forage and commute throughout the area.
- Red squirrel - The coniferous plantation woodland areas inside the Site Option were typically unsuitable for foraging red squirrel, however drey construction cannot be ruled out in woodland. The Site Option has some connectivity to a wider woodland network and so this species could forage and commute throughout the area.

5.2.11 The following species are not considered likely to be supported within Site Option 2:

- Fish - The drainage channels recorded within the Survey Area are unsuitable for fish due to the shallow depth, vegetated channels and disturbance from livestock.
- Otter - The drainage channels recorded within the Survey Area are unsuitable for otter due to the shallow depth, and narrow vegetated channels.
- Water vole - The ditches recorded within the Survey Area were typically unsuitable for burrowing; the channels were shallow and heavily shaded, with limited foraging resources and as such the channels are suboptimal for water vole.

5.2.12 Site Option 3 comprises suitable habitat to support the following species:

- Terrestrial invertebrates - Habitats within the Site Option could support a variety of invertebrate species which favour woodland for foodplants and in turn these habitats will rely on insects for pollination including flies, butterflies, moths, bees and wasps.
- Bats – Bat roosting features were limited throughout the Site Option and the wider Survey Area, with habitats in the Site Option dominated by young and semi-mature conifer plantation which is typically unsuitable for bat roosting. Beyond the Site Option there were pockets of broadleaved and Scots pine woodland (see **Figure 5**) which could potentially have features suitable for roosting bats. No structures were identified within the Survey Area. Bats could use woodland edges for foraging and commuting throughout the area.
- Badger - The habitats within the Site Option could offer suitable sett building habitat for badgers as well as commuting and foraging habitat.
- Red squirrel - Pockets of other Scot's pine woodland contain mature trees which could support drey construction for surrounding squirrels. However, these pockets are isolated amongst coniferous plantation woodland. The Site Option is well connected to a wider woodland network and so red squirrel could forage and commute throughout the area.
- Pine marten – Pockets of other Scot's pine woodland contained mature trees which could support pine marten dens (if suitable features are present). However, these pockets are very small within the Site

Option, and are isolated amongst coniferous plantation woodland. The Site Option is well connected to a wider woodland network and so pine marten could forage and commute throughout the area.

- Wildcats – Wildcat denning opportunities were limited throughout the Survey Area, however due to the area being well connected to the wider woodland network, the species could commute throughout the Area.
- Amphibians – There are limited opportunities for amphibians within the Site Option due to the absence of suitable habitats for breeding or sheltering. Wetland areas located beyond the Site Option boundary could support common frog and common toad. During the field surveys, frog spawn was recorded to the north-west of the Site Option. No ponds are located within 500 m of the Site Option offering no suitable breeding ponds and supporting terrestrial habitat for newts.
- Reptiles – The woodland habitats could support widespread reptile species, with suitable basking areas available on bare ground/ stumps. Habitat beyond the Site Option including blanket bog and its associated dwarf shrubs and tussocky vegetation could support reptiles, with suitable basking areas available on surrounding hard standing. The site is within the species range for adder, slow worm and common lizard, with recent records of both adder and common lizard within most 10 km grid squares in the surrounding area.

Within the Site Option there are no waterbodies or watercourses with suitability to support aquatic species such as otter, fish, water vole or breeding newts.

Biodiversity Net Gain

5.2.13 A BNG assessment was undertaken to quantify the baseline biodiversity within Site Option 2 and 3. The assessment followed SSEN Transmission's Biodiversity Net Gain Toolkit User Guide[38] and the SSEN Transmission Assessment Methodology & Associated Guidance[39].

5.2.14 The BNG Assessment is presented in Appendix A. A summary of the report findings is as follows; Site Option 3 is calculated to have the lower BU value overall and is therefore ranked as the preferred option from a BNG perspective.

5.2.15 Site Option 2 was calculated to contain 64.27 Biodiversity Units (BU). Whereas Site Option 3 contains 36.94 BU. It is presumed that Site Option 3 achieving a net gain is most likely to be achievable.

Ornithology

5.2.16 During the UKHab and protected species survey, incidental records of the following bird species were recorded within the Study Area of Site Option 2: skylark, curlew, snipe, oystercatcher, lapwing and buzzard. No birds were observed within Site Option 3 at the time of the survey.

5.2.17 Within Site Option 2, the heathland habitats could support ground nesting birds. Waders were recorded within the agricultural grassland situated beyond the boundary of Site Option 2 and further suitable habitat is likely present in the surrounding area. Snipe will overwinter is marsh areas / wetland habitats, which is present in habitats immediately adjacent to both Site Options.

5.2.18 Areas of woodland within both Site Options could support passerine species. The open habitat within and beyond both Site Options could support foraging barn owl and woodlands could support tawny owl, with bog habitats located in the wider surrounds beyond the Site Option boundaries, but within the Study area, likely to support ground nesting birds.

Hydrology, Geology and Hydrogeology

[38] SSEN Transmission (2022). Biodiversity Net Gain Toolkit User Guide. SSEN, Perth

[39] SSEN (2019). Biodiversity Net Gain Technical Methodology & Associated Guidance. SSEN, Perth

Hydrology

5.2.19 Site Option 2 is not situated within 1 km of any WFD classified watercourses, however according to OS 1:25,000 mapping it is located within 1 km of several unnamed watercourses.

5.2.20 According to the Scottish Environmental Protection Agency (SEPA) water classification hub[40] Site Option 3 is situated ~450 m southwest (upslope) of the Mosset Burn - source to Altyre (ID:23022) at its closest point. The Mosset burn – source to Altyre was designated as "Poor" under the Water Framework Directive (WFD) in 2023. According to Ordnance Survey (OS) 1:25,000 mapping, there are no additional watercourses within 1 km of Site Option 3.

