Scottish & Southern Electricity Networks
TRANSMISSION

TEM-NET-ENV-509

Environmental

Biodiversity Net Gain Assessment Report – Irreplaceable Habitat Supplement

Project Name - Carnaig 400 kV Substation

Project Code - 0699566

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TEM-NET-ENV-509	Biodiversity Net Gain Assessment Report – Irreplacable Habitat Supplement		Applies to Transmission ✓
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Contents

1 Introduction

1.1.1 Irreplaceable habitats are acknowledged for their particular importance therefore appropriate mitigation has been identified for any impacts on these habitats. A separate toolkit has been used to calculate any impacts on irreplaceable habitat.

1.1.2 SSEN Transmission consider irreplaceable habitats within their network to be:

- Ancient Woodland (categories 1a & 2a of the Ancient Woodland Inventory (AWI));
- Ancient or veteran trees; and
- Blanket bog or raised bog in good or moderate condition.

1.2 Site Description

1.2.1 The Proposed Development is located approximately 9.5 km north east of Bonar Bridge. The specific location of the proposed Carnaig 400 kV Substation is adjacent to the south western boundary of the existing 275 kV Loch Buidhe Substation at central grid reference NH 65053 97458. The Proposed Development is located within an area of commercial forestry, which has been partially felled. Lochbuie Road runs to the west of the Proposed Development.

1.2.2 The Proposed Development is located within the Strath Carnaig and Strath Fleet Moors Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI), which are designated for supporting 12 breeding pairs of hen harrier (*Circus cyaneus*) (further information provided within the **Carnaig 400 kV Substation Habitat Regulations Appraisal (HRA) Report**).

1.2.3 The SPA is currently in unfavourable condition, with pressures relating to agricultural operations, burning, development, forestry operation, game / fisheries management and plant pests and diseases.

1.2.4 The main habitats of the SPA are extensive heather moors and upland acid grasslands. There are also areas of commercially planted conifer and semi-natural broadleaf woodland. The Proposed Development footprint is situated primarily within coniferous plantation and clear-fell.

2 Methodology

2.1 Area and Surveys

2.1.1 **Desk Based Assessment** – the following datasets were reviewed to inform this assessment:

- The NatureScot SiteLink[1] and open-source data sets[2] ;
- The Strath Carnaig and Strath Fleet Moors SPA Citation and Conservation Obvectives[3];
- The Strath Carnaig and Strath Fleet Moors SSSI Site Management Statement and Citation[4];
- The Carbon and Peatland 2016 map[5] and
- The Scottish Government's National Planning Framework 4 (NPF4)[6].

[1] NatureScot: Site Link. Available online at: https://sitelink.nature.scot/home. (Accessed August 2024)
[2] SpatialData.gov.scot Metadata Portal. Available online at: https://spatialdata.gov.scot/geonetwork/srv/eng/catalog.search#/home (Accessed August 2024)
[3] NatureScot Strath Carnaig and Strath Fleet Moors SPA Overview. Available online at: SiteLink - Strath Carnaig and Strath Fleet Moors SPA. (Accessed August 2024)
[4] NatureScot Strath Carnaig and Strath Fleet Moors SSSI Overview. Available online at: SiteLink - Strath Carnaig and Strath Fleet Moors SSSI). (Accessed August 2024)
[5] Scotland's Environment (2016). Carbon and Peatland 2016 map. Available online at: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ (Accessed June 2024)
[6] National Planning Framework 4 (2023) Available online at: https://www.gov.scot/publications/national-planning-framework-4/. (Accessed August 2024)

2.1.2 **Field Assessment** - The Survey Area included all habitat within the Proposal of Application Notice (PAN) boundary referred to throughout this report as the 'Site' (shown within **Appendix A**).

