Scottish & Southern Electricity Networks

TRANSMISSION

Hurlie 400kV Substation
Environmental Impact Assessment (EIA)
Volume 4 | Appendix 10.4

Biodiversity Net Gain Assessment Report

November 2024

Scottish & Southern Electricity Networks

TRANSMISSION

CONTENTS

LIST OF ABBREVIATIONS

EIA: Environmental Impact Assessment

EcIA: Ecological Impact Assessment

UK Hab: UK Habitat Classification

LBAP: Local Biodiversity Action Plan

NVC: National Vegetation Classification

GWDTE: Ground Water Dependent Terrestrial Ecosystem

SEPA: Scottish Environment Protection Agency

BNG: Biodiversity Net Gain

AWI: Ancient Woodland Inventory

1. INTRODUCTION

1.1 The Proposals

1.1.1 Scottish Hydro Electric Transmission plc (the Applicant) is applying to Aberdeenshire Council for full planning permission under the *Town and Country Planning Act (Scotland) 1997*, to install and operate a new 400 kV substation at Hurlie, in Fetteresso Forest, Aberdeenshire , with associated earthworks, the formation of platforms, landscaping, means of access, means of enclosure, site drainage, and temporary construction compounds (the 'Proposed Development').

1.1.2 This appendix presents the full methodology and results of the desk study undertaken to inform the Ecological Impact Assessment (EcIA) relevant to the proposed Emmock 400 kV Substation hereafter referred to as the Proposed Development.

1.1.3 It should be read in conjunction with **Chapter 3: Development of the Proposed Development** (**Volume 2**) of the Environmental Impact Assessment (EIA Report) for full details of the Proposed Development and **Chapter 10: Ecology** for an assessment of the effects of the Proposed Development upon Ecology.

1.1.4 This appendix is supported by the following:

- **Figure 3.3: Landscape Design**; and
- **Figure 10.2.1: Habitat Survey Results (Volume 3)**.

1.1.5 This appendix supports the EcIA in addition to **Appendix 10.2 Habitats and Vegetation Survey Report (Volume 4)**.

1.2 Requirement for the Report

1.2.1 The Applicant is committed to delivering 110% Biodiversity Net Gain (BNG) on all projects gaining consent[1]. To inform the design of the Proposed Development, and to meet the Applicant's policy commitments, LUC was commissioned by the Applicant to undertake an assessment of Biodiversity Net Gain (BNG) using the SSEN Transmission Biodiversity Project Toolkit ('the Toolkit').

1.2.2 This report includes:

- A calculation of baseline Biodiversity Units (BU) for the Proposed Development following the guidance outlined within the Applicant's Biodiversity Net Gain Toolkit User Guide ('the User Guide') and associated guidance.
- A prediction of the post development on-site BU following successful implementation of the General Arrangement (**Chapter 3**, **Figure 3.1**) and the Landscape Design (**Chapter 3**, **Figure 3.3**).
- A qualitative assessment against the Biodiversity Net Gain Good Practice Principles[2]; and
- Details of the habitat creation or enhancements required to achieve biodiversity enhancements.

1.3 Terminology

1.3.1 The following terminology will be used throughout this report:

Site: all land within the planning application (red line) boundary (**Figure 1.1: Site Location in Volume 2, Chapter 1: Introduction** and in **Volume 3**); and

- Proposed Development: The infrastructure including the platform, bays, control buildings, access tracks, drainage and landscape features and temporary construction compounds (see **Section 3.3** in **Chapter 3: Description of the Proposed Development**); and
- Access Track: The existing track from Slug Road to the north and from Hill of Quithel to the southwest.

[1] SSEN Transmission (2024) Sustainability Strategy: Pathway to 2030. Available [online]: https://www.ssen-transmission.co.uk/about-us/sustainability/sustainability-strategy/ [Accessed October 2024]

[2] Baker, J., Hoskin, R. & Butterworth, T. (2019) Biodiversity net gain. Good practice principles for development. A practical guide: C776a. CIRIA, London.