Geology

5.2.21 The online British Geological Survey (BGS) Viewer[41] has shown the following:

- Superficial Geology – According to the BGS 1:50,000 superficial mapping, Site Option 2 is underlain by Beinn An Uain Till formation (Diamicton) and Site Option 3 is underlain by both Beinn An Uain till formation (Diamicton) and Peat.
- Bedrock Geology – According to BGS 1:50,000 mapping both Site Options are underlain by the Nethybridge Psammite formation – Psammite.

Hydrogeology

5.2.22 According to the SEPA water classification hub both Site Options are underlain by the Strathnairn, Speyside34 and Cairngorms (ID:150709) groundwater body, which was classified under the WFD as "Good" in 2023.

5.2.23 According to the BGS 1:625,000 Hydrogeology mapping, both Site Options are underlain by the Grampian Group low productivity aquifer which has small amounts of groundwater available in the surface weathered zones and secondary fractures.

5.2.24 WSP UK Ltd Ecologists completed UKHab surveys in April 2025 these indicate the presence of species that have potential reliance on groundwater; therefore, the presence of groundwater dependent terrestrial ecosystem (GWDTE) within and surrounding the two Site Options cannot be ruled out.

5.2.25 According to NatureScot SiteLink[42] there are no designated sites relevant to hydrology, geology and hydrogeology within 2 km of all Site Options.

5.2.26 The 'Scottish Government Drinking Water Protected Areas' – Scotland river basin district map[43] indicates that both Site Options are located entirely within a Scottish Government Drinking Water Protected Area (DWPA) for groundwater but not for surface water.

The Moray Council data indicates three private water supply (PWS) located within 1 km of Site Option 3 and three PWS within 1km of Site Option 2; however, none of the PWS are within 250 m of Option 2 or Option 3.

Data obtained from Scottish Water (SW) indicates that there is one SW [River Water Intake, RWI] asset within 1 km of Site Option 3; however, there are no SW assets within 1 km of Site Option 2.

40 SEPA, Water Classification Hub. Available at: https://informatics.sepa.org.uk/WaterClassificationHub/

41 British Geological Survey, Geology of Britain. Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html [Accessed April 2025]

42 NatureScot SiteLink Interactive Map. Available at: https://sitelink.nature.scot/map [Accessed April 2025]

43 Drinking water protected areas - Scotland river basin district: maps (map 8). Available at: https://www.gov.scot/publications/drinking-water-protected-areas-scotland-river-basin-district-maps/ [Accessed April 2025]

Cultural Heritage

Heritage Assets

Designations

5.2.27 There are no World Heritage Sites, Scheduled Monuments, Inventory Gardens and Designed Landscapes, and Inventory Battlefields within 2 km of the Site Option s.

5.2.28 There are two SMR entries located within Site Option 2. These comprise:

- Meikle Corshellach (Canmore ID 15744), a prehistoric hut circle, located within a prehistoric field system and located in the southwest of Site Option 2; and
- Moss of Faebuie (Canmore ID 15743), a prehistoric cairn, located in the southwest of Site Option 2.

5.2.29 There are an additional three SMR entries located within 250 m of Site Option 2. These comprise:

- Meikle Corshellach (Canmore ID 70319), a post medieval farmstead, located 53 m south of Site Option 2;
- Meikle Corshellach (Canmore ID 142742), a 19th century enclosure, located 28 m south of Site Option 2.; and
- Meikle Corshellach (Canmore ID 320932), a prehistoric cairn, located 193 m south of Site Option 2.

5.2.30 There are no SMR entries located within 250 m of Site Option 3.

Cultural Heritage Assets

5.2.31 There are no non-inventory Gardens and Designed Landscapes or Conservation Areas located within 2 km of both Site Options.

5.2.32 There is two Listed Buildings located within 2 km of Site 2. These comprise:

- Divie Railway Viaduct, Edinkillie (LB2189), a Category B Listed Building, located 1.9 km southwest of Site Option 2; and
- Bridge of Bantrach (LB2186), a Category C Listed Building, located 1.8 km southwest of Site Option 2.

5.2.33 There are no Listed Buildings within 2 km of Site Option 3.

National Landscape Designations

5.2.34 National landscape designations include:

- National Park
- National Scenic Area
- Wild Land Area
- Environmentally Sensitive Area

5.2.35 The study area is not located within any nationally designated landscape area, although some lie in proximity to it. Even so, none are anticipated to be impacted by the Proposed Development, as discussed below.

National Park

5.2.36 The Cairngorms National Park lies ~9 km south of the study area at the nearest point. Due to this distance and screening by intervening landform and forestry, the Cairngorms National Park is unlikely to be affected by the Proposed Development. It will not be considered further in this assessment.

National Scenic Area

5.2.37 National Scenic Areas (NSAs) are areas that have been identified as having outstanding scenic value in a national context. The designation's purpose is both to identify Scotland's finest scenery and to ensure its protection from inappropriate development through the planning system. The nearest NSAs are Donnoch which lies ~41 km northwest of the study area at the nearest point, and Cairngorms which lies ~9 km south of the Study Area at the nearest point. As these are located outside the study area, they will not be considered further in this assessment.

Wild Land Area

5.2.38 Wild Land Areas in Scotland are determined by their naturalness, remoteness, ruggedness and absence of modern artefacts. There are no Wild Land Areas within the study area. Monadliath Wild Land Area lies approximately ~45 km to the southwest of the study area boundary at the nearest point. The Cairngorms Wild Land Area lies approximately ~9 km to the south of the study area boundary at the nearest point. Due to this distance and screening by intervening landform and forestry, the Wild Land Areas are unlikely to be affected by the Proposed Development. They will therefore not be considered further in this assessment.

Environmentally Sensitive Area

5.2.39 Environmentally Sensitive Areas were introduced in Scotland in 1987 to help conserve designated areas of countryside where the landscape, wildlife or historic interest is of particular importance or may be affected by farming operations. The Cairngorms Straths ESA lies ~12 km south of the study area at the nearest point. Due to this distance and screening by intervening landform and forestry, the Cairngorms Straths ESA is unlikely to be affected by the Proposed Development. It will therefore not be considered further in this assessment.