2.1.3 Surveys were based on the methods described in the UK Habitat Classification User Manual[7] and the Joint Nature Conservation Committee (JNCC) Handbook for Phase 1 Habitat Survey[8], as extended for use in Environmental Assessment[9]. UK Habitat Classification (UKHab) Version 2.0[10] was used to assign the alphanumeric UKHab habitat classification codes.

2.1.4 For further detail refer to **Volume 4 Appendix 7.1** Habitat and Protected Species Survey Report of the Environmental Impact Assessment (EIA).

2.1.5 **Evidence of technical competence –** The UKHab walkover survey of the Proposed Development plus a 250 m buffer was carried out by Heather Green (ERM Ecologist) who has 20 years' experience and Aaron Martin (ERM Ecologist) who has two years' experience. Further UKHab, NVC, GWDTE walkover survey within the Site was carried out by Ecologists from Direct Ecology Ltd., commissioned by ERM on behalf of SSEN Transmission, under the supervision of Beccy Osborn (Director and Principal Ecologist), who has over 20 years' experience. UKHab Surveys were conducted in September 2023 and June 2024.

2.2 Irreplaceable Habitats

2.2.1 The BNG assessment involves assessing any impacts on irreplaceable habitats separately from non-irreplaceable habitats. Impacts on these areas have been avoided as far as possible, where avoidance was not possible, mitigation has been applied to reduce the impact. If irreplaceable habitats are present on site, the impact of development on irreplaceable habitats has been calculated using the SSEN Transmission BNG toolkit as bespoke compensation must be provided for these impacts.

2.2.2 Irreplaceable habitat impacts have been quantified by area (ha) so the impact can be fully understood and more habitat can be replaced than was lost to development, in accordance with SSEN Transmission's commitments towards irreplaceable habitats.

- Rigorously follow the mitigation hierarchy and seek to avoid irreplaceable habitats wherever possible by recognising these areas as a key environment constraint.
- Ensure all projects record and report on the measures taken to avoid irreplaceable habitats.

[7] Butcher, B., Carey, P., Edmonds, R., Norton, L., and Treweek, J. (2020) *UK Habitat Classification User Manual, Version 1.1*. UK Habitat Classification Working Group, Stockport. Available at: http://ecountability.co.uk/ukhabworkinggroup-ukhab.

[8] Joint Nature Conservation Committee (2010) *Handbook for Phase 1 Habitat Survey - A Technique for Environmental Audit*. With minor corrections addressed in 2016. JNCC, Peterborough. Available at: https://hub.jncc.gov.uk/assets/9578d07b-e018-4c66-9c1b-47110f14df2a

[9] Institute of Environmental Assessment (1995) Guidelines for Baseline Ecological Assessment, Spon, London.

[10] UKHab Ltd (2023) *UK Habitat Classification 2.0*. UKHab Ltd, Stockport. Available at: https://www.ukhab.org

- Have internal governance procedures in place requiring senior level sign off if projects have an impact on irreplaceable habitats.
- Ensure that more irreplaceable habitat is restored than is lost.
- Support irreplaceable habitat restoration schemes in preference to new habitat creation.

2.3 Limitations and Assumptions

2.3.1 To produce this assessment, certain assumptions have been made:

- Habitats which fall under an 80 m operational corridor of the Spittal to Loch Buidhe to Beauly (SLBB) 400 kV Connection have been excluded from this assessment.
- Habitats which fall under the Red Line Boundary (RLB) of the proposed communications mast (22/05825/FUL)[11] have been excluded from this assessment.
- Habitats with an area of less than 0.01 ha were excluded from the Toolkit following SSEN Toolkit guidance which considers them to be too small to be a viable habitat which can be effectively managed for biodiversity.
- Area calculations were rounded to three decimal places for input into the Toolkit.
- A mosaic of blanket bog and wet and dry heath surrounding the bunded peat relocation areas are proposed within a 'Peat Restoration Area'. The distribution of these three habitats within the Peat Restoration Area will be further defined and developed as the design of the Peat Restoration Area progresses as discussed in the SEPA Peat reuse consultation letter dated 02/08/24. The quantity in hectares (ha) of the three habitats within the Peat Restoration Area have been quantified for this assessment using a high-level assumption informed by peat depths and topography of the area alongside the aim to retain and enhance any existing areas of peat or heath habitat.
- The time to target condition and difficulty for blanket bog creation was adjusted from the Defra Metric 3.1 recommendation and based on previous Scottish and Southern Energy Renewables (SSER) wind farm blanket bog restoration project experience and guidance[12].

