

Environmental

Biodiversity Net Gain Assessment Report

Project Name – Cambushinnie 400kV Substation (Substation & access track, OHL and UGC)

Project Code - LT520 (60721943)



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ U scenco.uk Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No.SC213459; Scottish Hydro Electric Transmission plc Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution plc Registered in Scotland No. SC213460; (all having their Registered Offices at Inveralmond House 200 Dunkeld Road Perth PH1 3AQ); and Southern Electric Power Distribution plc Registered in England & Wales No.04094290 having their Registered Office at No. 1 Forbury Place 43 Forbury Road Reading RG1 3JHwhich are members of the SSE Group www.ssen.co.uk

			Applies to
TEM-NET-ENV-508	Biodiversity Ne R	et Gain Assessment eport	Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Contents

Executive Sum	imary3
Introduction	5
Scope of Study	/
Methodology.	
Results	
Summary	
Appendix A	Approach to Biodiversity Net Gain
Appendix B	Assigned UKHab Habitat Distinctiveness
Appendix C	Good practice principles for biodiversity net gain43
Appendix D	References45
Appendix E	Baseline BNG Habitat Map - Substation46
Appendix F	Baseline BNG Habitat Map – OHL Tie-in47
Appendix G	Post-Development BNG Habitat Map - Substation48
Appendix H	Post-development BNG Habitat Map – OHL Tie-in49
Appendix I	Proposed Landscaping and Habitat Restoration Plan50
Appendix J	Target Condition Justifications51
Appendix K	Template Revision History





In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Available Social Availa

			Applies to	
TEM-NET-ENV-508	Biodiversity Ne R	et Gain Assessment eport	Transmission ✔	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Executive Summary

This report sets out the results of the Biodiversity Net Gain (BNG) calculations and the approach to delivering on SSEN Transmission's BNG commitments for the Project.

This report details the BNG assessments undertaken for the Cambushinnie 400kV substation (including existing access track upgrades) and an overhead line (OHL) tie-in.

This report includes:

- A calculation of baseline Biodiversity Units (BU) for the Project following the guidance outlined within SSEN Transmission's Biodiversity Net Gain Toolkit User Guide¹.
- A prediction of the post development on-site BU following successful implementation of a habitat management plan.
- A qualitative assessment against the Biodiversity Net Gain Good Practice Principles²; and
- Details of the habitat creation or enhancements required to achieve biodiversity enhancements. With respect to the substation, the calculated gain for area-based habitats exceeds +10%. A net loss has been calculated for the OHL tie-in, with 5.36 area BU required to meet +10% gain. These 5.36 area BU are offset by the surplus of area BU delivered by the substation. There is therefore no need for off-Site measures in relation to area-based BU, provided the proposed habitat creation/enhancement measures described are implemented. A small length of hedgerow will be lost to the substation existing access track upgrades, measuring 0.46 km, resulting in a loss of -1.06 linear (hedgerow) BU (H). Off-site measures will therefore be required in relation to linear (hedgerow) BU. Creation and/or enhancement of Native species-rich hedgerows is recommended. There are no linear (watercourse) BU within the Site that will be impacted.

In respect of the substation, the report found that the baseline area BU was 176.41 BU, with postdevelopment area BU of 217.59. 1.06 Linear Hedgerow BU (H) were recorded at baseline, with loss of these hedgerows as a result of the existing access track upgrades.

For the substation, a +23% increase on the on-Site area BU is predicted, and a -100% decrease in linear hedgerow BU (H). Off-site compensation is needed to ensure the Project has an overall 10% net gain in biodiversity in relation to hedgerows.

In respect of the OHL tie-in, the baseline area BU was 10.59 BU, with post-development area BU of 6.29. A -31% decrease in the on-Site area BU is predicted. An additional 5.36 area BU are therefore required to meet +10% gain for the OHL tie-in. Given the surplus of area BU delivered by the substation, these units can be delivered on-Site, with no need for off-Site compensation measures. There are no linear hedgerow or watercourse BU associated with the OHL tie-in.



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Networks is a trading name of: Scottish Adv Carl Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; jail Networks is a new scottand No. SC13469; jail Networks and Networks and

¹ SSEN Transmission. 2023. TG-NET-ENV-526 Rev 2 - Biodiversity Net Gain Toolkit User Guide. ² CIEEM, CIRIA, IEMA. 2020. C776a. Biodiversity Net Gain: Good Practice Principles for Development, A

Practical Guide. [Online] Available at: <u>Biodiversity Net Gain: Good Practice Principles for Development,</u> <u>A Practical Guide. | CIEEM</u>

			Applies to
TEM-NET-ENV-508	Biodiversity Ne	ersity Net Gain Assessment	Transmission
	Report		\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Irreplaceable Habitats are habitats which are technically very difficult or impossible to restore, recreate, or replace once destroyed. SSEN Transmission consider Irreplaceable Habitats within their network to be ancient woodland (categories 1a & 2a of the Ancient Woodland Inventory (AWI)), individual ancient or veteran trees, and blanket bog or raised bog in good or moderate condition. Any loss or deterioration of an Irreplaceable Habitat will be recorded by area (hectares) outwith the Toolkit to allow for bespoke compensation. This project does not impact any irreplaceable habitats. Therefore, it has not been necessary to produce a separate assessment for irreplaceable habitat.



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469, Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Reg

	Die die eerste Net Onie Anneerste		Applies to
TEM-NET-ENV-508	Biodiversity Ne R	et Gain Assessment eport	Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Introduction

Background of the Project

Scottish and Southern Electricity Networks Transmission (SSEN Transmission), operating under licence held by Scottish Hydro Electric Transmission plc, to operate and develop the high voltage electricity transmission system in the North of Scotland and remote islands, commissioned AECOM to undertake a Biodiversity Net Gain (BNG) assessment for Cambushinnie 400kV Substation using the SSEN Transmission Biodiversity Project Toolkit Version 3.0 ('the Toolkit').

SSEN Transmission (also referred to as 'the Applicant') proposes to construct and operate electricity infrastructure and upgrade and extend the existing access tracks to enable the construction and operation of the Cambushinnie 400 Kilovolt (kV) substation approximately 400 m southwest of the existing Braco West Substation and OHL Tie-in (hereafter be referred to as 'the Project'). The purpose of this report is to interpret the impact of the Project in terms of losses and forecast gains in biodiversity units measured using the Toolkit.

This BNG Assessment Report has been prepared to accompany applications for planning permission under the Town and Country Planning (Scotland) Act 1997, (as amended) (the "1997 Act"), section 37 of the Electricity Act (1989). The application is supported by a voluntary Environmental Appraisal (EA).

Site Description

The Project would be located in the council area of Perth and Kinross, at National Grid reference (NGR) NN 79099 0889, hereafter referred to as 'the Site'. The Site is located 3.7 km north of the A9 and approximately 4.06 km east of the A822, within an area of plantation forestry, some of which has recently been felled. The existing Braco West Substation is located approximately 400 m north of the proposed substation platform and accessed by an existing track connecting the existing Braco West Substation to the B8033.

The majority of the habitat within the Site is mature, felled or recently re-stocked conifer plantation dominated by Sitka spruce *Picea sitchensis*, which is classed as Other coniferous woodland. In the north-western part of the proposed substation platform, under the wayleave to the existing Beauly-Denny 400 kV overhead line (OHL), there is Degraded blanket bog of Poor condition. Southern plantation compartments and those to the extreme north-west of the Site, within the boundary of the Site and beyond, appear to be planted on former bog on deep peat. The current habitat around the existing Braco West Substation is species-poor Other upland acid grassland, dominated by soft-rush *Juncus effusus*, developed from disturbed peatland. There is also Upland heathland in a few forestry rides, dominated by heather *Calluna vulgaris*. In the south-west of the Site around the proposed substation platform there are three very small tributaries that are headwaters of a notable watercourse, the Muckle Burn, and therefore constitute priority watercourses, however they will not be affected by the Project.

A hardstanding track, approximately 3.4 km in length, leads from the B8033 road to the existing Braco West Substation. A large proportion of the habitat along the access track is commercial forestry representing further Other coniferous woodland, including areas of Nordmann fir *Abies nordmanniana* and Norway spruce *Picea abies*, as well as Sitka spruce. Here the track is also in places

Page 5 of 58 © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inversioned House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co. U
Sottish and Southern Electricity Networks is a trading name of: Soutish and Southern Energy Power Distribution Limited Registered in Soutian No. SC213469; Soutish Hydro Electric Transmission plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Distribution plc Registered in Soutian No. SC213469; Soutish Hydro Electric Power Di

			Applies to
TEM-NET-ENV-508	Biodiversity Ne	let Gain Assessment Report	Transmission
	Report		\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

bordered by Mixed and Other broadleaved woodland, Species-poor hedges, Standing open water (artificial waterbodies) and minor watercourses/artificial drainage ditches (including priority habitat). There are also small amounts of Modified grassland (pasture), Other neutral grassland, Buildings (private residences) and Arable.

Project Description

The Applicant is proposing to upgrade the existing Beauly-Denny 275kV circuit to 400kV to mirror the ratings of the existing 400kV circuit which runs along the route. For the purposes of this assessment, the term 'the Project' encompasses the following developments:

- Cambushinnie 400kV substation
- Cambushinnie OHL tie-in

Two separate Toolkits have been prepared for the Project, split according to the consent type being sought. One Toolkit relates to the OHL tie-in and includes both temporary working areas and permanent areas of infrastructure associated with the new OHL. The other Toolkit includes both temporary working areas and permanent infrastructure associated with the new substation, the existing access road upgrades, and areas of habitat creation and restoration as indicated in the Landscape and Habitat Restoration Plan (this Toolkit is hereafter referred to as the 'Substation' for ease of reference, although includes the other project elements as detailed).

Scope of Study

This report sets out the results of the BNG assessment and the approach to delivering on SSEN Transmission's BNG commitments for the Project .This report identifies the baseline biodiversity measured in Biodiversity Units (BU), to achieve positive effects for biodiversity. This report has been informed by both Toolkits prepared for the Site.

SSEN Transmission BNG Commitments

SSEN Transmission is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. As part of this approach, SSEN Transmission has made commitments within its Sustainability Strategy³ to deliver 10% biodiversity net gain and leave a positive legacy for nature on all projects gaining consent.