Regional Landscape Designations

5.2.40 Regional landscape designations include:

Special Landscape Area

5.2.41 The study area is not located within, or contains any part of, a Special Landscape Area (SLA), although some lie in proximity to it. Even so, none are anticipated to be impacted by the Proposed Development, as discussed below.

5.2.42 These are regionally valuable landscapes, identified to protect and enhance landscape qualities and promote their enjoyment. These were previously identified as Areas of Great Landscape Value. They equate to National Landscapes in England. The study area does not lie within a Special Landscape Area[44] (SLA).

5.2.43 The nearest SLA include:

44 Policy EP3 Special Landscape Areas and Landscape Character, http://www.moray.gov.uk/downloads/file134782.pdf

- Findhorn Valley and Wooded Estates SLA lies ~1 km to the west of the study area boundary at the nearest point.
- Drynachan, Lochindorb and Dava Moors SLA (SLA 22) lies ~4.5 km to the south of the study area at its nearest point. The SLA lies within the neighbouring Highland Council local authority area.
- Pluscarden Valley SLA lies ~4.6 km to the northeast of the study area at the nearest point.

Local Landscape Designations

5.2.44 Local landscape designations and features are identified within Moray Council's Moray Local Development Plan 2020 and include:

- Pressurised and Sensitive Areas
- Scenic Approaches
- Landmark Hills

5.2.45 Some of these lies within, or in proximity to, the study area, as discussed below.

Pressurised and Sensitive Areas

5.2.46 The Moray Local Development Plan 2020 Policy DP4 Rural Housing identifies Pressurised and Sensitive Areas[45] (PSA) as landscape areas within which new housing development is not permitted. These areas direct building work away from landscape and environmentally sensitive areas and mitigate for the landscape and visual effects associated with build-up.

5.2.47 There are no Pressurised and Sensitive Areas within the study area. The nearest PSA (unnamed) are located:

- Within the Findhorn Valley and Wooded Estates SLA to the west, ~1 km from the study area boundary at the nearest point;
- Towards Fosse to the north, ~9.5 km from the study area boundary at the nearest point; and
- An area south, near Dava, ~10 km from the study area boundary at the nearest point.

Scenic Approaches

5.2.48 Other identified landscape features include Scenic Approaches (Moray Council). These are considered to be sensitive transport route corridors of special character into Moray which provide strong senses of arrival. Such Scenic Approaches include the A939, A940 and A941. The Moray Wind Energy Landscape Capacity Study Final Report (May 2017) describes Scenic Approaches[46] as:

> *"The A939/A940 provides a scenic approach to Moray from the south-west. Development of larger typologies within parts of the Open Rolling Uplands (11), the western fringes of the Upland Moorland and Forestry (10), the Narrow Wooded Valley (6) and the Rolling Farmland and Forest with Low Hills (5b) could significantly affect views from this route and detract from its special character."*

5.2.49 There are no Scenic Approaches within the study area. The nearest Scenic Approach is as follows:

45 Policy DP4 Rural Housing, http://www.moray.gov.uk/downloads/file134782.pdf

46 Paragraph 21.3.5, Moray Wind Energy Landscape Capacity Study Final Report (May 2017) http://www.moray.gov.uk/downloads/file114216.pdf

- The A939/A940 Scenic Approach lies ~1 km west of the study area boundary at the nearest point.

Landmark Hills

5.2.50 Landmark hills[47] are well defined, steep-sided hills which form prominent 'landmark' features seen across Moray. These are important and sensitive features of the landscape and are described as:

> "*There are a number of well-defined, steep-sided hills which form prominent 'landmark' features seen across Moray… The majority of these hills are both highly visible and easily recognisable landmarks with many forming the immediate backdrop to settlements, small scale valleys and the coast. Some of these hills form visual 'buffers' to less prominent upland areas and are important in visually containing operational wind farm development from more settled valleys. These landmark hills are highly sensitive to wind turbine development sited on or near them as this would be visually prominent in views from roads and settlement within adjacent well-settled landscapes and would detract from their distinct form and character."*

5.2.51 Within the study area are the summits or flanking slopes of the following Landmark Hills:

- Romach Hill - its 314 m summit lies on the northern periphery of the study area.
- Mill Buie - its summit lies ~9.2 km to the northeast of the study area, its lower slopes rise gradually from within the study area. and,
- Carn Kitty - its summit lies ~4.3 km to the southeast of the study area; its lower slopes rise gradually from within the study area.

5.2.52 Further to the southwest, associated with the A940 Scenic Approach and to the southwest of the River Divie is:

- Knock of Braemoray and its slopes, which lie outside the study area. The Knock of Braemoray will therefore not be considered further in this assessment.

Landscape Character – National and Regional Context

5.2.53 The 2.5km study area lies within three national Landscape Character Types (LCT). These are:

- LCT 285 Rolling Farmland and Forests – Moray and Nairn48
- LCT 290 Upland Moorland and Forestry49
- LCT 291 Open Rolling Upland50

Landscape Character – Local Context

5.2.54 More locally, the landscape context is one of rolling moorland around the broad valley of the Stripe of Corshellach. The landcover is a mix of heathland with gorse and birch scrub, and considerable areas of managed coniferous plantation. These plantations are managed in geometric compartments with rotational planting - as blocks mature, they are cleared and replanted and the cycle repeats for each block on rotation.

5.2.55 Both Site Options have existing energy infrastructure in their vicinity, including the Berryburn Transmission Substation which is sited on the low slopes of the Hill of Glaschyle to the southwest of Site Option 2; a row of towers carrying overhead lines that run directly through the valley of the Stripe of Coshellach in a southwest to northeast alignment, close to the existing track and east of each Site Option; and two windfarms - the Logie Wind Farm immediately north of site Option 2 and west of Site Option 3; and the Berry Burn Wind Farm to the south of Site Option 2 and Site Option 3.