2.3.2 Limitations appropriate to this Chapter mainly pertain to the field survey element which are detailed in **Volume 4 Appendix 7.1** of the EIAR and summarised below:

- Wet, boggy ground conditions throughout the Survey Area (impeded access into discrete areas).

[11] 22/05825/FUL | Erection of 25-metre-high lattice tower ancillary development | Land 1800M NE Of Sleastray Bonar Bridge (highland.gov.uk)

[12] SSE Renewables (2022) Positive for the planet: Renewable energy with a Biodiversity Net Gain Report. Available at: https://www.sserenewables.com/media/vgsdoav3/sser-biodiversity-net-gain-report-nov-2022-final.pdf

- Density of some coniferous woodland plantations and the presence of areas of wind-blown trees (prevented access to some forestry blocks).
- Ongoing forestry operations – harvesting (prevented access to some forestry blocks).

2.3.3 Due to survey coverage and access being generally good across the Survey Area, good characterisation of habitats and likely species present was possible. These limitations, both individually and in combination, are therefore not considered to be significant and do not undermine the validity of the survey.

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3 Results

3.1 Baseline

3.1.1 The irreplaceable habitats recorded within the Site are shown in the irreplaceable habitat figure presented in **Appendix A.**

3.1.2 The irreplaceable habitats impacted by development are:

- blanket bog in good condition (0.221 ha) permanently lost due to the substation footprint and adjacent earthworks.

3.2 The irreplaceable blanket bog. will be subject to permanent loss under the footprint of the substation platform and adjacent earthworks.

3.2.1 In addition to the above, 45.525 ha of blanket bog in Good condition is present within the Site and will be retained (please see **Section 3.4** below).

3.2.2 No ancient woodland (categories 1a & 2a of the Ancient Woodland Inventory (AWI)) or ancient or veteran trees were recorded within the Site.

3.3 The mitigation hierarchy has been applied to minimise the impact to irreplaceable habitat, in accordance with SSEN Transmission's commitments towards irreplaceable habitats.

3.4 Temporary Impacts and Retained Habitats

3.4.1 Impacts to habitats which are reversible and can return to same extent and ecological condition within two years of the initial impact, can be considered temporary. Temporary impacts have not been included in the irreplaceable habitat calculations as there are no permanent adverse impacts. No temporary impacts relating to irreplaceable habitat and the Proposed Development have been identified.

3.5 Retained habitats have not been included in the toolkit calculations as there are no permanent adverse impacts. The retained irreplaceable habitats are summarised here:

- blanket bog in good condition (45.525 ha).

3.6 Post-development Irreplaceable Habitat Impacts

3.6.1 The post-development impacts have been calculated using the difference between the baseline and the impact on the habitat.

3.6.2 The post-development hectares for Irreplaceable habitat within the Site's proposed Peat Restoration Area are predicted to be approximately:

- blanket bog in Moderate condition (107.74 ha).

3.7 Irreplaceable Habitat Compensation

3.7.1 Off-site bespoke compensation is only required when all options for on-site biodiversity enhancement provision has been explored. If no on-site opportunities can be identified, off-site habitat creation will be undertaken but kept within the locale of the Proposed Development. Compensation is targeted at delivering enhancements that are ecologically equivalent in type and condition to the habitats lost, following the 'like for like or better' principle.