Page 6 of 58 © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Networks is a trading name of: Scottish Adv Carl Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; jail Networks is a new scottand No. SC13469; jail Networks and Networks and

³ SSEN Transmission. 2024. *Sustainability Strategy*. [Online] Available at: <u>Sustainability Strategy - SSEN</u> <u>Transmission</u>

			Applies to	
TEM-NET-ENV-508	Biodiversity Ne	ersity Net Gain Assessment	Transmission	
	Report		\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Legislation and Planning Policy

Section 1 of the Nature Conservation (Scotland) Act 2004⁴ (as amended) places a duty on all public bodies and officeholders in Scotland to further the conservation of biodiversity when carrying out their functions in so far as is consistent with the proper exercise of those functions. This duty applies to the Energy Consents Unit and planning authorities in their functions as competent authorities, and to SSEN Transmission as a statutory undertaker. Section 3A of the Town & Country Planning (Scotland) Act 1997⁵ requires that an outcome of the National Planning Framework is securing positive effects for biodiversity.

National Planning Framework 4 (NPF4)⁶ requires biodiversity enhancements be provided in addition to any proposed mitigation. It states that for national, major or Environmental Impact Assessment (EIA) development (Policy 3b) "Development proposals for national or major development that require an Environmental Impact Assessment will only be supported where it can be demonstrated that the proposal will conserve, restore and enhance biodiversity, including nature networks, so that they are in a demonstrably better state than without intervention. This will include future management. To inform this, best practice assessment methods should be used."

The mitigation hierarchy, as presented in NPF4, has been applied to avoid impacts to biodiversity, where avoidance is not possible, these impacts have been minimised. This is aligned to the Scottish Government's NPF4 Policy 3 for proposed developments to contribute to biodiversity enhancement.

- 1) Avoid by removing the impact at the outset
- 2) Minimise by reducing the impact
- 3) Restore by repairing damaged habitats
- 4) Offset by compensating for the residual impact that remains, with preference to on-site over off-site measure

A biodiversity site / route optioneering assessment was undertaken early in the project design to inform the site / route selection process based on the habitats identified through this assessment. The mitigation hierarchy has been applied to avoid impacts to biodiversity, where avoidance is not possible, these impacts have been minimised.

A separate optioneering assessment was undertaken, with six sites subject to a high-level BNG assessment⁷. The chosen Site demonstrated the highest possible net gain in area-based units, with no impacts on watercourses or irreplaceable habitats. Other sites identified as part of this site selection process impacted irreplaceable habitat (blanket bog in Moderate or Good condition, which would have required significant bespoke compensation), smaller net gains or net losses in area-based units, consequently, the chosen Site was the preferred

Page 7 of 58 © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13459; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Regis

⁴ Scottish Government. Nature Conservation (Scotland) Act 2004. [Online] Available at: <u>Nature Conservation</u> (Scotland) Act 2004

⁵ Scottish Government. Town & Country Planning (Scotland) Act 1997. [Online] Available at: <u>Town and Country</u> <u>Planning (Scotland) Act 1997</u>

⁶ Scottish Government. 2023. National Planning Framework 4. [Online] Available at: <u>National Planning Framework</u> <u>4 - gov.scot</u>

⁷ AECOM (2023). Braco Substation Biodiversity Net Gain Report. Report to SSEN Transmission.

			Applies to
TEM-NET-ENV-508	Biodiversity Ne	/ Net Gain Assessment	Transmission
	Report		\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

option from a BNG perspective. This is aligned to the Scottish Government's NPF4 Policy 3 for proposed developments to contribute to biodiversity enhancement.

Methodology

Area and Surveys

Desk Based Assessment

A desk study to help establish baseline conditions was completed. The desk study sought to identify ecological features within the Site that may be affected by its construction and operation. Ecological features searched for included:

- any designated nature conservation sites, including locally-designated sites listed in the Local Development Plan (LDP) or Local Biodiversity Action Plan (LBAP);
- priority habitats listed in the LBAP or Scottish Biodiversity List (SBL) that might reasonably occur within the Site; and
- records of protected and/or notable habitats and species.

The following sources were used for the desk study:



			Applies to	
TEM-NET-ENV-508	Biodiversity Ne	Biodiversity Net Gain Assessment	Transmission	
	Report		✓	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

- Perth and Kinross Council website⁸;
- Tayside Biodiversity website^{9,10};
- NatureScot SiteLink webpage¹¹;
- NatureScot Natural Spaces webpage¹²;
- National Biodiversity Network (NBN) Atlas Scotland¹³;
- Ordnance Survey (OS) 1:25,000 maps and aerial photography¹⁴;
- Scottish Environment Protection Agency (SEPA) Water Classification Hub¹⁵; and
- Scottish Forestry Open Data^{16;}

Field Assessment

Baseline habitat data was recorded using UK Habitat Classification (UKHab) categories¹⁷. However, Phase 1 categories¹⁸ and relevant habitat details (including dominant, characteristic, and notable flora and ecological characteristics, particularly those pertaining to condition), as well as National Vegetation Classification¹⁹ (NVC) types, were also recorded. Condition of baseline habitats was

⁹ Tayside Biodiversity Partnership (2016). *Tayside Local Biodiversity Action Plan 2nd Edition 2016 – 2026*. [Online] [Accessed July 2024] available from: https://www.taysidebiodiversity.co.uk/

¹⁰ The Perth and Kinross Council follows the Tayside LBAP.

¹¹ Nature Scot. *SAC, RAMSAR and SSSIs*. [Online] [Accessed July 2024] Available from: <u>https://sitelink.nature.scot/home</u>

- ¹² Nature Scot. Natural Spaces webpage. AWI and NWSS for Scotland [Online] [Accessed July 2024] Available from: <u>https://cagmap.snh.gov.uk/natural-spaces/</u>
- ¹³ NBN Atlas Scotland. Commercially available records of protected species. [Online] [Accessed July 2024] Available from: <u>https://scotland.nbnatlas.org/</u>
- ¹⁴ Bing Maps. OS 1:25,000 maps and aerial photography. [Online] [Accessed July 2024] Available from: <u>https://www.bing.com/maps/</u>
- ¹⁵ SEPA Water Classification Hub. *Watercourse classification data*. [Online] [Accessed July 2024] Available from: <u>https://www.sepa.org.uk/data-visualisation/water-classification-hub/</u>.

Page 9 of 58 © Scottish and Southern Electricity Networks Uncontrolled if Printed



Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13459; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Regis

⁸ Perth and Kinross Council (2019). *Perth and Kinross Local Development Plan 2*. [Online] [Accessed March 2025] available from: <u>https://www.pkc.gov.uk/media/45242/Adopted-Local-Development-Plan-2019/pdf/LDP 2 2019 Adopted Interactive.pdf?m=1576667143577</u>

¹⁶ Scottish Forestry Open Data. *Caledonian Pinewood Inventory.* [Online] [Accessed July 2024] Available from: <u>https://open-data-scottishforestry.hub.arcgis.com/</u>

¹⁷ UKHab Ltd. 2023. UK Habitat Classification Version 2.0. [Online] Available at: <u>ukhab – UK Habitat Classification</u>

¹⁸ Joint Nature Conservation Committee (2010). Handbook for Phase 1 habitat survey – a technique for environmental audit. Joint Nature Conservation Committee, Peterborough.

¹⁹ Averis et al (2004) An Illustrated Guide to British Upland Vegetation; Averis, B. and Averis A., (2015) Plant Communities Found In Surveys By Ben And Alison Averis But Not Described In The UK National Vegetation Classification. Unpublished document; British Plant Communities Volume 3 Grassland and Montane Communities. Cambridge University Press, Cambridge.; Rodwell, J.S. (ed.). (1991a). British Plant Communities Volume 1 Woodlands and Scrub. Cambridge University Press, Cambridge.; Rodwell, J.S. (ed.) (1991b). British Plant Communities Volume 2 Mires and Heaths. Cambridge University Press, Cambridge.

			Applies to
TEM-NET-ENV-508	Biodiversity Ne	y Net Gain Assessment	Transmission
	Report		✓
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

assessed in the field by the field surveyor using the condition criteria set out for Defra Biodiversity Metric 3.1²⁰.

Collection of habitat data was carried out on 11 and 12 April 2023, 15 January 2024, 18 and 19 March 2024, and 04 April 2024 by a suitably experienced ecologist, using a GPS-enabled tablet running ESRI FieldMaps loaded with recent aerial photography. The habitat data were refined as necessary using desktop ESRI ArcGIS and recent aerial photography, to maximise habitat mapping accuracy.

Relevant attribute data extracted from ESRI ArcGIS, including area/length, habitat category and habitat condition, were fed into the Toolkits. Connectivity and strategic significance were added, to enable the Toolkits to calculate baseline biodiversity units.

Evidence of technical competence

The primary field surveyor is an Associate member of CIEEM with over 16 years' professional experience as an ecologist with specialism in habitats. The report was authored by an Associate member of CIEEM with over 5 years' professional experience as an ecologist. The report was checked and verified by a full member of CIEEM also specialising in habitats, with over 21 years' professional experience.

Limitations and Assumptions

To produce this assessment, certain limitations and assumptions have been made.

Desk-based:

- all baseline habitat areas/lengths have been calculated in ESRI ArcGIS from the digitised features
 of the baseline habitat map. Where habitat boundaries coincided with discernible boundaries on
 aerial imagery available at the time of survey, accuracy is as determined by the accuracy and
 clarity of the aerial imagery. Otherwise, habitat boundaries are as estimated in the field. Note
 also that habitats often grade into each other without a sharp boundary, and in these cases best
 placement of the boundary has been estimated. For these reasons, baseline habitat
 areas/lengths are approximations only; and
- calculations involving habitat areas/lengths are rounded to two decimal places in the Toolkits, therefore the calculations are to that level of accuracy; and

© Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ 🛛 ssen.co.uk 🖤

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Networks is a trading name of: Scottish Adv Carl Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; jail Networks is a new scottand No. SC13469; jail Networks and Networks and

²⁰ Natural England. 2022. Biodiversity Metric 3.1. [Online] Available at: <u>Archive Site for Legacy Biodiversity Metrics</u> Page 10 of 58 © Scottish and Southern Electricity Networks

			Applies to
TEM-NET-ENV-508	Biodiversity Ne R	et Gain Assessment eport	Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Fieldwork:

- the initial habitat survey took place in winter with ground habitats often partially obscured by thick frost. This is sub-optimal for vegetation survey and placed limitations on plant identification. However, NVC surveys were conducted in early spring, and although at this season there are also some species identification limitations, it was possible to classify habitats and NVC types at an appropriate level (especially given the nature of the habitats in the Site). As such, this is not a significant limitation and does not impact the conclusions of this assessment;
- a small pond is present within the west of the Site, within an area of Other Coniferous Woodland. This pond, which was found to support palmate newt *Lissotriton helveticus*, will be lost to the Project. It is not shown on the Baseline Habitat Plan in Annex E or included in the Toolkit calculation for the Substation, because it is approximately 30 m² (measured using aerial imagery), which is smaller than the UKHab minimum mapping unit (MMU) for larger projects and upland habitats. However, the proposed small compensatory pond is shown on the Post-Development Habitat Plan in Annex C to indicate where it is proposed; and
- baseline habitats and conditions may change with further elapsed time since the field surveys informing this BNG assessment were completed. However, it is unlikely given the current ownership and management of the Site, and the nature of habitats, that there would be significant changes to baseline habitats for several years at least.