47 Paragraph 21.3.1, Moray Wind Energy Landscape Capacity Study Final Report (May 2017) http://www.moray.gov.uk/downloads/file114216.pdf

48 https://www.nature.scot/sites/default/files/LCA/LCT%20285%20-%20Roling%20Farmland%20and%20Forests%20-%20Moray%20&%20Nairn%20-%20Final%20pdf.pdf

49 https://www.nature.scot/sites/default/files/LCA/LCT%20290%20-%20Upland%20Moorland%20and%20Forestry%20-%20Final%20pdf.pdf

50 https://www.nature.scot/sites/default/files/LCA/LCT%20291%20-%20Open%20Rolling%20Upland%20-%20Final%20pdf.pdf

5.2.56 Beyond the study area, the wind turbines of Rothes Wind Farm are visible from Site Option 2. Due to the woodland plantation surrounding it, only the nearby pylons and Logie Wind Farm were visible from Site Option 3 during the site visit. The unclassified track that runs from the A940, beneath the Divie Viaduct, provides access to isolated dwellings, the substation, and forest plantations, and is also considered to be a recreational route which offers extensive panoramic views north over Moray and the Firth of Moray.

5.2.57 Views eastwards from Bantrach Cottage and the Dava Way over the moorland of Cairn Eney include the pylons and OHL, Logie Wind Farm, Berryburn Wind Farm and the upper portion of the Berryburn Transmission Substation by Site Option 2.

Potential Visual Receptors

5.2.58 There are a number of sensitive visual receptors in the 2.5 km study area which include Residential, Recreational and Commercial & Transport receptors, as outlined below:

Residential receptors

5.2.59 There are no settlements within the study area, but the following residential receptors are located within the study area:

- Residents of individual dwellings and farmsteads including Sleughwhite, Tomcork, Wester Greens, Tomnamoon, Johnstripe, Rochuln.

Recreational receptors

5.2.60 There are no Core Paths, national cycleway routes, national trails, or long-distance footpath routes within the study area. There are, however, the following recreational receptors located within the study area:

- Daytrippers, tourists and visitors to the Dunphail Distillery (by Wester Greens) within the study area.
- Short stay holidaymakers and visitors using bed and breakfast accommodation. Google indicates one, Bantrach Cottage, which lies west of and outside the 2.5 km study area.
- Walkers and cyclists using the Logie Wind Farm and Trail Route and other unclassified tracks and paths within the study area.
- Hillwalkers on publicly accessible land and the surrounding hills within the study area, including Romach Hill, Hill of Tomechole, Hill of Glaschyle (public access to be confirmed);
- Horseriders travelling on the unclassified roads and publicly accessible tracks within the study area.

5.2.61 Outside the study area are a number of visitor and tourist attractions such as Findhorn Valley, Logie Steading, Randolph's Leap, Altyrie Estate Forest and Darnaway Forest and users of proposed circular trails through the forests and surrounding countryside. These lie east and northeast of the study area. There are also walkers and cyclists using the Dava Way Core Path which lies west of and outside the study area. Their presence could enhance the number of visitor journeys into the study area, for example, visiting the Logie Wind Farm Trail, visiting the Dunphail Distillery, using the unclassified road or enjoying the attractive views north and south from this road.

Commercial and Transport Receptors

5.2.62 The following Workers and commuters are located within the study area:

- People, Forestry and Agricultural workers travelling on the unclassified roads within the study area.
- Agricultural and forestry workers in the open landscape and forests within the study area.
- Dunphail Distillery workers giving tours at the distillery and travelling on the unclassified roads within the study area.

Land Use and Recreation

5.2.63 This section considers land use and recreation within the area of search, specifically forestry and woodland, agriculture, and recreational use and amenity.

Forestry and Woodland

5.2.64 The area of search contains distinct areas of woodland, and ancient woodland. However, through the siting process the Site Options were selected due to the avoidance of key environmental features/receptors, including woodland and ancient woodland.

5.2.65 However, both Site Options are located within areas of commercial forestry. Site Option 2 is located within an area of land that was recently felled, and Site Option 3 is located within an area of commercial forestry that contains a blend of young and maturing trees.

5.2.66 As a result of Site Option 2 and Site Option 3 not containing any protected woodland features, and both being situated in commercial forestry land, Forestry and Woodland are not considered significant factors in the site selection process.

Agriculture

5.2.67 The area of search is predominantly comprised of land classified by Scotland Soil's National scale land capability for agriculture as 5.2. Class 5.2 is defined as land capable of use as improved grassland. There are also distinct areas of Class 3.2, 4.2, 6.1, and 6.3 land within the area of search. BMV Farmland is defined as between Class 1 and Class 3.1.

5.2.68 As a result of there being no BMV Farmland within the area of search, agricultural land is not considered a significant factor in the site selection process.

Recreation

5.2.69 The area of search, and subsequently the proposed substation Site Options, are/is located within the Scottish Highlands, which is an area of high recreational interest for walkers, cyclists, hikers, canoeists and horse-riding.

5.2.70 The Core Path, 'Dava Way' section DA04 and DA05, is located ~1 km to the west of the area of search. Additionally, there is the 'Logie Windfarm & Trail Route' within the east of the area of search, located within Logie Windfarm. As part of the site selection process, a 200m exclusion area from the Logie Windfarm turbines was applied. Thus, the proposed Site Options are not considered to impact upon the amenity value of the Logie Windfarm & Trail Route.

5.2.71 Within the area of search lies the Dunphail Distillery, which offers tours of their facility. This recreation asset is located within the north of the area of search. Both proposed Site Options are more than 1km from the distillery. Thus, are not considered to have an impact upon the amenity value of the distillery.

5.2.72 Due to the absence of significant Land Use and Recreation assets, it is not considered that there will be an impact as a result of either of the proposed Site Options.