1.4 Legislation and Policy

1.4.1 Key elements of relevant legislation are detailed in **Appendix 10.1: Desk Study and Legal Context** (**Volume 4**).

1.4.2 National Planning Framework 4 (NPF4)[3] Policy 3c requires significant biodiversity enhancements be provided in addition to any proposed mitigation stating that "*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*."

1.4.3 The Applicant is committed to delivering BNG on all projects gaining consent and to leaving the natural environment in a better state than its baseline[1]. To achieve this, the Applicant has a policy of delivering a net gain of 10% when measured using the Toolkit.

[3] Scottish Government (February 2023). National Planning Framework 4. Available [online]: https://www.gov.scot/publications/national-planning-framework-4/ [Accessed October 2024]

2. METHODOLOGY

2.1 Constraints and Opportunities

2.1.1 A qualitative desk-based assessment of ecological constraints and opportunities was undertaken to inform the site selection process based on the habitats identified through this assessment.

2.2 Baseline Assessment

Desk Study

2.2.1 A desk study was undertaken as part of the EcIA and is available in **Appendix 10.1: Desk Study and Legal Context** (**Volume 4**). Datasets that were consulted include:

- NatureScot SiteLink website[4].
- AWI[5].
- Multi-Agency Geographic Information for the Countryside (MAGIC)[6].
- Scotland Environment Mapping Service[7].
- North-East Scotland Biodiversity Partnership[8].
- North-East Scotland Biodiversity Records Centre (NESBReC)[9].
- The Carbon and Peatland Map[10].
- National Biodiversity Network (NBN) Atlas Scotland[11].

Field Assessment

2.2.2 Field surveys were undertaken as part of the EcIA during the survey seasons of 2023 and 2024. Full details are available in **Appendix 10.2: Habitats and Vegetation Survey Report** (**Volume 4**).

2.2.3 Surveys that were carried out include:

- UK Habitat (UK Hab) Classification Survey[12] in August 2023, April 2024, and July to September 2024.
- National Vegetation Classification (NVC) survey of potential habitats of conservation concern[13] in August 2023 and April 2024.
- Condition assessment of each habitat type using the relevant Habitat Condition Sheets published by Natural England[14].

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[4] URL: https://sitelink.nature.scot/home [Accessed October 2024]

[5] Ancient Woodland Inventory. Available [online]: https://spatialdata.gov.scot/geonetwork/srv/api/records/A091F945-F744-4C8F-95B3-A09E6EF6AE33

[6] Department for Environment, Food and Rural Affairs et al (n.d.) Multi-Agency Geographic Information for the Countryside [online]. Available [online]: http://magic.defra.gov.uk [Accessed October 2024]

[7] Scottish Environment Protection Agency (n.d.) Scotland's Environment Map. Available [online]: https://map.environment.gov.scot/sewebmap/ [Accessed October 2024]

[8] NESBiP (no date) Biodiversity Information for Developers. Available [online]: https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/ [Accessed October 2024]

[9] URL: https://nesbrec.org.uk/ [Data received July 2024]

[10] Scotland's Soils (2016) Carbon and Peatland Map [online]. Available [online]: https://soils.environment.gov.scot/maps/thematic-maps/carbon-and-peatland-2016-map/ [Accessed October 2024]

[11] National Biodiversity Network Atlas (n.d.) National Biodiversity Network Atlas, Scotland [online]. Available [online]: https://scotland.nbnatlas.org/ [Accessed October 2024]

[12] UK Hab (2020) UK Habitat Classification Version 1.1. Available [online]: https://ukhab.org/ [Accessed October 2024]

[13] Habitats of conservation concern include habitats considered conservation priorities in the Habitats Directive (Annex I habitats); habitats considered to indicate potential groundwater dependency; habitats included on the Scottish Biodiversity List; and habitats included in local biodiversity policy.

[14] Panks, S. *et al.* (2022) Biodiversity Metric 3.1 Auditing and accounting for biodiversity - User Guide.