Project:

- separate Toolkits have been prepared for the substation (including the existing access track upgrades) and the OHL tie-in;
- time to target condition and difficulty values followed Metric 3.1²¹ values, with the exception of the values used for blanket bog (for which see below). The construction period will vary for different associated developments of the Project as follows: 4 years for the substation, and 19 months for the OHL tie-in. Additional time has been added to the time the time to target condition for the construction period depending on the project element;
- with respect to blanket bog creation, it is acknowledged that the values used within the Metric may not be fully applicable to Scotland, which is considered to be the case for this habitat type. The draft planning guidance with respect to Biodiversity22² notes that where the Metric or a BNG tool is used, it should be demonstrated how Scotland's habitats and environmental conditions are taken into account and where modifications are made, the reasons should be set out clearly. Scottish Government commissioned research into the use of metrics in Scotland23 concluded that Metric 3.1 could be adapted for planning and development use in Scotland. Specifically for blanket bog, following consideration of baseline conditions, difficulty has been set at medium (deviating from high in Metric 3.1), and time to target condition is set at 20 years, plus the relevant construction period (deviating from 30+ years in Metric 3.1). The rationale for this is set out in Appendix B;

© Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk 🖤

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13469; Light Scottish Hydro Electric Power Distribution pic Registered in Scottish Hydro Electric Power Distribut

 ²¹ Natural England. 2022. Biodiversity Metric 3.1 Technical Supplement. [Online] Available at: <u>Archive Site for Legacy Biodiversity Metrics</u>
 ²² Scottish Government (2023) Biodiversity: draft planning guidance Biodiversity: draft planning guidance

²³ McVittie, A., Cole, L., McCarthy, J., Fisher, H., and Rudman, H. (2023) Research into approaches to measuring biodiversity in Scotland Page 11 of 58

			Applies to
TEM-NET-ENV-508	Biodiversity Ne R	et Gain Assessment eport	Transmission ✓
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

- a) there is a band of Degraded blanket bog present within the Site at baseline, a proportion of which is proposed to be seeded with a peatland seeding mix following completion of the Project. The post-development habitat type has been categorised differently in the Toolkits depending on the nature of works, as follows:where Degraded blanket bog is lost during construction of the Project (for example, within temporary working areas), the intended postdevelopment habitat type is Upland heathland²⁴ of Poor condition.
- b) where Degraded blanket bog will not be impacted by the construction of the Project but will be seeded with a peatland mix (as part of the Landscape and Habitat Restoration Plan), the postdevelopment habitat type has been assumed to be Blanket bog of Poor condition. On a precautionary basis, it has been assumed that areas of Blanket bog will not meet the criteria required for Moderate condition. The time to target condition of these habitat types has been set at 0 years, as these areas are already at Poor condition at baseline.
- upgrades associated with the existing access track are anticipated to be completed within one year of construction start. Temporarily impacted habitats will be seeded with an acid grassland mix, resulting in Upland acid grassland of Poor condition. Areas of Upland acid grassland of Poor condition along the existing access track have therefore not been included within the Toolkit for the Substation, as these areas will be fully restored to their baseline condition within two years;
- where works to culverts (upgrades and installation) are proposed associated with existing access track upgrades, it has been assumed there will be loss of vegetation to facilitate works. It has been assumed that habitats within a 5 m buffer of works to culverts will be removed. Upgrades associated with the existing access track are anticipated to be completed within one year of construction start, with impacted habitats seeded with an acid grassland mix, resulting in Upland acid grassland of Poor condition. As such, the time to target value has been adjusted to account for the construction period;
- it has been assumed that all other habitats (outside of those identified within areas of permanent widening, temporary working areas, and within a 5 m buffer of culvert upgrades) will be unimpacted by the existing access track upgrades, and these have therefore not been included within the Toolkit;
- new ditches will be created along the length of the upgraded access track. These will be topsoiled and seeded, and it is assumed that they will not permanently hold water. These areas have been categorised as Upland acid grassland of Poor condition within the Toolkit for the Substation;
- for sections of permanent track upgrade and temporary working areas, it has been assumed that all linear-based hedgerow habitats will be lost, including those directly adjacent to temporary working areas;
- where existing culverts are installed, upgraded or widened, the actual length of watercourse will not be changed, and as such these watercourse lengths have not been included within the Toolkits and no value for watercourse units has been calculated;
- very small watercourses occurring within the Site but well beyond the construction footprint have not been included within the Toolkits. This is because there are assumed to be no impacts on or changes to them;

Page 12 of 58 © Scottish and Southern Electricity Networks Uncontrolled if Printed



ssen.co.uk 🖤 Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution limited Registered in Scotland No. S.213459; Scottish Hydro Electric Transmission plc Registered in Scotland No. S.213469; [al having their Registered Offices at Inveraimond House 200 Dunkeld Read Petri PH1 3AQ); and Southern Electry Power Distribution Registered in Scotland No. S.213469; [al having their Registered Offices at Inveraimond House 200 Dunkeld Read Petri PH1 3AQ); and Southern Electric Power Distribution Registered in Scotland No. S.213469; [al having their Registered Offices at Inveraimond House 200 Dunkeld Read Petri PH1 3AQ); and Southern Electric Power Distribution Registered in Scotland No. SCOL 3459; Scottish Hydro Electric Offices at Inversion Reading RG13 JHNMich are members of the SSE Group www.senc.ou.k

TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

- existing tracks/roads (Artificial unvegetated unsealed surface) have not been included within the Toolkits;
- where habitat creation and restoration measures are proposed in locations not affected by the Project, the baseline habitats in these locations will be retained and enhanced. The time to target values here, follow Metric 3.1²¹, with the exception to Blanket bog, which has been adjusted as per the rationale above. The time to target condition for these habitats does not include the construction period, as the value of these habitats will not be affected until the habitat creation and restoration commences;
- a Drainage/SuDS basin is proposed. However, there is no specific category within the Toolkit for SuDS basin. This will be planted with a wetland grassland mixed, the water level will be variable within this and it may not be permanently wet. This is recorded in the Toolkit as Other neutral grassland, as this is the best fit for the proposed grassland following UKHab classification definitions.

Results

Biodiversity Baseline

Separate Toolkits have been prepared for the substation and OHL tie-in (refer to Limitations and Assumptions). The results in respect of the substation and OHL tie-in have therefore been presented separately below.

Substation

The baseline habitats impacted by the Project are shown in the baseline habitat map (see Appendix E) and are summarised here in relation to the substation:

The total baseline area units are 176.61 BU.

The total baseline linear (hedgerows) units are 1.06 BU (H).

There is assumed to be no net effect on any watercourse (the few small streams within the Site being well beyond the construction footprint, or with no overall change in watercourse length where culverted for the existing access track upgrades). Linear (watercourse) units are therefore not considered further in this assessment in relation to the substation.

The Baseline habitats associated with the substation have been summarised in the Table 1 below (see Baseline Habitat Map - Appendix E).



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC213459; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213460; Jail hwing their Registered of Registered Reading Rei 31Hwinch are members of the SSE cross powers in Electric Power Distribution pic Registered in Scotland No. SC213460; Jail hwing their Registered of Reading Rei 31Hwinch are members of the SSE cross powers in Electric Power Distribution Pice Registered in Scotland No. SCP21460; Jail hwinch are members of the SSE cross powers in Electric Power Distribution Pice Registered in Scotland No. SCP21460; Jail hwinch are members of the SSE cross powers in Electric Power Distribution Pice Registered in Scotland No. SCP21460; Jail hwinch are members of the SSE cross powers in Electric Power Distribution Pice Registered in Scotland No. SCP21460; Jail hwinch are members of the SSE cross powers in Electric Power Distribution Pice Registered in Scotland No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers encode No. SCP21460; Jail hwinch are members of the SSE cross powers enco

²⁴ The proposed mix will simulate h1b6 – wet heathland with cross-leaved heath; upland, but has the potential in drier situations to develop into h1b5 – dry heaths; upland, where species such as cross-leaved heath *Erica tetralix* will be replaced by heather *Calluna vulgaris*, bell heather *Erica cinerea* and bilberry *Vaccinium myrtillus*.

TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to	
			Transmission	
			•	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Table 1: Summary of baseline habitats – substation

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
New substation platform			
h1b6 Wet heathland with cross- leaved heath; upland (Heathland and shrub – Upland heathland)	<0.01 ha	Poor	0.00
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.05 ha	N/A – No biodiversity value	0.00
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	2.14 ha	Poor	4.28
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	6.08 ha	Poor	12.16
Temporary clearance required for	new substation		
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.01 ha	Poor	0.08
h1b6 Wet heathland with cross- leaved heath; upland (Heathland and shrub – Upland heathland)	0.17 ha	Poor	1.29
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.07 ha	N/A – No biodiversity value	0.00



TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			•
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.90 ha	Poor	1.8
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	1.90 ha	Poor	3.8
Footprint of substation access tra	ck		
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.37 ha	Poor	2.81
g1b6 Other upland acid grassland (Grassland – Upland acid grassland)	0.04 ha	Poor	0.29
u1c artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.37 ha	N/A – No biodiversity value	0.00
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.10 ha	Poor	0.20
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.47 ha	Poor	0.94
Earthworks for substation access	track		
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.59 ha	Poor	4.48
g1b6 Other upland acid grassland	0.20 ha	Poor	1.45

Page **15** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



if Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Soctial Association of the Statistic and Southern Energy Power Distribution Interference of Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered in Sociation No. 5213469; Sociation Hydro Electric Transmission plc Registered Office at No. 1 Forbury Place 43 Forbury Road Reading RG1 31Hwhich are members of the SSE Group www.ssen.co.uk

TEM-NET-ENV-508	8 Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
(Grassland – Upland acid grassland)			
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.18 ha	N/A – No biodiversity value	0.00
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.33 ha	Poor	0.66
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	1.68 ha	Poor	3.36
Habitat clearance for site accomm	odation		
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.24 ha	Poor	1.82
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	<0.01 ha	Poor	0.00
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	2.93 ha	Poor	5.86
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.05 ha	Poor	0.10
Existing access track upgrades –	permanent widening		
c1c Cereal crops (Cropland – Cereal crops)	0.18 ha	N/A - Agriculture	0.36