Planning

National Policy

5.2.73 The Scottish Government published the National Planning Framework 4 (NPF4)[51], which was adopted in February 2023, which supersedes and replaces NPF3[52]. The need for strategic renewable electricity generation and transmission is included within NPF4 as "*new and/or upgraded infrastructure directly supporting on and offshore high voltage electricity lines, cables and interconnectors including converter stations, switching stations and substations*". NPF4 is the long-term strategy for Scotland and sets out spatial principles, regional priorities, national developments and national planning policy.

51 Scottish Government (2023). National Planning Framework 4. Available at: https://www.gov.scot/publications/national-planning-framework-4/documents/

52 Scottish Government (2019). National Planning Framework 3: monitoring report (2019). Available at: https://www.gov.scot/publications/national-planning-framework-3-monitoring-report/pages/3/

5.2.74 Policy 10 within NPF4 specifically notes that the planning system should: *"encourage, promote and facilitate all forms of renewable energy development onshore and offshore. This includes energy generation, storage, new and replacement transmission and distribution infrastructure*."

Regional and Local Policy

5.2.75 Local Development Plans (LDPs) cover all planning authority areas and provide detailed and site-specific planning policy for an area.

5.2.76 The current Development Plan for Moray Council is the Moray Local Development Plan 2020[53]; the plan provides policies and proposals for delivering sustainable economic growth, and long-term infrastructure planning, within Moray Council. A revised LDP is due to be published by Moray Council in 2027.

5.2.77 The Highland-wide Local Development Plan (HLDP) is in progress and is also expected to be released in 2027. For the first time, the National Planning Framework will be part of the Local Development Plan, which is likely to lead to a reduction in the number and range of policies that are included in the Highland-wide LDP. 'Policy 19: Green Energy' from the Draft NPF4 states:

> *"Local development plans should seek to ensure that an area's full potential for electricity and heat from renewable sources is achieved".*

5.2.78 The Highland-wide LDP contains policies that provide protection of the Highlands' rich natural environment. There are a number of overarching strategic policies which are focused around making better places. Overarching Policy 28 Sustainable design ensures that developments are undertaken to ensure any design is not considered to be detrimental to the environment.

5.2.79 There are several policies on the protection of cultural and environmental assets, infrastructure and development that may be relevant in the consideration of this proposal. These include:

- Policy 51 – Trees and Development;
- Policy 52 – Principle of Development in Woodland;
- Policy 57 – Natural, Built and Cultural Heritage;
- Policy 58 – Protected Species;
- Policy 59 – Other Important Species;
- Policy 60 – Other important habitats and Article 10 Features;
- Policy 61 – Landscape;
- Policy 63 – Water Environment;
- Policy 64 – Flood Risk;
- Policy 66 – Surface Water Drainage;
- Policy 69 – Electricity Transmission Infrastructure; and
- Policy 74 – Green Network.

Planning Proposals

5.2.80 A search for Planning applications within 500 m from each of the Site Options has been undertaken and the planning applications within this area, in the past 2 years, have been provided below:

- 24/01073/APP– Permitted energy storage facility, including battery enclosures power conversion units transformer substation grid connection infrastructure vehicular access and associated works This is located approximately 50 m southwest of Site Option 2. It is more

53 Moray Council (2020) Local Development Plan. Available at: http://www.moray.gov.uk/moray_standard/page_133431.html

than 500 m from Site Option 3. The associated vehicular access, which comprises part of the RLB, passes Site Option 2 and Site Option 3 traveling from south the north.

- Decision – Application permitted. Issued 19th December 2024.

- 24/01438/SCN – Land Adjacent to Electricity Substation Berryburn Dunphail Forres Moray. 'Non-EIA' EIA Screening Opinion Issued [08/10/2024], status Unknown. Site Option 2 is immediately adjacent to the northern boundary of this application, within the southern portion of Site Option 2. Site Option 3 is more than 500 m from the application boundary.
  - Decision – Unknown.

5.3 Comparative Appraisal

Environmental Appraisal

5.3.1 **Table 6.1** summarises the appraisals RAG ratings for the Site Options considered within this section. **Table 6.2** shows the RAG ratings for the assessed site Options.

Table 6-1: Substation Site Options Environmental Appraisal

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
Natural Heritage	Designations	No part of Site Option 2 has a Natural Heritage Designation, nor does it contain any ancient woodland, national forestry inventory	No part of Site Option 3 has a Natural Heritage Designation, nor does it contain any ancient woodland, national forestry inventory.
	Protected Species	Site Option 2 has potential to support: Terrestrial Invertebrates, Bats, Badgers, Amphibians, Reptiles, Scottish Wildcats, Other (Hare), Pine Marten, and Red Squirrel	Site Option 3 has potential to support: Terrestrial Invertebrates, Bats, Badgers, Amphibians, Scottish Wildcats, Pine Marten, and Red Squirrel
	Habitats (including BNG)	Site Option 2 is predominantly other coniferous woodland – recently felled, with a slender strip of dry heath and upland heathland in the southern limit. There is irreplaceable habitat (blanket bog) to the north of the site	Site Option 3 is predominantly other coniferous woodland – predominantly young and middle-aged plantation, with a small area of Scot's pine woodland plantation in the west of the site. There is irreplaceable habitat (blanket bog) to the south of the site.
	Ornithology	Site visits to Site Option 2 observed presence of: Skylark, Curlew, Snipe, Oystercatcher, Lapwing, and Buzzard. With the surrounding heathland and bog habitat potentially supporting nesting bird	Site Option 3 may support tawny owl species in the woodland habitat. There is also potential within the surrounding heathland and bog habitat potentially supporting nesting bird species, and wintering birds.