2.2.4 The Proposed Development does not impact on any irreplaceable habitats; therefore, these habitats are not considered further. The Applicant considers irreplaceable habitats within their network to be Ancient Woodland (categories 1a & 2a of the AWI[5]), ancient or veteran trees, and blanket bog or raised bog in good or moderate condition.

2.3 Evidence of Technical Competence

2.3.1 Surveys were completed during accepted survey seasons by experienced LUC field ecologists with appropriate memberships of the Chartered Institute of Ecology and Environmental Management (CIEEM), in appropriate weather conditions. The survey and assessment was overseen by senior members of the LUC Ecology team, with full membership of CIEEM.

2.4 Approach to Biodiveristy Net Gain

2.4.1 A BNG Assessment was undertaken for the Site (excluding the Access Track; see **Section 2.5 Limitations and Assumptions** below). The BNG assessment was completed within the Toolkit following the User Guide. This method has been revised to align with Natural England Biodiversity Metric 3.1[14], adapted to reflect the requirements of Scottish habitats, to quantify losses and gains of biodiversity. Data were collected on type, area, and condition of habitats within the Site, indicating the biodiversity present on-site before the work begins. The Toolkit was used to calculate the biodiversity losses and the units resulting from the proposed habitat creation after works. The outcomes have been used to ensure the biodiversity targets are being met for the Proposed Development.

2.4.2 The Toolkit assesses losses of area and linear habitat separately. The Toolkit produces a Unit score for three categories of habitat: Biodiversity Units, Linear Hedgerow (H) Units and Linear Watercourse (W) Units.

2.5 Limitations and Assumptions

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

- All ecological surveys represent a snapshot of the faunal and floral assemblages of any given site. While surveys provide an overview of the habitats and species present, they cannot be used to determine long-term trends in species and habitat populations or behaviours. Methods adopted during the surveys represent current good practice but the data collected cannot be used to confirm the absence of a species from the Site. Faunal and floral assemblages are dynamic and can change over short periods of time. However, it is considered that an appropriate level of data has been collected to enable an informed decision to be taken in relation to the identification and assessment of baseline habitats and their condition.
- Landscape design proposals have been assessed, including the proposed planting schedules, in order to determine the most appropriate UK Hab classification. Risk parameters, such as 'Time to Target Condition', have been determined with reference to Defra guidance[14]. The 'Target Condition' of proposed habitats has been selected with consideration of each criterion in the relevant condition assessment; a judgement has been made in each case as to whether the criterion is deliverable within the corresponding timeframe. In addition, the time to target creation has taken into account the likely delay to the commencement of landscaping works as a result of the three-year construction period anticipated.
- The calculations undertaken and reported here are restricted to the main portion of the Site within which construction of the proposed substation and associated landscaping works will be undertaken. The Access Track comprises an existing forestry track; some widening works may be required, but it is not known at this stage where these would be and their precise extent. The Access Track is therefore excluded from the calculations presented in this report. However, any works are expected to be minor and the habitats along the Access Track are dominated by habitats of limited ecological value; therefore, this is not considered to be a significant limitation to the assessment.

3. RESULTS

3.1 Constraints and Opportunities

3.1.1 The desk-based assessment identified key features including the watercourses and potential for limited extents of semi-natural habitats in unforested areas, such as along rides and watercourses, and areas from which conifers have been removed and not restocked.

3.1.2 Relevant embedded mitigation (mitigation achieved through design) is outlined in Chapter 10: Ecology, including making use of the landform around the substation platform to provide opportunities for different ecological niches and habitat types, designing the SUDS to allow for grassland habitats to be created, and retention of trees and riparian habitat along watercourses where possible. This is aligned to the Scottish Government's NPF4 Policy 3 for proposed developments to contribute to biodiversity enhancement.

3.2 Site Description

There are no designated sites within the Site (see **Figure 10.1.2: Designated sites within 10 km and 5 km of the Site** in **Volume 3**).

3.2.1 There are three blocks of woodland listed on the AWI as Long-Established of Plantation Origin (LEPO) alongside the Access Track.