Page **16** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



			Applies to
TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report	Transmission	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	<0.01 ha	Poor	0.00	
g3c Other neutral grassland (Grassland – Other neutral grassland)	0.18 ha	Poor	1.31	
g3c8 Holcus-Juncus neutral grassland (Grassland – Other neutral grassland)	0.22 ha	Poor	1.60	
g4 Modified grassland (Grassland – Modified grassland)	0.01 ha	Poor	0.02	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	0.06 ha	Poor	0.26	
w1h Other woodland – mixed (Woodland and forest – Other woodland; mixed)	0.13 ha	Poor	0.57	
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.10 ha	Poor	0.20	
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.83 ha	Poor	1.66	
h2a Native hedgerow (Native hedgerow)	0.24 km	Poor	0.55	
Existing access track upgrades – new ditch extents				

Page **17** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



II Printed
Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk
Scottish and Southern Electricity Networks is a trading name of. Scottish and Southern Energy Power Distribution limited Registered in Scotland No. SC213469; Scottish Hydro Electricity Networks is a trading name of. Scottish and Southern Energy Power Distribution limited Registered Office at No. 1 Forbury Place 43 Forbury Road Reading RG1 3JHwhich are members of the SSE Group <u>www.ssen.co.uk</u>

			Applies to
TEM-NET-ENV-508	TEM-NET-ENV-508 Biodiversity Net Gain Assessment Report	Transmission	
Revision: 1 00	Classification: Public Issue Date: February 2025		Review Date: October 2030
1.00		issue buter rebrudi y 2025	iterien Batel Octobel 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
c1 Arable and horticulture (Cropland – Cereal crops)	0.01 ha	N/A - Agriculture	0.02
g3c Other neutral grassland (Grassland – Other neutral grassland)	0.05 ha	Poor	0.36
g4 Modified grassland (Grassland – Modified grassland)	0.02 ha	Poor	0.04
w1h Other woodland – mixed (Woodland and forest – Other woodland; mixed)	0.02 ha	Poor	0.09
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.19 ha	Poor	0.38
Existing access track upgrades –	temporary working areas		
c1 Arable and horticulture (Cropland – Cereal crops)	0.05 ha	N/A - Agriculture	0.10
c1c Cereal crops (Cropland – Cereal crops)	0.01 ha	N/A - Agriculture	0.02
g3c Other neutral grassland (Grassland – Other neutral grassland)	0.04 ha	Poor	0.29
g3c8 Holcus-Juncus neutral grassland (Grassland – Other neutral grassland)	0.12 ha	Poor	0.87

Page **18** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) Condition / Length (km)		Biodiversity Units (BU)	
g4 Modified grassland (Grassland – Modified grassland)	0.02 ha	Poor	0.04	
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.01 ha	N/A – No biodiversity value	0.00	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	0.02 ha	Poor	0.09	
w1h Other woodland – mixed (Woodland and forest – Other woodland; mixed)	0.07 ha	Poor	0.31	
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.07 ha	Poor	0.14	
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.40 ha	Poor	0.80	
h2a Native hedgerow (Native hedgerow)	0.22 km	Poor	0.51	
New SuDS basin				
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.70 ha	Poor	1.4	
SuDS basin access track				
w2c Other coniferous woodland	0.15 ha	Poor	0.30	

Page **19** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
(Woodland and forest – Other coniferous woodland)				
Habitat clearance for drainage and	l SuDS basin			
h1b6 Wet heathland with cross- leaved heath; upland (Heathland and shrub – Upland heathland)	0.09 ha	Poor	0.68	
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.03 ha	NA – No biodiversity value	0.00	
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	3.66 ha	Poor	7.32	
Habitat clearance for UGC				
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.03 ha	Poor	0.23	
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	0.09 ha	Poor	0.65	
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.32 ha	Poor	0.64	
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.07 ha	Poor	0.14	
Habitat clearance for culvert installation and upgrades				





	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission ✔
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
g3c Other neutral grassland (Grassland – Other neutral grassland)	<0.01	Poor	0.00	
g3c8 Holcus-juncus neutral grassland (Grassland – Other neutral grassland	0.01 ha	Poor	0.07	
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.03 ha	N/A – No biodiversity value	0.00	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	<0.01 ha	Poor	0.00	
w1h Other woodland – mixed (Woodland and forest – Other woodland; mixed)	0.01 ha	Poor	0.04	
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	0.02 ha	Poor	0.04	
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.09 ha	Poor	0.18	
Other areas within the Site (not affected by the Project, but retained and enhanced in the Landscape and Habitat Restoration Plan)				
h1b6 Wet heathland with cross-		_		

Page **21** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed

leaved heath; upland



7.21

In Printed
Inveraimond House, 200 Dunkeld Road, Perth PH1 3AQ Sent.ou.

Poor

0.95 ha

TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
(Heathland and shrub – Upland heathland)			
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.04 ha	N/A – No biodiversity value	0.00
w2c 206 Other coniferous woodland (Woodland and forest – Felled)	10.53 ha	Poor	21.06
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	19.23 ha	Poor	38.46
f1a6 Degraded blanket bog (Wetland – Blanket bog)	4.44	Poor	33.70
g1b6 Other upland acid grassland (Grassland – Upland acid grassland)	1.45	Poor	9.57

OHL Tie-in

The baseline habitats impacted by the Project are shown in the baseline habitat map (see Appendix E) and are summarised here in relation to the OHL tie-in:

The total baseline area units are 10.59 BU. There are no baseline linear hedgerows or watercourse units associated with the OHL tie-in. Linear habitats are therefore not considered further in this assessment in relation to the OHL tie-in.

The Baseline habitats associated with the OHL tie-in have been summarised in the Table 2 below (see Baseline Habitat Map - Appendix E).



TEM-NET-ENV-508 Biodiversity Net Gain Assessment Report	Biodiversity Net Gain Assessment		Applies to
			Transmission
	\checkmark		
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Table 2: Summary of baseline habitats – OHL tie-in

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)			
OHL permanent tower area	OHL permanent tower area					
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.21 ha	Poor	1.59			
OHL temporary tower foundation construc	tion area					
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.09 ha	Poor	0.68			
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.41 ha	Poor	0.82			
OHL tower assembly crane laydown area						
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.08 ha	Poor	0.61			
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.17 ha	Poor	0.34			
OHL tower removal working area						
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.22 ha	Poor	1.67			
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	0.08 ha	Poor	0.58			
OHL access route						
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.07 ha	Poor	0.53			



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Available Social Availa

TEM-NET-ENV-508	-508 Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	<0.01 ha	Poor	0.00
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	<0.01 ha	Poor	0.00
w2c Other coniferous woodland (Woodland and forest – Other coniferous woodland)	0.04 ha	Poor	0.08
Existing tower working areas		1	1
f1a6 Degraded blanket bog (Wetland – Blanket bog)	0.37	Poor	2.81
g1b6 Other upland acid grassland (Grassland – Upland acid grassland	0.12	Poor	0.87

Temporary Impacts

Where a habitat is disturbed for a short period of time, it may be considered temporary loss and is treated as 'retained' in terms of the SSEN Transmission Biodiversity Toolkit. To be considered, the habitat must be restored in full to its baseline condition (or better) within two years of the initial impact. Where the habitat cannot be fully restored to its baseline value within two years from the date of impact this is treated as a loss of the baseline habitat, and the reinstatement of the baseline habitat is treated as a creation of that habitat.

The following temporary impacts relating to the Project have been identified (summarised in Table 3):



	NV-508 Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			✓
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Table 3: Summary of temporary habitat loss

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	
Existing access track upgrades – t	emporary working areas		
g1b6 – Other upland acid grassland	<0.01 ha	Poor	
(Grassland - Upland acid grassland)			
Habitat clearance for culvert insta	allation and upgrades		
g1b6 – Other upland acid grassland	0.05 ha	Poor	
(Grassland - Upland acid grassland)			
Habitat clearance for UGC			
g1b6 Other upland acid grassland	0.10 ba	Poor	
(Grassland – Upland acid grassland	0.10 118		



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Available Social Availa

TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Applies to
			Transmission
кер		eport	\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Temporary impacts associated with the substation are related to the existing access track upgrades and habitat clearance.

Construction of the existing access track upgrades is anticipated to be completed within one year. Habitats which will be removed for temporary working areas and culvert upgrades will be seeded with an acid grassland mix following completion of construction, creating Other upland acid grassland (g1b6) of Poor condition (Refer to Appendix J for target condition rationale). A small amount of Other upland acid grassland of Poor condition is present along the existing access track, and this habitat type takes one year to create (following Biodiversity Metric 3.1 Technical supplement²¹). As such, these small areas of Other upland acid grassland will be fully restored to the same habitat type and condition within two years of the initial impact and are therefore excluded from the Toolkit for the Substation.

An area of Other upland acid grassland is present within the area adjacent to the existing substation compound, which will be seeded with an acid grassland mix following completion of construction, creating Other upland acid grassland (g1b6) of Poor condition (Refer to Appendix J for target condition rationale). For the same reason as outlined above, this habitat is therefore excluded from the Toolkit for the Substation.

Construction associated with the OHL tie-in is anticipated to take 19 months. As such, there is no temporary loss associated with the OHL tie-in Toolkit.

Post-development Biodiversity Units

Substation

The post-development BU for the substation have been summarised here:

The total post-development area units are 218.10 BU, meaning that the substation element of the Project will result in a +23% net gain in area BU.

The total post-development linear (hedgerows) units are 0.00 BU (H).

As discussed previously, there are no linear (watercourse) impacts associated with the substation.

The substation element of the Project has achieved a 10% increase in area BU meaning the Project has left nature in a demonstrably better state than before intervention which is also in line with SSEN Transmission's sustainability targets. However, the substation element of the Project has not achieved a 10% linear (hedgerow) BU BNG of 10% on-Site, therefore, additional BU are required offsite to meet SSEN Transmission requirements.