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
		species, and wintering birds	
	Hydrology / Geology	Site Option 2 is a greater distance from the nearest classified surface water body. The presence of the Stripe of Corshellach watercourse likely acts as a hydrological barrier, limiting potential impact on nearby Private Water Supply.	Site Option 3 is within closer proximity to a classified surface waterbody (Mosset Burn). However still poses low potential impact. Site Option 3 is within 1 km of an existing Scottish Water asset, resulting in greater potential for compromised water quality/quantity.
Cultural Heritage	Designations	There are no World Heritage Sites, Scheduled Monuments, Inventory Gardens and Designed Landscapes, and Inventory Battlefields within 2 km of the Site Option 2. There is a low potential for Site Option 2 to be constrained by the SMR entries, due to previous forestry activity on the site	There are no designations within Site Option 3, and there are no World Heritage Sites, Scheduled Monuments, Inventory Gardens and Designed Landscapes, and Inventory Battlefields within 2 km of the Site Option, or SMR entries within 250 m of the Site Option.
	Cultural Heritage Assets	There are no cultural heritage assets within Site Option 2, and there are no Conservation areas of non-inventory Gardens and Designed landscapes within 2 km of the Site Option.	There are no cultural heritage assets within Site Option 3, and there are no Conservation areas of non-inventory Gardens and Designed landscapes within 2 km of the Site Option.
Landscape and Visual	Designations	There are no national, regional, or locally designated landscapes within the Study Area.	There are no national, regional, or locally designated landscapes within the Study Area.
	Landscape Character	Site Option 2 is likely to increase/intensify the 'urbanising effect' due to the presence of existing energy infrastructure in the area	Site Option 3 is located along the existing OHL route, with no other energy infrastructure. Surrounding forestry has the potential to reduce impact on the landscape character of the area.
	Visual	There may be potential views of Site Option 2 from the Dava Way Core Path, Bantrach Cottage bed and breakfast accommodation,	There may be potential views of Site Option 3 from residential accommodation at Tomnamoon, Green Kennel, Swiney Hillock, Burntack, and Sleughwhite. Site

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
		and residential accommodation at Berryburn, Tochuln, Tomcorck, Dallasbraughty, and Johnstripe. As shown in **Figure 8**	Option 3 may also be visible from the Dunphail Distillery. As shown in **Figure 9**
Land Use	Agriculture	There is no Best Most Versatile land present at Site Option 2	There is no Best Most Versatile land present at Site Option 3
	Forestry and Woodland	Site Option 2 consists of recently felled commercial woodland	Site Option 3 consists of young – mature commercial woodland
	Recreation	There are no recreation assets and/or Core Paths that interact with Site Option 2	There are no recreation assets and/or Core Paths that interact with Site Option 3
Planning	Policy	Adherence to National, Regional and Local planning policy will largely depend on avoiding or minimising potential constraints noted, particularly in relation to potential impacts on the natural environment. This is achieved by carful siting and design	Adherence to National, Regional and Local planning policy will largely depend on avoiding or minimising potential constraints noted, particularly in relation to potential impacts on the natural environment. This is achieved by carful siting and design
	Proposals	Site Option 2 is immediately adjacent to planning application [24/01438/SCN]. Site Option 2 is not anticipated to impact upon the application	Site Option 3 does not pose any potential to conflict with surrounding planning applications.
Engineering			
Connectivity	Existing circuits / network	Where an option is adjacent or with 1km of the highest voltage connecting circuit (or closer proximity to the other sites) and there are no significant constraints between the point of connection and the site	Where an option is adjacent or with 1km of the highest voltage connecting circuit (or closer proximity to the other sites) and there are no significant constraints between the point of connection and the site
	Outages	Where an option requires additional outages or risks to connect to the highest voltage	Where an option requires additional outages or risks to connect to the highest voltage circuits and/or where other

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
		circuits and/or where other circuits need to be modified or rediverted	circuits need to be modified or rediverted
	Future development possibilities	Where there is space available which is out with existing wayleaves and has low risk to any existing asset	Where there is space available which is out with existing wayleaves and has low risk to any existing asset
	Interface with SSE Distribution and Generation	Where there is space available which is out with existing wayleaves and has low risk to any existing assets	Where there is space available which is out with existing wayleaves and has low risk to any existing assets
	DNO Connection	Where DNO connection is <1km.	Where DNO connection is between 1km and 5km
Footprint Requirements	Technology	Where the space available can accommodate any technology type.	Where the space available can accommodate any technology type.
	Adjacent Land Use	Where the surrounding land use could create challenges to accommodate ancillary infrastructure but be accommodated through sub optimal arrangements.	Where the surrounding land use could create challenges to accommodate ancillary infrastructure but be accommodated through sub optimal arrangements.
	Space Availability	Where the site can be accommodated with modification to the shape of the site, or where other site risks are considered to be manageable	Where the optimal site design can be accommodated
Hazards	Unique Hazards	Where there is outstanding information that mean that risks are not well understood or there are possibly avoidable risks remaining with the option.	Where there is outstanding information that mean that risks are not well understood or there are possibly avoidable risks remaining with the option.
	Railway Interface	L	L
	Existing Utilities	Where minimal existing services exist where diversion / protection is deemed possible at low cost and protection of the environment	Where minimal existing services exist where diversion / protection is deemed possible at low cost and protection of the environment