3.2.2 The Site is located approximately 5 km west of Stonehaven, in the county of Aberdeenshire. The Site is generally flat sloping downhill from west to east, with its highest point approximately 296.19 m Above Ordnance Datum (AOD) within the west of the Site.

3.2.3 The survey results are presented in **Figure 10.2.1: Habitat Survey Results (Volume 3).**

3.2.4 The Site is dominated by coniferous plantation forestry which is under commercial forestry management (refer to **Chapter 7: Forestry** in **Volume 2** for further detail), and therefore of a variety of age structures, and small areas of upland heathland where the trees have been felled relatively recently.

3.2.5 Three watercourses surface within the Site: the Burn of Day is present within the north and flows to the east and out of the Proposed Development; the Burn of Baulks is present in the southeast and flows to the southeast out of the Proposed Development; and the upper reaches of the Burn of Elfhill (sometimes referred to as Clarkenhill Burn) surface in the southwest and flows south out of the Proposed Development. The damp area around the Burn of Day is referred to as Hurlie Bog. Further extents of damp habitat are present in the centre of the Site, where wet heath and scattered rushes were recorded among extents of restocked plantation.

3.2.6 The Site offers some commuting potential for bats and otter (*Lutra lutra*) along the watercourses. In addition, pine marten (*Martes martes*) and red squirrel (*Sciurus vulgaris*) are known to be present within the forest and may occasionally utilise habitats within the Site. Badger (*Meles meles*) is present in the wider landscape and may forage within the Site.

3.3 Biodiversity Baseline

3.3.1 The baseline habitats impacted by development are shown in the baseline habitat plan (see **Figure 10.2.1: Habitat Survey Results** in **Volume 3**) and are summarised here:

- The baseline Area-Based Habitats are 610.09 BU;
- The baseline Linear Hedgerow (H) Habitats are 0.00 BU; and
- The baseline Linear Watercourse (W) Habitats are 2.00 BU.

Table 3.1: Baseline Biodiversity Units

Area Based Habitats	Condition	BU
Cropland - Temporary grass and clover leys	N/A - Agriculture	0.00
Grassland - Bracken	Poor	2.05
Grassland - Upland acid grassland	Moderate	0.40
Heathland and shrub – Upland Heathland	Moderate	47.67
	Fairly Poor	27.32
	Poor	16.77
	Sub-Total	*79.79*
Urban - Developed Land; sealed surface	N/A – No biodiversity value	0.00
Wetland – Upland flushes, fens and swamps	Fairly Poor	19.47
	Poor	3.72
	Sub-Total	*20.16*
Woodland and forest – Felled	Poor	17.96
Woodland and forest – Other coniferous woodland	Fairly Poor	13.92
	Poor	475.82
	Sub-Total	*489.74*
Total		*610.99*
Linear Hedgerow (H) Habitats	**Condition**	**BU**
None recorded	N/A	N/A
Total		*0.00*
Linear Watercourse (W) Habitats	**Condition**	**BU**
Rivers and lakes – Other rivers and streams (Low)	Poor	2.00
Total		*2.00*

3.4 Temporary Impacts

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[14].

3.4.2 For the Proposed Development, all direct loss of area habitats are considered permanent because the construction is expected to last longer than two years. Consequently, there are no temporary impacts identified for the Proposed Development. All habitat impacts have been included in the calculations as permanent adverse effects.

3.4.3 The linear habitats within the Site are retained.

3.5 Post-Development Biodiversity Units

3.5.1 The post-development Biodiversity Units have been calculated using the difference between the baseline and the impact on the habitat.

3.5.2 The post-development units for Area-Based Habitats are 651.45 BU.

3.5.3 There are no Linear Hedgerow (H) Habitats within the Site.

3.5.4 The post-development units for Linear Watercourse (W) Habitats are 2.00 BU.

3.6 Habitat Creation (Within the Development Boundary)

Opportunities for habitat creation and enhancement on site have been identified (see **Figure 3.3: Landscape Design** in **Volume 3**).