Proposed post-development habitats associated with the substation have been summarised in Table 4 below (Proposed Habitat Map - Appendix G)



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ Stence. Use Section 2014 Section

TEM-NET-ENV-508	TEM-NET-ENV-508 Biodiversity Net Gain Assessment Report		Applies to	
			Transmission	
			\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Table 4: Summary of the post development habitats – substation

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
New substation platform	<u> </u>			
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	8.27 ha	N/A – No biodiversity value	0.00	
Temporary clearance required for	new substation			
h1b Upland heathland (Heathland and shrub – Upland heathland)	3.05 ha	Poor	9.40	
Footprint of substation access tra	ck			
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	1.35 ha	N/A – No biodiversity value	0.00	
Earthworks for substation access	track			
h1b Upland heathland (Heathland and shrub – Upland heathland)	2.98 ha	Poor	9.21	
Habitat clearance for site accommodation				
h1b Upland heathland (Heathland and shrub – Upland heathland)	3.15 ha	Poor	9.69	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	0.08 ha	Moderate	0.36	

Page **27** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)		
Existing access track upgrades - v	widening				
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	1.70 ha	N/A – No biodiversity value	0.00		
Existing access track upgrades –	new ditch extents				
g1b6 Other upland acid grassland (Grassland – Upland acid grassland)	0.28 ha	Poor	1.97		
Existing access track upgrades –	Existing access track upgrades – temporary working areas				
g1b6 Other upland acid grassland (Grassland – Upland acid grassland)	0.81 ha	Poor	5.48		
New SuDS basin					
g3c Other neutral grassland (Grassland – Other neutral grassland)	0.70 ha	Poor	4.78		
SuDS basin access track					
u1c Artificial unvegetated, unsealed surface (Urban – Artificial unvegetated, unsealed surface)	0.15 ha	Poor	0.00		
Habitat clearance for drainage and SuDS basin					
f1a5 Blanket bog (Wetland – Blanket bog)	2.29	Poor	4.95		

Page **28** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to	
			Transmission	
			\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)
h1b Upland heathland (Heathland and shrub – Upland heathland)	1.26 ha	Poor	3.88
w1d Wet woodland (Woodland and forest – Wet woodland)	0.23 ha	Moderate	1.19
Habitat clearance for UGC			
h1b Upland heathland (Heathland and shrub – Upland heathland)	0.51 ha	Poor	1.75
Habitat clearance for culvert insta	llation and upgrades		
g1b6 Other upland acid grassland (Grassland – Upland acid grassland)	0.17 ha	Poor	1.09
Other areas within the Site (not a Habitat Restoration Plan)	ffected by the Project, but r	etained and enhance	d in Landscape and
f1a5 Blanket bog (Wetland – Blanket bog)	13.51 ha	Poor	63.94
h1b Upland heathland (Heathland and shrub – Upland heathland)	20.39 ha	Poor	85.02
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	2.67 ha	Moderate	13.77
r1g Other standing water (Urban – Artificial lake or pond)	0.01 ha	Moderate	0.04

Page **29** of **58**

© Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			*
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

OHL Tie-in

The post-development BU for the OHL tie-in element of the Project have been summarised here:

The total post-development area units are 6.29 BU, meaning that the OHL tie-in will result in a -41% loss in area-based BU. There are no linear habitat proposals associated with the OHL tie-in.

The OHL tie-in element of the Project has not achieved an area BU of 10%, and an additional 5.36 area BU are required to achieve this target.

However, the substation has resulted in a substantial net gain in area BU above the 10% target (with a net change of 41.49 area BU), owing to the extensive habitat creation and enhancement measures proposed. Of the 218.10 area BU achieved by the substation at post-development, there is a surplus of 21.98 area BU above those required to meet a 10% gain. The 5.36 area BU required to meet 10% gain for the OHL tie-in is therefore offset by the surplus BU delivered by the substation. As such, a 10% gain in area BU for the OHL tie-in can be achieved within the Site itself, and no additional BU are required off-Site to meet SSEN Transmission requirements.

Proposed post-development habitats associated with the OHL tie-in have been summarised in Table 5 below (Proposed Habitat Map - Appendix G)

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
OHL permanent tower area				
h1b Upland heathland (Heathland and shrub – Upland heathland)	0.21 ha	Poor	0.70	
OHL temporary tower foundation cons	truction area		-	
h1b Upland heathland (Heathland and shrub – Upland heathland	0.43 ha	Poor	1.46	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	0.06 ha	Moderate	0.29	
OHL tower assembly crane laydown area				
h1b Upland heathland (Heathland and shrub – Upland heathland	0.22 ha	Poor	0.76	

Table 5: Summary of the post development habitats – OHL tie-in

Page **30** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508			Applies to
	Biodiversity Ne R	et Gain Assessment eport	Transmission
			· ·
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Condition	Biodiversity Units (BU)	
w1g Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	0.02 ha	Moderate	0.10	
OHL tower removal working area				
h1b Upland heathland (Heathland and shrub – Upland heathland	0.30 ha	Poor	1.00	
OHL access route				
h1b Upland heathland (Heathland and shrub – Upland heathland)	0.12 ha	Poor	0.37	
Existing tower working areas				
h1b Upland heathland (Heathland and shrub – Upland heathland)	0.50 ha	Poor	1.63	

Forecasted changes in High Distinctiveness habitats

High Distinctiveness habitats associated with the substation and OHL tie-in are recorded in Table 6 and Table 7 respectively, outlining the net change per habitat type.

High Distinctiveness Habitats	Baseline Area (ha) / Length (km)	Post-development Area (ha) / Length (km)	Biodiversity Unit Net Change (BU)	% Net Change
g3c Other neutral grassland	0.62 ha	0.70 ha	0.28	+6%
(Grassland – Other neutral grassland)				

Table 6: Summary of High distinctiveness habitats - substation

Page **31** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



	Biodiversity Net Gain Assessment		Applies to
TEM-NET-ENV-508			Transmission
	Report	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

High Distinctiveness Habitats	Baseline Area (ha) / Length (km)	Post-development Area (ha) / Length (km)	Biodiversity Unit Net Change (BU)	% Net Change
g1b6 – Other upland acid grassland (Grassland – Upland acid grassland)	1.54 ha	1.09 ha	-4.11	-34%
h1b Upland heathland (Heathland and shrub – Upland heathland)	1.04 ha	28.39 ha	101.66	+1288%
f1a5 Blanket bog (Wetland – Blanket bog)	5.31 ha	15.80 ha	28.66	+71%
w1d Wet woodland (Woodland and forest – Wet woodland)	0 ha	0.23 ha	1.19	N/A ²⁵

Table 7: Summary of High distinctiveness habitats – OHL tie-in

High Distinctiveness Habitats	Baseline Area (ha) / Length (km)	Post-development Area (ha) / Length (km)	Biodiversity Unit Net Change (BU)	% Net Change
g1b6 – Other upland acid grassland (Grassland – Upland acid grassland)	0.21 ha	0.00 ha	-1.45	-100%
f1a5 Blanket bog (Wetland – Blanket bog)	1.04 ha	0.00 ha	-7.89	-100%
h1b Upland heathland (Heathland and shrub – Upland heathland)	0.00	1.86	6.18	N/A ²⁵

 $^{^{\}rm 25}$ Zero baseline units for this habitat type - % net change cannot be calculated

Page **32** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ see.ev. (b) Sootish and Southern Electricity Networks is a trading mane of: Scotish and Southern Energy Power Distribution limited Registered in Scotiand No. S213459; Scotish Hydro Electric Transmission plc Registered in Scotiand No. S213451; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered in Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered in Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered of Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered Scotiand No. S213459; Scotish Hydro Electric Power Distribution plc Registered Scotiand No. S213459; Sco

	Biodiversity Net Gain Assessment Report		Applies to		
TEM-NET-ENV-508			Biodiversity Net Gain Assessment		Transmission
			✓		
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030		

Off-Site BNG

Off-Site habitat creation and enhancement is only required when all options for on-site BNG requirements have been considered. If no on-Site opportunities can be implemented, off-Site habitat creation and enhancement will be undertaken but kept, wherever possible, within the locale of the Project. Compensation is targeted at delivering biodiversity net gains that are ecologically equivalent in type and condition to the habitats lost, following the 'like for like or better' principle. The off-site habitat has been assessed/will be assessed using the Toolkit to take into consideration the existing biodiversity present and aims to maximise benefits for biodiversity in accordance with local and national strategies.

Substation

The amount of linear (hedgerow) BU (H) required to achieve a 10% gain is 1.17 HU. Offsetting will allow the substation element of the Project to achieve a minimum 10% biodiversity net gain. However, no location has currently been selected for off-Site habitat creation and/or enhancement.

To compensate for the loss of Native hedgerows to existing access track upgrades, replacement hedgerow planting is recommended as close to the Site as possible. Hedgerows which will be lost are all species-poor, and creation and/or enhancement of Native species-rich hedgerows is recommended. However, without knowing the nature of habitats at possible habitat creation/enhancement sites, it is not possible to provide specific detail on the type of habitat measures available to achieve a +10% gain.

OHL tie-in

As discussed at Results, the OHL tie-in element of the Project has not achieved an area BU of 10%, with an additional 5.36 area BU required to achieve an area BU of 10%. However, the substation has resulted in a surplus of 18.03 area BU above those required to meet a 10% gain in area BU. This surplus of area BU associated with the substation therefore more than compensates for the loss of BU associated with the OHL tie-in, whilst also meeting a 10% gain in area BU. Therefore no additional BU are required off-Site to meet SSEN Transmission requirements

Additional Ecological Benefits

Opportunities have been identified for additional ecological benefits as a result of habitat creation and enhancement on-site and off-site. These opportunities have been listed below.

- the created habitats provide further benefits beyond the floristic (such as for invertebrates and amphibians) for the local environment. This will include peatland restoration, with the creation and enhancement of Blanket bog (involving sustainable re-use of peat excavated for the Project), and creation of several other habitats comprising Upland heathland, Wet woodland, Other broadleaved woodland, Other neutral grassland, Upland acid grassland, and a small pond compensating for loss of another;
- a number of the habitats to be created and/or enhanced are Tayside LBAP⁹ priority habitats, comprising Upland heathland, Blanket bog, Wet woodland and Other neutral grassland (wet grassland associated with SuDs);
- hedgerows will be created and/or enhanced at an off-Site location, to be specified.



	Biodiversity Net Gain Assessment Report		Biodiversity Net Gain Assessment		Applies to
TEM-NET-ENV-508					Transmission
			✓		
Revision: 1.00	Classification: Public Issue Date: February 2025		Review Date: October 2030		

Implementing and Monitoring

To ensure positive habitat creation and enhancements are achieved long term, monitoring and maintenance procedures will be implemented by the SSEN Transmission Operations team following completion of the Project. These are detailed in the Landscape and Habitat Restoration Plan (Appendix F of accompanying EA) but generally:

- all planting required for habitat creation will be carried out according to appropriate standards, including following the instructions provided by the tree or seed supplier;
- peatland restoration areas will be appropriately prepared prior to placement of extracted peat and seeding with bog species, including removal of forestry brash, and blocking of ditches as necessary; and
- created (and enhanced) habitats will be monitored to ensure correct establishment, and remedial action taken if growth fails.

It is predicted that the biodiversity enhancements will reach their targeted conditions within the following timeframes (following completion of construction²⁶):

- Blanket bog 20 years;
- Upland heathland 10 years;
- Other broadleaved woodland and wet woodland 15 years;
- Upland acid grassland 1 year;
- Other neutral grassland 2 years; and
- Pond 3 years.

An appropriate monitoring and management plan should be developed to ensure the created and enhanced habitats reach their targeted conditions. It is recommended that monitoring is undertaken in years 3, 5, 10, 15 and 20 with an appropriate management feedback loop, should the monitoring find the habitats are not on track to achieve the targeted conditions.