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
Ground Conditions	Topography	Where there is rolling undulating terrain with slopes across the site between 5-15% gradient	Where there is open terrain, nearly flat or gently undulating ground
	Geology – Superficial Deposits (Peat)	Where peat is between 0.5m and 2m and suitable areas for reuse have been identified. Or where clay deposits can be improved in situ and only supplement with piling locally.	H – at time of report creation peat probing has not been completed in this area.
	Geology – site testing to verify properties	H – at time of report creation ground investigation studies have not been completed in this area.	H – at time of report creation ground investigation studies have not been completed in this area.
Environmental Conditions	Elevation	Where the site is >200m AOD or a factored windspeed >48m/s	Where the site is >200m AOD or a factored windspeed >48m/s
	Salt Pollution	Where the site is >10km from coast line or remiss of any evidence of heavy salt pollution	Where the site is >10km from coast line or remiss of any evidence of heavy salt pollution
	Flooding	SEPA flood maps do not indicate flood areas available within this site.	SEPA flood risk illustrate an area to the North of site 3 that has 10% chance of flooding.
	Carbon Footprint	< 120% of least carbon option	< 120% of least carbon option
	SF6	Utilisation of SF6 gas in switchgear and busbars Option is not within contaminated land.	Utilisation of SF6 gas in switchgear and busbars Option is not within contaminated land.
	Contaminated Land	Option is not within contaminated land.	Option is not within contaminated land.
	Noise (proximity to dwellings / residential properties)	Identified as 'low risk' through noise selection screening tool	Identified as 'Medium risk' through noise selection screening tool
Construction Access	Access Road	Where <0.5km of new or significant upgraded access road is required	Where between 0.5 and 5km of new or significantly upgraded access road is required
	Transformer Delivery Road	Where minor public road improvements (e.g., 1 structure replacement or rebuild, <500m total road	Where minor public road improvements (e.g., 1 structure replacement or rebuild, <500m total road widening, <5 passing places

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
		widening, <5 passing places	
Construction Safety	Customer access disruption during construction	Site welfare/laydown areas and access strategy to be agreed prior to construction phase.	Site welfare/laydown areas and access strategy to be agreed prior to construction phase.
Operation and Maintenance	Access	Where the tracks are between 500m to 1km of well-maintained public roads (or significantly shorter than comparable options).	Where the tracks are between 500m to 1km of well-maintained public roads (or significantly shorter than comparable options).
Cost			
Capital	Construction	Substation options 2 and 3 would require a similar platform to be constructed. The civil engineering costs for development of Site 2 are likely to be greater due to its increased slope requiring more cut and fill.	Substation options 2 and 3 would require a similar platform to be constructed. The civil engineering costs for development of site 3 are likely to be less as It Is a flatter site and would therefore require less cut and fill.
	Diversions	A similar amount of diversion work would be required to accommodate the options from a SSEN perspective. Option 2 Is likely to require less tree felling. From the windfarm developer's perspective Option 2 requires shorter cable runs from the windfarm.	A similar amount of diversion work would be required to accommodate the options from a SSEN perspective. Option 3 Is likely to require more trees to be felled. From the windfarm developer's perspective there would be longer cable runs required to reach Option 3 from the windfarm.
	Public Road Improvements	Site 2 has an existing road in close proximity which could easily be upgraded, with less associated costs.	Site 3 is much further away from the public road and would require extensive upgrade work to make it accessible.
	Felling	Tree felling would not be required for option 2 as it is in a tree felled area.	Site Option 3 would require extensive tree felling to clear the site and surrounding area to enable an access road to be built and protect the site from potential wildfires.
	Land Assembly	The landowner is more agreeable to Option 2 as this is not visible to residents.	The landowner does not favour Site Option 3 as it would be visible to residents to the Northwest of the site. Option 3

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
		Site Option 2 would not Involve payment of timber crop compensation, and access can be obtained without a requirement for the purchase of additional land for new access road construction.	would also be subject to timber crop compensation due to the amount of young and old trees which would need to be felled to prepare the site. Option 3 would require a section of new track to be constructed to access the substation, therefore more land would need to be purchased and sterilised from forestry.
	Consent Mitigations	Both options will need planning consent. Site Option 2 is close to the existing Berryburn substation where consent has already been granted for an extension. Site Option 2 is not anticipated to Involve tree felling, therefore consent mitigation would be less in comparison to Site Option 3.	Both options will need planning consent. Given the more remote nature of Site 3 and the number of trees which would need to be felled, it is expected that significant mitigation would be required to gain consent for site 3.
Operational	Inspections	Both options are considered to result in a similar design, setup, access and configuration and as such inspection for both options has a RAG Rating of Green.	Both options are considered to result in a similar design, setup, access and configuration and as such inspection for both options has a RAG Rating of Green.
	Maintenance	Site 2 is located away from recent Instances of wildfire and is not anticipated to require the same level of on-going maintenance work to protect the site associated with Site Option 3. As Site 2 is located next to existing infrastructure it will be easier to maintain going forward.	Site 3 is more exposed to Wildfire risk, being in an area where wildfires have occurred recently. Therefore, on-going maintenance work to protect the site in the future would be a significant factor.

Table 6-2: Substation Site Options Environmental RAG Appraisal

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
Natural Heritage	Designations	L	L
	Protected Species	M	M

Category	Sub-Topic	Site Option 2	Site Option 3
Environmental			
	Habitats (including BNG)	M	M
	Ornithology	M	M
	Hydrology / Geology	L	M
Cultural Heritage	Designations	L	L
	Cultural Heritage Assets	L	L
Landscape and Visual	Designations	L	L
	Landscape Character	M	L
	Visual	M (TBC)	M (TBC)
Land Use	Agriculture	L	L
	Forestry and Woodland	L	M
	Recreation	L	L
Planning	Policy	L	L
	Proposals	L	L

Category	**Sub-Topic**	**Substation Option 2**	**Substation Option 3**
Engineering			
Connectivity	Existing Circuits / Network	L	L
	Outages	M	M
	Future Development Possibilities	M	M
	Interface with SSE Distribution and Generation	L	L
	DNO Connection	L	M
Footprint Requirements	Technology	L	L
	Adjacent Land Use	M	M
	Space Availability	M	L
Hazards	Unique Hazards	M	M
	Existing Utilities	L	L
Ground Conditions	Topography	M	L
	Geology	M	M
Environmental Conditions	Elevation	H	H
	Salt Pollution	L	L
	Flooding	L	M
	Carbon Footprint	L	L
	SF6	L	L
	Contaminated Land	L	L
	Noise (proximity to dwellings / residential properties)	L	M