- **Grassland - Upland Acid Grassland** (8.55 ha): Establishment of acid grassland will support diverse wildflowers and grasses, which benefit pollinators as well as small wildlife. A greater diversity of small mammals and birds will in turn provide greater foraging opportunities for raptors.
- **Heathland and Shrub - Mixed Scrub** (14.13 ha): Mixed scrub habitats offer shelter and nesting sites for birds, and habitats for small mammals and reptiles, and contribute to the structural diversity within the Site.
- **Sparsely Vegetated Land - Ephemeral** (3.25 ha): This type of habitat provides challenging conditions for plant species, and this is likely to result in the persistence of relatively open, rocky areas. However, this can provide habitat for invertebrates, particularly on south-facing slopes, and associated foraging opportunities for wildlife such as birds.
- **Woodland and Forest - Upland Birchwoods** (26.19 ha): Planting of native broadleaved trees will become upland birchwoods given the prevailing acidic conditions. This will enhance the structural diversity within the Site and its local context and provide more varied habitat resources for woodland species.
- **Woodland and Forest - Wet Woodland** (1.17 ha): Planting of native broadleaved trees appropriate to damp condition will enhance the structural diversity within the Site and provide additional habitat for woodland species.
- **Wetland - Aquatic Marginal Vegetation** (2.00 ha): Creation of wetland areas with aquatic plants will support amphibians, provide foraging and breeding habitats for aquatic invertebrates, and resources for birds.
- **Woodland and Forest - Other Woodland; Coniferous** (9.61 ha): This includes areas returned to conifer plantation.
- **Urban - Bioswale** (2.15 ha): Installation of SUDS ponds to manage surface water runoff will maintain water quality and provide wetland habitats for aquatic species.
- **Urban Areas** (21.47 ha): This includes developed land with sealed and unsealed surfaces.

3.6.1 The biodiversity units designed in by on-site habitat creation or enhancement are summarised below:

Area Habitats

3.6.2 For area habitats, 217.17 BU are delivered through habitat creation. As retained area habitats are 434.28, the total post-development units is 651.45 BU. This leads to a gain of 26.36 BU, resulting in a +4% net gain compared to the baseline.

3.6.3 As the proposals do not deliver BNG within the Site, off-site delivery to achieve the net gain of 10% is proposed.

Linear Hedgerow (H) Habitats

3.6.4 There are no Linear Hedgerow (H) Habitats recorded within the Site. No delivery of these habitats is therefore proposed, and they are not considered to be required in this type of upland fringe location.

Linear Watercourse (W) Habitats

3.6.5 For watercourses, no new units were created (0.00 BU). The total post-development units remain at 2.00 BU as all watercourses were retained. This results in no net gain or loss, maintaining 0% net gain.

3.6.6 As the proposals do not deliver BNG within the Site with regards to watercourses, off-site delivery to achieve a net gain of 10% BNG is required.

Summary of Proposed Development Contributions

3.6.7 The Proposed Development contributes to national biodiversity targets by creating habitats that support species listed on the Scottish Biodiversity List (SBL)[15], thereby limiting negative impacts on important species and habitats. It aligns

[15] Scottish Government (2012) Scottish Biodiversity List Available, version 1.4. Available [online]: https://www.nature.scot/doc/scottish-biodiversity-list

with larger conservation initiatives, such as the Pollinator Strategy for Scotland[16], through the establishment of pollinator-friendly habitats such as species-rich Upland Acid Grassland. In addition, the Proposed Development has potential to strengthen the connectivity for nature around Mergie Local Nature Conservation Site (LNCS) which is located approximately 0.4 km north of the Proposed Development, and it contributes to North-East Scotland Biodiversity Partnership8), priorities by creating locally important habitats such as the SBL priority habitats of Upland Birchwoods and Wet Woodland. The creation of ecologically valuable woodland habitats, including riparian Wet Woodland, will result in a greater diversity of tree species within the Site, and support priority habitats and species; this is in alignment with Aberdeenshire's Forest and Woodland Strategy[17].