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13459; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Registered in Scotland No. SC13460; and Southern Electry Power Distribution pic Regis

²⁶ The construction period varies depending on specific project element, as outlined in Limitations and Assumptions.

	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Summary

The results of the onsite BNG assessment are summarised in Table 8 and Table 9 in relation to the substation and OHL tie-in respectively.

	Baseline Biodiversity Units	Post- Development Biodiversity Units	Difference Change in Biodiversity Units	Difference Change in Biodiversity Units (%)	Biodiversity Units Required Off-site
Area Units	176.61 BU	218.10 BU	+41.49 BU	+23%	0 BU
Linear Units (Hedgerows)	1.06 BU (H)	0 BU (H)	-1.06 BU (H)	-100%	1.17 BU (H)
Linear Units (Watercourses)	0 BU (W)	0 BU (W)	0 BU (W)	-	0 BU (W)

Table 8: Summary of the onsite biodiversity units - Substation

Table 9: Summary of the onsite biodiversity units – OHL tie-in

	Baseline Biodiversity Units	Post- Development Biodiversity Units	Difference Change in Biodiversity Units	Difference Change in Biodiversity Units (%)	Biodiversity Units Required Off-site
Area Units	10.59 BU	6.29 BU	-4.30 BU	-41%	0 BU. 5.36 area BU required to meet +10% net gain offset by the large surplus in units delivered by the substation. All offsetting can therefore be achieved within the Site, and no off-Site



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

	Baseline Biodiversity Units	Post- Development Biodiversity Units	Difference Change in Biodiversity Units	Difference Change in Biodiversity Units (%)	Biodiversity Units Required Off-site
					measures ae required.
Linear Units (Hedgerows)	0 BU (H)	0 BU (H)	0 BU (H)	-	0 BU (H)
Linear Units (Watercourses)	0 BU (W)	0 BU (W)	0 BU (W)		0 BU (W)

The predicted post-development area BUs are 218.10 for the substation, meaning that the substation will achieve a net gain in excess of 10% and therefore at least a 10% gain would be delivered.

Off-Site habitat creation/enhancement will be required to achieve a +10% gain in linear (hedgerow) BU. The amount of BUs required from off-Site habitat creation/enhancement to achieve a +10% gain is 1.17 BU. No off-Site location has currently been selected for hedgerow creation/enhancement. Creation of Native species-rich hedgerow is in particular recommended to compensate for the reduction in area-based BU, with all hedgerows lost being species-poor.

The predicted post-development area BUs are 6.29 for the OHL tie-in, meaning that the OHL tie-in would result in a net loss of area BU. To meet the 10% gain target, 5.36 area BUs are required to. The large surplus of area BU associated with the substation more than compensates for the loss of BU associated with the OHL tie-in, whilst also meeting the 10% gain target. As such, 10% gain in area BU can be achieved for both the Substation and OHL tie-in within the Site itself, with no additional area BU are required off-Site to meet SSEN Transmission requirements.

The habitat creations and enhancements have been designed to be achieved within a reasonable timeframe and with reasonable certainty as the outcomes from the Toolkit have been informed by the Natural England Biodiversity Metric 3.1²¹, with the exception of Blanket bog (adapted to reflect the requirements of Scottish habitats). The restoration and enhancement of biodiversity was conducted in accordance with local and national guidance. It is considered these measures are appropriate to the nature and scale of the Project. These habitat creations and enhancements have considered surrounding habitats, such as improving the biodiversity value of open space habitats (i.e., peatland restoration) around the Project, and replacing some Sitka spruce plantation with native broadleaved woodland. No Irreplaceable Habitat will be affected by the Projectt.

This BNG report illustrates that there will be positive effects on biodiversity, leaving the natural environment in a demonstrably better state than before the Project work began.

Page **36** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co. U
Sottish and Southern Electricity Networks is a trading name of: Sottish and Southern Energy Power Distribution Limited Registered in Sottian No. SC213469; Sottish Hydro Electric Power Distribution pic Registered in Sottian A Sottian No. SC213469; Sottish Hydro Electric Power Distribution pic Registered in Sottian A Sottian Hydro Electric Power Distribution pic Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian A

	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Biodiversity Outcomes

The habitats created are more species-rich and with higher biodiversity value than existing habitats, largely owing to the baseline comprising Sitka spruce plantation (felled or otherwise), which is of very low value ecologically. The outcomes of the proposed habitat works and further biodiversity enhancement measures aim to create more natural, species-rich habitats with higher biodiversity value than existing habitats, and providing further benefits beyond the floristic (such as for invertebrates and amphibians) for the local environment. This will include peatland restoration, with the creation and enhancement of Blanket bog (involving sustainable re-use of peat excavated for the Project), and creation of several other habitats comprising Upland heathland, Wet woodland, Other broadleaved woodland, Other neutral grassland, Upland acid grassland, and a small pond compensating for loss of another.

Hedgerows will be created and/or enhanced at an off-Site location.



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co. U
Sottish and Southern Electricity Networks is a trading name of: Sottish and Southern Energy Power Distribution Limited Registered in Sottian No. SC213469; Sottish Hydro Electric Power Distribution pic Registered in Sottian A Sottian No. SC213469; Sottish Hydro Electric Power Distribution pic Registered in Sottian A Sottian Hydro Electric Power Distribution pic Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian Hydro Electric Power Distribution of Registered in Sottian A Sottian A

	Die die ensite Net Cain Assessment		Applies to	
TEM-NET-ENV-508	Biodiversity Net Gain Assessment	Biodiversity Net Gain Assessment		Transmission
Report		\checkmark		
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Appendix A Approach to Biodiversity Net Gain

A full BNG assessment was undertaken for the Project to quantify the change in biodiversity. The BNG assessment was completed within the Toolkit following the SSEN Transmission Biodiversity Net Gain Toolkit User Guide¹. This method has been revised to align with Natural England Biodiversity Metric 3.1^{20} , adapted to reflect the requirements of Scottish habitats.

A UKHab survey of the Project was undertaken on 11 and 12 April 2023, 15 January 2024, 18 and 19 March 2024, and 04 April 2024 . The survey was based on the methods described within the UK Habitat Classification User Manual¹⁷.

The baseline multiplication uses the following characteristics of the habitats:

- Habitat area (hectares) or length (kilometres) •
- Distinctiveness •
- Condition •
- Connectivity •
- Strategic significance •
 - Figure A.1: Pre-intervention biodiversity calculation

Size of habitat parcel	×	Distinctiveness	x	Condition	x	Strategic location	x	Connectivity	=	Biodiversity units
10 (ha)	×	6 (high)	x	3 (good)	x	1.15 (high)	x	1.15 (high)	=	238 units
					н	abitat parcel			Risk fa	ctor
					M	leasure of biodiversity	quality		Value i	n biodiversity units

Habitat Distinctiveness for the habitats relevant to the project were assigned as per Appendix C, and scored as

High = 6

Medium = 4

Low = 2

Very low = 0



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Naing their Registered Offices at Inveraimond House 200 Dunkeld Road Perth PH3 A02; and Southern Electric Power Distribution pic Registered in England & Wales No. 0040920 banking their Registered Offices at No. Perturbation Reading RG3 JiHwink are members of the SSE Group waves rencoust

		Applies to	
TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Transmission
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Each habitat parcel recorded was assigned a condition score (Good, Moderate, Poor, or N/A) determined by the Natural England Biodiversity Metric 3.1 Habitat Condition Assessment sheets²⁷ which have been adopted into the Toolkit's methodology.

The following scores were assigned to conditions:

Good = 3 Moderate = 2 Poor = 1 N/A – Agriculture = 1 N/A - No biodiversity value = 0

The SSEN Transmission User Guide has adopted the Natural England Beta Biodiversity Metric 2.0 method of assigning connectivity. The connectivity of a habitat parcel is determined based on the distinctiveness of the habitat. High distinctiveness habitats are assigned with a Moderate connectivity multiplier, whereas Moderate and Low distinctiveness habitats are assigned a Low connectivity.

The following scores were assigned for connectivity:

High = 1.15 Moderate = 1.1 Low = 1

Strategic significance scores are measured using the Tayside LBAP⁹, these have been assigned as follows, based on habitats identified to be of local importance:

High = Formally identified in local strategy, plan or policy = 1.15

Medium = Location ecologically desirable but not identified in a local strategy, plan or policy = 1.1 Low = Not identified in a local strategy, plan or policy or no strategy or plan is in place in the area = 1



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk 🕚

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Naing their Registered Offices at Inveraimond House 200 Dunkeld Road Perth PH3 A02; and Southern Electric Power Distribution pic Registered in England & Wales No. 0040920 banking their Registered Offices at No. Perturbation Reading RG3 JiHwink are members of the SSE Group waves rencoust

²⁷ Natural England. 2022. Biodiversity Metric 3.1 Habitat Condition Sheets with Instructions. [Online] Available at: <u>Archive Site for Legacy Biodiversity Metrics</u>

		Applies to	
TEM-NET-ENV-508	T-ENV-508 Biodiversity Net Gain Assessment Report		Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Figure A.2: Post-intervention biodiversity calculation

POST-intervention biodiversity calculation (for newly created habitat)



The creation and enhancement of habitats has a delivery risk multiplier assigned to each habitat to represent the difficulty in creating or restoring that habitat. The delivery risk multipliers are taken from the Biodiversity Metric 3.1 Technical Supplement:

Very High = 0.1 High = 0.33 Medium = 0.67 Low = 1

Time to target condition scores were assigned based on the Biodiversity Metric 3.1 Technical Supplement²⁸, (with the exception of Blanket Bog, for which see Appendix J Target Condition Justifications) which provides tables with estimated time to target for habitat creating and enhancement and uses the same multipliers. The delay to creation and/or enhancement is added on to the time to target found in the Technical Supplement to account for the Project timeline.

Table A.1:	Time to	Target	Condition	multiplier
------------	---------	--------	-----------	------------

Time to Target Condition				
Time (years)	Multiplier	Time (years)	Multiplier	
0	1	17	0.546	
1	0.965	18	0.527	
2	0.931	19	0.508	
3	0.899	20	0.490	

²⁸ Natural England. 2022. Biodiversity Metric 3.1 Technical Supplement. [Online] Available at: <u>Archive Site for</u> <u>Legacy Biodiversity Metrics</u>



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.u Vo Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC213463; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213463; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SCOLT Power Distribution pic Registered No.