3.7.2 The offsetting site is located within the Proposed Development Site.

3.7.3 The area required for irreplaceable habitat compensation is greater than 0.221 ha to ensure that more habitat is restored than is lost. For this assessment, ten times the area of irreplaceable blanket bog impacted by Proposed Development is recommended to be created for compensation (2.21 ha)[13]. An additional 10% of the baseline area irreplaceable blanket bog impacted by Proposed Development is recommended to deliver a 10% enhancement (0.022 ha). Therefore, it is recommended that 2.232 ha blanket bog is created / restored for offsetting and enhancement.

3.7.4 This project involves the creation of bunded peat relocation areas within a proposed wider Peat Restoration Area (see Appendix C within the **Biodiversity Net Gain Assessment Report**).

3.7.5 A mosaic of blanket bog and wet and dry heath surrounding the bunded peat relocation areas are proposed within a 'Peat Restoration Area'. The distribution of these three habitats within the Peat Restoration Area will be further defined and developed as the design of the Peat Restoration Area progresses, as discussed in the Peat reuse consultation letter dated 02/08/2024. The quantity in hectares of the three habitats within the Peat Restoration Area have been quantified for this assessment using a high-level assumption informed by peat depths and topography of the area alongside the aim to retain and enhance any existing areas of peat or heath habitat. The target condition for blanket bog within the peatland restoration area has been proposed as Moderate condition.

3.8 The outcome of the proposed habitat works and further biodiversity enhancement measures relating to the Peatland Restoration Area in relation to irreplaceable blanket bog will be the enhancement and creation of approximately 107.74 ha of blanket bog in Moderate condition.

3.9 The 2.232 ha of blanket bog creation for the purposes of Irreplaceable Habitat Compensation have not been delineated within the Peat Restoration Area however this area has been removed from the main Project Toolkit to avoid double counting.

[13] This approach aims to align with the NatureScot guidance on mitigation measures noted within the Advising on peatland, carbon-rich soils and priority peatland habitats in development management document. Available online at: https://www.nature.scot/doc/advising-peatland-carbon-rich-soils-and-priority-peatland-habitats-development-management

4 Summary

- The impact of the Proposed Development on blanket or raised bog in Good condition is 0.221 ha.