3.6.8 The integration of complementary habitats—such as grasslands, woodlands, and wetlands—provides ecological coherence and creates habitat corridors both on-site and connecting into the surrounding landscape. By enhancing ecological connectivity through the creation of habitats that link with existing natural areas, and enhancing the ecological benefits of the woodland resource, the Proposed Development aligns with strategies such as the draft Scottish Biodiversity Strategy[18], Forestry Strategy[19,] and the North-East Scotland Biodiversity Partnership[8] . The integration of complementary habitats—such as grasslands, woodlands, and wetlands—provides ecological coherence and creates habitat corridors both on-site and connecting into the surrounding landscape.

3.6.9 The Proposed Development has connectivity to habitats around the existing Fetteresso substation and along the proposed Kintore to Tealing OHL, thereby providing opportunities for habitat networks to be strengthened by providing stepping stones within extents of conifer plantation, enhancing regional ecological connectivity and providing greater opportunities for species dispersal through the landscape. The Proposed Development also delivers benefits by implementing sustainable urban drainage systems to manage runoff and reduce flood risk, and improving air and water quality. These efforts collectively support biodiversity enhancement in line with Scottish legislation, policies, and initiatives, delivering both ecological and social benefits.

3.7 Habitat Creation (Off-site)

3.7.1 Off-site habitat creation is required when all options for on-site biodiversity enhancement provision have been explored. If on-site opportunities are insufficient to deliver 110% BNG, off-site habitat creation will be undertaken but kept, wherever possible, within the local authority area. Compensation is targeted at delivering net gains that are ecologically equivalent in type and condition to the habitats lost, following the 'like for like or better' principle.

3.7.2 Once off-site delivery areas are identified, they will be assessed using the Toolkit to take into consideration the existing biodiversity present and will aim to maximise benefits for biodiversity in accordance with local and national biodiversity strategies.

3.7.3 **Table 3.2** summarises the calculation of off-site habitat creation required to achieve the necessary 110% BNG. The amount of biodiversity units required from off-site habitat creation, in order to meet the 10% unit gain from baseline conditions, are:

- 16.58 BU for area habitats: In order to meet the 'like for like or better' principle, the amount of units delivered post-development needs to be at least equivalent in both habitat type and ecological value, ensuring that the new habitats provide the same or greater biodiversity benefits as those lost.

[16] NatureScot (2017) Pollinator Strategy for Scotland: 2017-2027. Available [online]: https://www.nature.scot/doc/pollinator-strategy-scotland-2017-2027 [Accessed October 2024]

[17] Aberdeenshire Council (2023) Aberdeenshire Forest and Woodland Strategy: Planning advice PA2023-01.

[18] The Scottish Government (2022) Scottish Biodiversity Strategy to 2045: Tackling the Nature Emergency in Scotland. Available [online]: https://www.gov.scot/publications/scottish-biodiversity-strategy-2045-tackling-nature-emergency-scotland/documents/ [Accessed October 2024]

[19] The Scottish Government (2019) Scotland's Forestry Strategy: 2019-2029. Available [online]: https://www.forestry.gov.scot/forestry-strategy [Accessed October 2024]

- 0.00 BU for Linear Hedgerow (H) Habitats: This indicates that there are no hedgerow or treeline habitats within the Site. These habitat types are more commonly associated with the enclosed lowlands and are not considered appropriate for delivery at the Site.
- 0.20 BU for Linear Watercourse (W) Habitats: Although all watercourses have been retained in the Proposed Development, they have not been enhanced, nor has the watercourse length increased. Therefore, 0.20 BU are required to meet the net gain targets for watercourses.

Table 3.2: Summary of Biodiversity Units Required to Achieve BNG by the Proposed Development

Habitat Type	Baseline Units	Baseline Units with 10% BNG	Current Post-Development Units	Units Required to be Offset
(Area) – Based Habitats	625.09	687.60	651.45	36.15
Linear Hedgerow (H) Habitats	0.00	0.00	0.00	0.00
Linear Watercourse (W) Habitats	2.00	2.20	2.00	0.20

3.7.4 As a result of the insufficient onsite opportunity, offsite BNG opportunities are being explored at locations remote from the Site but within the Aberdeenshire Council area in line with the policy commitments of the Applicant and expected planning requirements.