Construction Access	Substation Access Road (from public road)	L	M
	Transformer Delivery Route	M	M
Operation and Maintenance	Access	L	L
Category	**Sub-Topic**	**Substation Option 2**	**Substation Option 3**
Cost			
Capital	Construction	M	L
	Diversions	L	H
	Public Road Improvements	L	H
	Felling	L	H
	Land Assembly	L	H
	Consent Mitigations	L	H
Operational	Inspections	L	L
	Maintenance	L	H

6. DISCUSSION AND PREFERRED SITE OPTION

6.1.1 The appraisal of the Proposed Site Options indicates that the two Site Options are largely comparable, when considering environmental factors. With both Site Options having been assessed to have a Low impact/**Green** RAG Rating for: Natural Heritage – Designations, Cultural Heritage – Designations & Assets, Landscape and Visual – Designations, Land Use – Agriculture & Recreation, and Planning – Policy & Proposals. Both Site Options have been assessed to have an **Amber** RAG Rating for Natural Heritage – Habitat, due to the proximity of degraded blanket bog & blanket bog habitats being adjacent to both Site Options. Additionally, both sites have been assessed as Amber for their impacts on Natural Heritage - Protected Species & Ornithology, and Landscape and Visual – Visual impacts.

6.1.2 The assessment of the Site Options differs for Land Use – Forestry & Woodland, Natural Heritage – Geology, Hydrology and Hydrogeology, and Landscape & Visual – Landscape Character. With Site Option 2 assessed as **Green**, for Forestry & Woodland, due to the Site Option containing already felled commercial forestry. Site Option 2 was also assessed as being **Green** for Geology, Hydrology and Hydrogeology, as it has been assessed to not have impacts on WFD waterbodies or PWS. Site Option 3 was assessed as **Amber** for both criteria, due to mature forestry on the site and proximity, and greater potential to compromise the quality/quantity of a waterbody.

6.1.3 Site Option 3 was assessed as having a lesser potential impact on Landscape Character. The Landscape Character impact at Site Option 3 results in the spreading of the urbanising effect, whilst Site Option 2 may result in an intensification of the urbanising effect, due to the existing industrial infrastructure nearby.

6.1.4 From a cost perspective Site Option 2 offers a lot of benefits and savings over Site Option 3 as detailed in the cost section of Table 6.1 and RAG scoring. Site Option 2 will not require any tree felling or additional land to enable a new access track, which means that Site 2 offers a more affordable location for the substation to built on. The developer's costs would also rise significantly with Site Option 3 as it is further away from the windfarm development the cable routing could be up to 3 times longer than with Site Option 2. Lastly the mitigation factors around building on Site Option 3 are likely to be greater than Site Option 2, due to the anticipated wildfire risk on Site 3 and Its proximity to residents which all have the potential to Increase costs.

6.1.5 No strong engineering preference has emerged through the assessment of these site options. Option 3 offers a gentler gradient across the site, which presents a less challenging area for construction. Considering potential access arrangements, site option 2 offers several benefits to the project due to its proximity to the existing public road currently utilised by SSENT for maintenance and other activities associated with the Berryburn Substation, resulting in a foreseeable reduced scope of work to construct new access tracks to this area. Site option 3 is located further away from the access track and will likely require increased construction works to allow sufficient access to the substation platform, including the need for increased tree felling to accommodate the delivery of large plant.

6.1.6 With regards to the infrastructure, site option 2 benefits from its proximity to existing substation and overhead line circuits, which could offer opportunity to utilise existing access tracks and form a cluster of platforms in proximity to one another. This approach would reduce the need for increased travel between substations to complete essential maintenance, whereas Site option 3 would require additional dedicated access tracks to any new or existing towers that will be incorporated into the project design. Further detailed assessment of drainage will be required, but at this stage it has been noted via SEPA flood maps that land in proximity to site option 3 includes an area identified with a '10% chance of flooding'.

6.1.7 To summarise, environmental and engineering appraisals have identified no strong preference between the site options, with both options potentially allowing for a consentable development. The cost appraisal presents a strong preference for Site Option. On balance, taking account of environmental, engineering and cost criteria, Site Option 2 is considered to be the overall Preferred Site Option.

7. CONSULTATION ON THE PROPOSALS

7.1.1 SSEN Transmission places great importance on, and is committed to, consultation and engagement with all parties, or stakeholders, likely to have an interest in proposals for new projects such as this. Stakeholder consultation and engagement is an essential part of an effective development process.

Questions for Consideration by Consultees

7.1.2 When providing comments and feedback on this Consultation Document, SSEN Transmission would be extremely grateful for your consideration of the questions below:

- Has the requirement for the project been clearly explained?
- Based on the information provided, are you in agreement with the preferred site option?
- Are there any additional factors, or environmental features that you consider important and should be brought to the attention of the project team?

Next Steps

7.1.3 As detailed in the preface of this document, one consultation event will be undertaken on June 3rd between 2-7pm at Edinkillie Hall. The responses received from the consultation event, and those sought from statutory consultees and other key stakeholders, will inform further consideration of the Site Options put forward and the confirmation of the Preferred Site Option for the Proposed Development.

7.1.4 All comments are requested by [Tuesday 15 July. A Report on Consultation will be produced which will document the consultations received, and the decisions made in light of these responses.

7.1.5 The outcome of the substation site selection process will lead to progression of a development for which consent under the Town & Country Planning regime will be sought. The application will identify:

- The site boundary clearly shown in red (the Planning Red Line Boundary) including any access route (up to the public road).
- The Proposed Development in relation to the site boundary, with dimensions of all permanent structures, buildings, perimeter fencing, and any key drainage features (SuDS pond) and key electrical features, such as transformers.

7.1.6 In some cases, the application will be subject to Environmental Impact Assessment (EIA) under the Town & Country Planning (Environmental Impact Assessment) (Scotland) Regulations 2017. This may result in further alterations to the Proposed Development to reflect outcomes of the EIA consultation process.

7.1.7 Further public and stakeholder consultation will be undertaken to present our proposals ahead of submitting a planning application