4.1 Biodiversity Outcomes

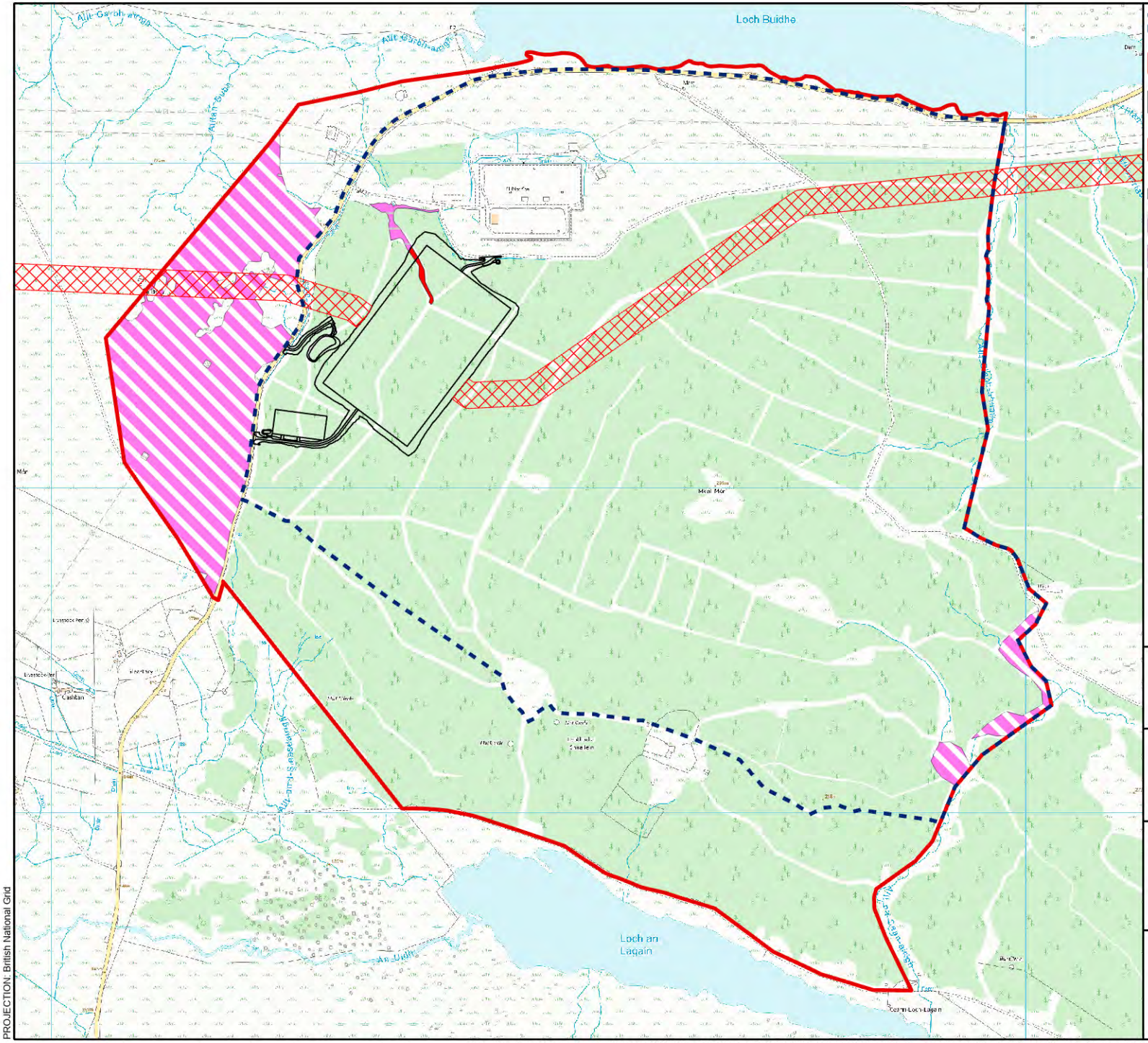
4.1.1 The outcome of the proposed habitat works and further biodiversity enhancement measures relating to the Peatland Restoration Area in relation to irreplaceable blanket bog will be:

- The creation of 2.232 ha blanket bog in Moderate condition within the wider Peatland Restoration Area.

4.2 Implementing and Monitoring

4.2.1 Irreplaceable habitat compensation efforts will be achieved within the following estimated timeframe: Wetland - Blanket bog of Moderate condition: 10 years following the establishment of the Peatland Restoration Area.

4.2.2 To ensure positive enhancements are achieved long term, monitoring and maintenance procedures will be implemented and managed by the Applicant.



Planning Application Boundary

Proposal of Application Notice (PAN) Boundary

Proposed Infrastructure

Area Cannot be Included in Habitat Restoration - Falls Under Proposed SLBB OHL 80 m Working Corridor

Irreplaceable Habitat (UK Habitat Classification)

f1a - Blanket bog - Retained

f1a5 - Blanket bog (H7130) - Retained

f1a5 - Blanket bog (H7130) - Lost

0 100 200 300 400 500

Meters

N

SCALE: See Scale Bar	VERSION: A01
SIZE: A4	DRAWN: DN
PROJECT: 0699566	CHECKED: KO
DATE: 31/10/2024	APPROVED: SC

Appendix A
Irreplaceable Habitats

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Path: \\uksprdgisfs01\Data\London\Projects\0699566 - SSE Carnaig Substation\MAPS\0699566 - SSE Carnaig Substation - Final\0699566 - SSE Carnaig Substation - Final.aprx\0699566 - CS - BNG - Appendix A - ECoW - Irreplaceable Habitat - A01