3.7.5 Discussions are being advanced with potential BNG partners (site owners/project developers) regarding projects and sites are being evaluated based on their location, and their potential to provide strategic and holistic biodiversity gain for the area.

3.7.6 The sites that are shortlisted for further assessment will be surveyed by our environmental contractors using the Toolkit to measure their BNG potential. BNG partners will also be assessed, and due diligence will be undertaken of potential projects prior to the agreement of heads of terms with BNG partners. Contracts with partners will not be agreed however, until planning consent for the Proposed Development has been granted.

3.7.7 The chosen BNG sites will adhere to the Applicant's key BNG goals, namely, to compensate for losses through habitat creation and enhancement, to collaborate with landowners, partners and consultants and to positively impact local council areas.

4. SUMMARY

4.1.1 The final calculation of post-development Biodiversity Area Units, which consider the units delivered both on-site and off-site to meet BNG requirements, cannot be established at this stage because the off-site delivery projects have not yet been identified. As it stands, the Area-Based Habitats delivered within the Site amount to 651.45 BUs, meaning that the project currently achieves a net gain of +4% for Area-Based Habitats. In addition, Linear Watercourse (W) Habitats are retained but the calculation is neutral, meaning that the BUs required to achieve 110% BNG for these habitat types are not delivered within the Site (see **Table 4.1: Summary of Biodiversity Units** for a summary of the results for each habitat type). Linear Hedgerow (H) Habitats are not present and are not considered to be required in this type of upland fringe location.

4.1.2 The habitat creation / enhancements within the Site set out in the Landscape Design (**Figure 3.3: Landscape Design** in **Volume 3**) 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 3.114. The restoration and enhancement of biodiversity will be conducted in accordance with local and national guidance. These proposals have considered surrounding habitats and opportunities for strengthening nature-networks, and we believe these measures are appropriate to the nature and scale of development.

4.1.3 Once the off-site units are identified through a suitable off-site location, the Proposed Development will achieve net positive effects for biodiversity by delivering net gain of 10% compared to the baseline, leaving the natural environment in a better state than before development work began[1].

4.2 Summary of Results

Table 4.1: Summary of Biodiversity Units

Habitat Type	Baseline Biodiversity Units	On-site Habitat Creation (Post-Development)	Total Post-Development Biodiversity Units On-Site – retained, created and enhanced	Interim Difference in Biodiversity Units (%)	Total Units Required to Achieve 110% BNG from Baseline Units (on-site and off-site)	Biodiversity Units Required Off-site	Final Post-Development Biodiversity Units – on-site and off-site	Final Difference in Biodiversity Units (%)
Area-Based Habitats	6255.09	217.17	651.45	+4%	687.60	36.15	To be confirmed	To be confirmed
Linear Hedgerow (H) Habitats	0.00	0.00	0.00	Neutral	0.00	0.00	To be confirmed	To be confirmed
Linear Watercourse (W) Habitats	2.00	0.00	2.00	Neutral	2.20	0.20	To be confirmed	To be confirmed

4.3 Biodiversity Outcomes

The Proposed Development delivers important woodland habitats that are listed on the SBL[15] and the LBAP[8], specifically Upland Birchwoods and Wet Woodland. The Landscape Design (**Figure 3.3: Landscape Design** in **Volume 4**) will deliver a wider range of habitats and resources than are currently present on the Site due to the existing dominance of conifer plantation. Connectivity will be improved through the landscape as the Site will provide an additional stepping stone connecting into important areas such as Mergie LNCS.

4.3.1 The outcomes of the proposed habitat works and further biodiversity enhancement measures will be detailed once off-site delivery areas have been identified.