	Biodiversity Net Gain Assessment		Applies to
TEM-NET-ENV-508			Transmission
Report		✓	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

4	0.867	21	0.473
5	0.837	22	0.457
6	0.808	23	0.441
7	0.779	24	0.425
8	0.752	25	0.410
9	0.726	26	0.396
10	0.700	27	0.382
11	0.676	28	0.369
12	0.652	29	0.356
13	0.629	30	0.343
14	0.607	31	0.331
15	0.586	32+	0.320
16	0.566		

Off-site habitat creation and enhancement is only required when all options for on-site BNG requirements have been considered. If no on-site opportunities can be identified, off-site habitat creation and enhancement will be undertaken. The Toolkit has a spatial risk multiplier to encourage off-site compensation work to occur in the locale of the Project, with reference to Local Planning Authority (LPA) or National Park Authority boundary. The Spatial Risk Categories are displayed below:

Habitat provides compensation within the local LPA area = 1

Habitat provides compensation outwith the local LPA but within neighbouring LPA = 0.75

Habitat provides compensation outwith the local LPA and neighbouring LPAs = 0.5

The same Toolkit was used to calculate the net biodiversity change between the baseline habitats and the post-development habitats.

An impact to a habitat which is reversible and can return to same extent and ecological condition or better within two years of the initial impact, can be considered a temporary impact. Temporary impacts have not been included in the Toolkit calculations as there are no permanent adverse impacts.

Retained habitat are also excluded from the Toolkit as there is no recordable impact.

The Toolkit assesses both the area and linear habitat separately within the same Toolkit. The Toolkit produces a Biodiversity Unit value for the three categories of habitat type: Area Biodiversity Units (BU), Linear Hedgerow Biodiversity Units (H BU) and Linear Watercourse Biodiversity Units (W BU). These units are not interchangeable. Area-based habitats are always impacted by the footprint of the Project, therefore Area BU are always relevant.



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Naing their Registered Offices at Inveraimond House 200 Dunkeld Road Perth PH3 A02; and Southern Electric Power Distribution pic Registered in England & Wales No. 0040920 banking their Registered Offices at No. Perturbation Reading RG3 JiHwink are members of the SSE Group waves rencoust

Appendix B Assigned UKHab Habitat Distinctiveness

Table B.1: Baseline and post-development habitat types and distinctiveness

UKHab habitat	Distinctiveness
Grassland - Other neutral grassland	High
Grassland - Upland acid grassland	High
Heathland and shrub - Upland heathland	High
Urban - Artificial lake or pond	Low
Urban - Artificial unvegetated, unsealed surface	Very Low
Native hedgerow	Low
Wetland - Blanket bog	High
Woodland and forest - Felled	Low
Woodland and forest – Other coniferous woodland	Low
Woodland and forest – Other woodland; broadleaved	Medium
Woodland and forest - Wet woodland	High



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469, Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Reg

	Biodiversity Net Gain Assessment		Applies to
TEM-NET-ENV-508			Transmission
Report	eport	✓	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Good practice principles for biodiversity net gain Appendix C

The Project has applied the UK good practice principles for BNG² below:

Principle	Summary of Project actions
Apply the mitigation hierarchy	The mitigation hierarchy has been applied during this assessment by engaging with the applicant team and finding the best ecological solutions for the Site. However, it has been determined through field survey and desk study that habitats within the Site are neither irreplaceable nor specially notable, as a result of their low quality and/or ubiquity. Thus there is no habitat in the Site that particularly requires to be avoided. Biodiversity losses have been necessarily mitigated to achieve the stated net gain, through the proposed habitat measures.
Avoid losing biodiversity that cannot be offset elsewhere	There are no irreplaceable habitats within the footprint of the Project (the only baseline blanket bog is in Poor condition and therefore not considered irreplaceable, although it will be retained and enhanced).
Be inclusive and equitable	Wider stakeholder engagement was not necessary for this project; however, the SSEN Transmission operations team have been consulted throughout the assessment, including to avoid conflicts with other land use management plans.
Address risk	Risk in achieving net gain has been mitigated by selecting created/enhanced habitats and target conditions that are reasonable to attain in the light of guidance and professional judgement, and give sufficient provision of compensatory habitats to achieve net gain.
Make a measurable net gain contribution	Measurable net gain has been achieved for the Project as documented in this Report and the associated SSEN Biodiversity Toolkits, in this case through substantial on-Site area BU provision for the substation using created/enhanced habitats that are reasonable to attain given the nature and location of the Site. Whilst the OHL tie-in resulted in a net loss of area BU, this has been offset through the substantial gain in

Table C.1: Good practice principles for biodiversity net gain

Page **43** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469, Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Registered in Scotland No. SC13469, iad Naving their Registered of International Registered in Reg

		Applies to	
TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Transmission
	ĸ	✓	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

	area BU delivered by the substation. Off-Site measures are also acknowledged to be necessary to achieve net gain for linear hedgerow BU. Provided these measures are implemented, a measurable net gain contribution will be achieved.
Achieve the best outcomes for biodiversity	The project enhances habitats of current low ecological value, that are often disturbed and of poor quality. Peatland restoration and the creation of heathland, woodland and grassland will provide multiple benefits both floristically and by benefitting other taxa such as invertebrates (including pollinators). The creation of open water habitat will provide continued opportunities for amphibians.
Be additional	The creation and enhancement of area habitats on- Site for the substation are set to achieve a net gain in excess of 10%, surpassing the target of 10%. This arises largely from the low value of dominant Sitka spruce baseline habitat, the necessity of re-using excavated peat (in this case, for peatland restoration), and the requirement to provide landscape screening.
Create a net gain legacy	The proposed created/enhanced habitats can be expected to persist in the long-term and thus represent a net gain legacy.
Optimise sustainability	The habitat proposals include on-Site re-use, where it is available, of surplus excavated material during construction. Such re-use minimises the need for off- Site disposal and associated carbon costs. This includes the re-use for peatland restoration of peat excavated (from under existing forestry) for the Project.
Be transparent	Through regular meetings and liaison with the AECOM project team and applicant team, the habitat proposals have been clearly presented and altered or removed as necessary.



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Advances of the State of the

	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Appendix D References

Table D.1 - Scottish and Southern Electricity Networks Documents

Reference	Title
TG-NET-ENV-526	Biodiversity Net Gain Toolkit User Guide (2023)
	Sustainability Strategy (2024)

Table D.2 – Miscellaneous Documents

			-		
	-		-	-	
		-	-	-	
			-		
				۰.	
-			-	-	

CIEEM, CIRIA, IEMA. 2020. C776a. Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide. [Online] Available at: <u>Biodiversity Net Gain: Good Practice Principles for Development, A Practical Guide.</u> | <u>CIEEM</u>

JNCC. 2010. Handbook for Phase 1 habitat survey A technique for environmental audit. [Online] Available at: <u>Handbook for Phase 1 habitat survey</u>

Natural England. 2022. Biodiversity Metric 3.1 Habitat Condition Sheets with Instructions. [Online] Available at: <u>Archive Site for Legacy Biodiversity Metrics</u>

Natural England. 2022. Biodiversity Metric 3.1. [Online] Available at: <u>Archive Site for Legacy Biodiversity</u> <u>Metrics</u>

Natural England. 2022. Biodiversity Metric 3.1 Technical Supplement. [Online] Available at: <u>Archive Site for</u> <u>Legacy Biodiversity Metrics</u>

Natural England. 2010. Higher Level Stewardship Farm Environment Plan Manual Third Edition. [Online] Available at: http://publications.naturalengland.org.uk/file/122006

Scottish Government. 2023. National Planning Framework 4. [Online] Available at: <u>National Planning</u> <u>Framework 4 - gov.scot</u>

Scottish Government. Nature Conservation (Scotland) Act 2004. [Online] Available at: <u>Nature Conservation</u> (Scotland) Act 2004

Scottish Government. Town & Country Planning (Scotland) Act 1997. [Online] Available at: <u>Town and Country</u> <u>Planning (Scotland) Act 1997</u>

SSE Renewables. 2024. SSER Biodiversity Net Gain Toolkit User Guide V2.2 [Online] Available at: <u>sser-bng-toolkit-user-guide_v2-2.pdf</u>

Tayside Biodiversity Partnership (2016) Tayside Local Biodiversity Action Plan 2nd Edition 2016 – 2026. [Online]. Available at: <u>Tayside New LBAP 2016-2026</u>

UKHab Ltd. 2023. UK Habitat Classification Version 2.0. [Online] Available at: ukhab – UK Habitat Classification



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk 🥹

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC13469; Scottish Hydro Electric Transmission pic Registered in Scotland No. SC13469; jail Naing their Registered Offices at Inveraimond House 200 Dunkeld Road Perth PH3 A02; and Southern Electric Power Distribution pic Registered in England & Wales No. 0040920 banking their Registered Offices at No. Perturbation Reading RG3 JiHwink are members of the SSE Group waves rencoust

			Applies to
TEM-NET-ENV-508 Biodiversity Net Gain As	t Gain Assessment	Transmission	
	Report		\checkmark
Revision: 1.00	Classification: Public Issue Date: February 2025		Review Date: October 2030

Appendix E Baseline BNG Habitat Map - Substation

Page **46** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to
			Transmission
			✓
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Appendix F Baseline BNG Habitat Map – OHL Tie-in

Page **47** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			\checkmark
Revision: 1.00	Classification: Public Issue Date: February 2025		Review Date: October 2030

Appendix G Post-Development BNG Habitat Map - Substation



	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
Revision: 1.00	Classification: Public Issue Date: February 2025		Review Date: October 2030

Appendix H Post-development BNG Habitat Map – OHL Tie-in

Page **49** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



			Applies to
TEM-NET-ENV-508 Biodiversity Net Ga	Biodiversity Net Gain Assessment Transmission		
	Report		\checkmark
Revision: 1.00	Classification: Public Issue Date: February 2025		Review Date: October 2030

Appendix I **Proposed Landscaping and Habitat Restoration** Plan



	Biodiversity Net Gain Assessment Report		Applies to
TEM-NET-ENV-508			Transmission
			\checkmark
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Appendix J Target Condition Justifications

Table K.1 below provides justification for why the proposed habitat conditions were assigned per habitat parcel in line with Biodiversity Metric 3.1 - Technical Supplement.

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
g1b6 – Other upland acid grassland	Substation: 1.09 ha	Poor	Predicted to pass 2 of 5 criteria: A. The parcel represents a good example of its
(Grassland – Upland acid grassland)	Grassland – OHL tie-in: 0 ha pland acid rassland)		B. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm). Fail.
			C. Cover of bare ground is between 1% and 5%, including localised areas. Fail.
			D. Cover of bracken <i>Pteridium aquilinium</i> is less than 20% and cover of scrub is less than 5%. Fail.
			E. Combined cover of species indicative of suboptimal condition and physical damage accounts for less than 5% of total area. Pass.
		Will likely fail on sward height variability, scrub cover and minimum 1% bare ground (although the latter criterion is arguably inappropriate for most grasslands, at least in Scotland), and given likely minimum management a target condition of Poor is considered appropriate.	
g3c – Other neutral grassland	Substation: 0.7 ha	Poor	Predicted to pass 2 of 6 criteria:
(Grassland – Other	OHL tie-in: 0 ha		A. The parcel represents a good example of its habitat type. Fail.
neutral grassland)			B. Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm). Fail.
			C. Cover of bare ground is between 1% and 5%, including localised areas. Fail.
			D. Cover of bracken <i>Pteridium aquilinium</i> is less than 20% and cover of scrub is less than 5%. Pass.