4.4 Implementation and Monitoring

4.4.1 Biodiversity enhancements will be achieved within the relevant timeframes as determined by the habitat type and guidance[14], and as used in the corresponding toolkit

4.4.2 To ensure positive enhancements are achieved long term, monitoring and maintenance procedures will be implemented.

4.4.3 As per **Chapter 10: Ecology** in **Volume 2** (see E6 in Table 10.13), post-construction habitat surveys and monitoring will be undertaken to ensure that mitigation measures are effective, sensitive habitats are retained, and to identify any requirement for improvements or remedial works.

4.4.4 On-site monitoring and maintenance during operation of the Proposed Development will be undertaken by the Applicant's Operations team.

4.4.5 Off-site monitoring and maintenance will be discussed and agreed with project partners once suitable projects have been identified.

ANNEX 10.3.1 - GOOD PRACTICE PRINCIPLES FOR BNG

The Proposed Development has applied the UK good practice principles for BNG[2] as detailed in **Table 10.3.1A** below.

Table 10.3.1A: Application of UK Good Practice Principles for BNG[2]

Principle	Summary of Application
Apply the mitigation hierarchy	Impacts to notable habitats have been avoided where possible (e.g. through retention of watercourses and the majority of hedgerows). Where habitat losses cannot be avoided, they have been minimised. Losses of notable habitats (hedgerows) have been compensated.
Avoid losing biodiversity that cannot be offset elsewhere	N/A – there are no irreplaceable habitats within the Site.
Be inclusive and equitable	The Proposed Development has undertaken and responded to consultation at various stages of the EIA process. The proposed landscaping of the Site has sought to address concerns through appropriate mitigation wherever possible. The Proposed Development will identify off-site delivery partners and projects, and work alongside them to delivery the necessary biodiversity improvements to achieve 110% BNG for the Proposed Development.
Address risk	Target conditions of habitats have been carefully assessed, including taking experience of local conditions into account, to ensure an appropriate selection has been made. Published, habitat-specific risk factors have been applied in accordance with guidance.
Make a measurable net gain contribution	The Toolkit allows careful calculation of the Biodiversity Units, and will be updated once suitable off-site delivery areas have been identified to ensure that the net gain of 10% from the baseline.
Achieve the best outcomes for biodiversity	The proposals are underpinned by sound ecological principles, including local knowledge and experience. Habitats targeted conform to the principle of 'like for like or better', and consideration has been given to local priorities and to the context of the Site within the wider landscape.
Be additional	The habitat creation proposed within the Site would not be delivered in the absence of the Proposed Development. Additional off-site projects and partners will be carefully selected to ensure additionality.
Create a net gain legacy	The Site will be managed in the long-term, and is expected to deliver the range of benefits for the lifetime of the substation.
Optimise sustainability	BNG has been prioritised where possible, whilst balancing the needs of stakeholders and the local economy.
Be transparent	The proposals will be made publicly available through this BNG report and the EIAR documentation.

ANNEX 10.3.2 - HABITAT TRANSLATION

Table 10.3.2A below details the translations that have been used to apply UK Hab classification terms to the terminology and treatments defined in the landscape design (**Figure 3.3: Landscape Design** in **Volume 3**).

Table 10.3.2A: Translation of Landscape Design Terminology to UK Hab Classification

Landscape Design Terminology	UK Hab Classification
Substation Platform and Access Tracks ▪ Permeable hard surfacing	Urban - Artificial unvegetated, unsealed surface
Woodland Block	Woodland and forest - Upland birchwoods Woodland and forest - Wet woodland (adjacent to south of Burn of Day only)
'To be replanted with evergreen conifers'	Woodland and forest - Other coniferous woodland
Shrub and Scrub	Heathland and shrub - Mixed scrub
Grass and Wildflower	Grassland - Upland acid grassland
SUDS Feature	Urban - Bioswale
Wetland Planting	Wetland - Aquatic marginal vegetation
Cutting into hill	Sparsely vegetated land - Ephemeral
Burn of Day	Rivers and lakes - Other rivers and streams (Low)