Table J.1:	Target	Condition	Justifications
------------	--------	-----------	----------------



TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Applies to
			Transmission
	ĸ	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			E. Combined cover of species indicative of suboptimal condition and physical damage accounts for less than 5% of total area. Pass
			F. There are 10 or more vascular plant species per m ² present, including forbs that are characteristic of the habitat type. Fail.
			Grassland comprising a wetland meadow mix, associated with SuDS. Likely to fail on species richness, sward height, and bare ground (although as mentioned above 1% minimum bare ground is arguably not appropriate). Given likely minimum management a target condition of Poor is considered appropriate.
f1a – Blanket bog	Substation:	Poor	Predicted to pass 2 of 7 criteria:
(Wetland – Blanket ^{15.80} ha bog) OHL tie-ir	15.80 ha OHL tie-in: 0 ha		A. The water table is at/near surface all year, with no artificial drainage. Pass.
			B. The parcel represents a good example of its specific habitat type, matching closely with its UKHab description, with indicator species consistently present. Fail.
			C. The water supplies to the wetland are of good water quality, with no obvious signs of pollution. Pass.
			D. Cover of scrub and scattered trees are less than 10%. Fail.
			E. Cover of bare ground is less than 5%. Fail.
			F. There is an absence of invasive non-native plant species and species indicative of suboptimal condition make up less than 5% of ground cover. Fail.
			H. Sphagnum moss <i>Sphagnum</i> spp. and cottongrass <i>Eriophorum</i> spp. are at least frequent. Cover of ericaceous dwarf shrubs is less than 75%. Fail.
			Favourable hydrological conditions must be restored. Following this, it is reasonable to

Page **52** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Applies to
			Transmission
	ĸ	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			assume the successful promotion of peat bog indicator species and reduced cover of ericoid shrubs (which seldom exceed 75% cover), will both occur. The IUCN details that in many cases rewetting brings back former peat forming vegetation within 5 to 10 years29. The IUCN report of forest to bog restoration also notes that it is possible to rehabilitate damaged areas of peatland and return beneficial and biodiversity functions even within a 10-20 year period30. Taking a precautionary approach, it is therefore reasonable to predict that the proposed restoration will result in the development of Blanket Bog, of Poor condition, within 20 years.
			20 years has therefore been set as the time to target condition. The peatland restoration will follow best practice techniques to restore the water table through ditch blocking which will likely make use of excess peat from the construction areas and methods such as smoothing to remove the current ridge and furrows in place from the historical forestry.
			With respect to the difficulty multiplier, this has been set at medium, based on the growing knowledge and experience of peatland restoration techniques in Scotland. For example, the peatland ACTION programme as undertaken peatland restoration on over 51,000 ha since 2012. The Scottish Government has committed investment in peatland restoration and as a result there is a greater industry knowledge and expertise amongst contractors who undertaken restoration. Detailed guidance on restoration techniques is available, which has been developed based on experience of restoration projects. It is considered that in light of the level
			of industry knowledge, which has learnt from success and failures on restoration projects

³⁰ Forest to Bog Restoration – Demonstrating Success'. 2024. IUCN UK Peatland Programme <u>Demonstrating</u> <u>Success Forest to Bog_small.pdf</u>



Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC213469; Scottish Hydro Electric Pransmission pic Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotland No. SC213469; Control Hydro Electric Power Distribution pic Registered in Scotla

	Diadimensity Net Cain Assessment		Applies to
TEM-NET-ENV-508	Biodiversity Ne	Transmission	
	ĸ	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			there can be confidence in methods to be used on the Site.
h1b Upland heathland ²⁴ (Heathland and shrub – Upland heathland)	Substation: 28.29 ha OHL tie-in: 1.86 ha	Poor	 Predicted to pass 6 of 11 criteria: A. The parcel represents a good example of its habitat type. Fail. B. There are at least two dwarf shrub species frequent, and cover of dwarf shrubs is between 25-75% for lowland heathland, 50-75% for upland dry heath, or >20% for upland wet heath. Pass. C. All heather <i>Calluna vulgaris</i> age-classes (pioneer, degenerate and mature) present with at least 10% pioneer heather in the lowlands or at least 10% degenerate or mature in the uplands. Fail. D. Unshaded bare ground is between 1-10%. Pass. E. There is an absence of invasive non-native plant species and shallon <i>Gaultheria shallon</i>. Pass. F. No signs of disturbance of sensitive areas. Pass. G. No more than 33% of heather shoots have been recently grazed, or flowering heather plants are at least frequent in autumn. Fail. H. The canopy cover of scattered trees and or scrub (not including gorse <i>Ulex</i> spp.) is less than 20% for upland heaths, less than 15% for lowland wet heaths. Fail. I. Total gorse cover is less than 50%, with common gorse <i>Ulex</i> europaeus less than 25%. Pass. J. The cover of bracken is less than 5%. Fail.

Page **54** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Advances of the State of the

	Biodiversity Net Gain Assessment		Applies to
TEM-NET-ENV-508			Transmission
	ĸ	✓	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			K. No signs of any damaging activities or contamination to the habitat such as: artificial drains, peat extraction, silt, leachate or eutrophication. Pass.
			Given likely minimum management a target condition of Poor is considered appropriate.
w1g – Other broadleaved woodland (Woodland and forest – Other woodland; broadleaved)	Substation: 2.75 ha OH tie-in: 0 ha	Moderate	 Predicted total score 27/39: A. Number of age classes of trees. 1 (poor). B. Amount of herbivore damage. 3 (good). C. Invasive plants. 3 (good). D. Number of native tree/shrub species. 3 (good). E. Cover of native tree and shrub species. 3 (good). F. Open space within woodland. 3 (good). G. Woodland regeneration. 1 (poor). H. Tree health. 3 (good). I. Vegetation and ground flora. 1 (poor). J. Woodland vertical structure. 1 (poor).
			K. Veteran trees. 1 (poor).L. Amount of deadwood. 1 (poor).M. Woodland disturbance. 3 (good).
w1d – Wet woodland (Woodland and forest – Wet woodland)	Substation: 0.23 ha OHL tie-in: 0 ha	Moderate	 Predicted total score 27/39: A. Number of age classes of trees. 1 (poor). B. Amount of herbivore damage. 3 (good). C. Invasive plants. 3 (good). D. Number of native tree/shrub species. 3 (good).

Page **55** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Advances and Southern Electricity Networks is a trading name of. Socialish and Southern Energy Power Distribution Limited Registered in Social No. Sc213469; Social Networks is a trading name of. Social No. Social No. Sc213469; Social Networks is a trading name of. Social No. Social No. Sc213469; Social Networks is a trading name of. Social No. Soci

TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Applies to
			Transmission
	K	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			E. Cover of native tree and shrub species. 3 (good).
			F. Open space within woodland. 3 (good).
			G. Woodland regeneration. 1 (poor).
			H. Tree health. 3 (good).
			I. Vegetation and ground flora. 1 (poor).
			J. Woodland vertical structure. 1 (poor).
			K. Veteran trees. 1 (poor).
			L. Amount of deadwood. 1 (poor).
			Woodland disturbance. 3 (good).
r1g – Other	Substation:	Moderate	Predicted to pass 8 of 9 criteria:
standing water 0.0 (Urban – Artificial OH lake or pond)	OHL tie-in: 0 ha		A. The pond is of good water quality, with clear water indicating no obvious signs of pollution, and low turbidity. Pass.
			B. There is semi-natural habitat (moderate distinctiveness or above) for at least 10 m from the pond edge for its entire perimeter. Pass.
			C. Less than 10% of the water surface is covered with duckweed <i>Lemna</i> spp or filamentous algae. Pass.
			D. The pond is not artificially connected to other waterbodies, such as agricultural ditches or artificial pipework. Pass.
			E. Pond levels can fluctuate naturally with no obvious artificial dams, pumps or pipework. Pass.
			F. There is an absence of invasive non-native plant and animal species. Pass.
			G. The pond is not artificially stocked with fiish. Pass.

Page **56** of **58** © Scottish and Southern Electricity Networks Uncontrolled if Printed



In Printed
Inveralmond House, 200 Dunkeld Road, Perth PH13AQ
Social Advances and Southern Electricity Networks is a trading name of. Socialish and Southern Energy Power Distribution Limited Registered in Social No. Sc213469; Social Networks is a trading name of. Social No. Social No. Sc213469; Social Networks is a trading name of. Social No. Social No. Sc213469; Social Networks is a trading name of. Social No. Soci

TEM-NET-ENV-508	Biodiversity Net Gain Assessment		Applies to
			Transmission
	ĸ	\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030

Habitat Type	Total Habitat Area (ha) / Length (km)	Proposed Condition	Brief Justification of Proposed Condition
			 H. Emergent, submerged or floating plans (excluding duckweed) cover at least 50% of the pond area which is less than 3 m deep. Fail. I. The pond surface is no more than 50% shaded by adjacent trees and scrub. Pass.



if Printed
Inveralment House, 200 Dunkeld Road, Perth PH1 3AQ ssen.co.uk
Sottish and Southern Electricity Networks is a trading name of. Soctish and Southern Energy Power Distribution Limited Registered in Sociation No. SC131469; Soctish Hydro Electricity Networks is a trading name of. Soctish and Southern Energy Power Distribution Limited Registered in Sociation No. SC131469; Soctish Hydro Electricity Networks is a trading name of. Sociatish and Southern Energy Power Distribution Limited Registered of Fice at No. SC131469; Sociatish Hydro Electricity and Southern Jenergy Power Distribution Limited Registered of Price at No. SC131469; Sociatish Hydro Electricity and Southern Fice Power Distribution power Distribution and Price Power Distribution and Southern Electricity Networks and Southern Fice Power Distribution power Distribution and Southern Fice Power Distribution power Distribution and Southern Fice Power Distribution and Price Power Distribution and Southern Fice Power Distribution power Distribution power Distribution and Price Power Distribution and Price Power Distribution and Price Power Distribution powe

TEM-NET-ENV-508	Biodiversity Net Gain Assessment Report		Applies to	
			Transmission	
			\checkmark	
Revision: 1.00	Classification: Public	Issue Date: February 2025	Review Date: October 2030	

Appendix K Template Revision History

No	Overview of Amendments	Previous Document	Revision	Authorisation
01	New document	n/a	1.00	Richard Baldwin
02				

