Scottish & Southern Electricity Networks
TRANSMISSION

TEM-NET-ENV-508

Environmental

Biodiversity Net Gain Assessment Report

Banniskirk Substation

0697221

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Executive Summary

1.1.1 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. The SSEN Biodiversity Project Toolkit Excel Sheet was used to produce the BNG calculations for the Project Site (hereafter referred to as 'the Toolkit').

1.1.2 This report details the BNG assessment undertaken for the proposed "Banniskirk Hub" (hereafter also referred to interchangeably as "the Proposed Development").

1.1.3 This report includes:

- A calculation of baseline Biodiversity Units (BU) for the Proposed Development following the guidance outlined within SSEN Transmission's Biodiversity Net Gain Toolkit User Guide (hereafter referred to as the "Toolkit user guide") and the SSEN Transmission Assessment Methodology & Associated Guidance.
- A prediction of the post development on-site BU following successful implementation of a Landscape & Habitat Management Plan.
- A qualitative assessment against the Biodiversity Net Gain Good Practice Principles; and
- Details of the required habitat creation or enhancements required to achieve biodiversity enhancements.

1.1.4 BNG could not be delivered within the boundary of the land proposed to deliver the Proposed Development (hereafter referred to as the red line boundary (RLB)). A total 386.70 BU and 81.55 Linear (Watercourse) Units (LU (W)) are estimated to be required off-site to deliver a 10% Net Gain (NG).

1.1.5 A suitable off-site area will be identified by the Applicant to deliver a 10% NG. Such off-site habitat enhancements would ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began.

1.1.6 Irreplaceable habitats are acknowledged for their particular importance and the inability to create similar habitats due to length of time needed to form them, therefore appropriate mitigation will be identified for any impacts on these habitats. A separate Toolkit and report have been used to calculate any impacts on irreplaceable habitat. 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, blanket bog or raised bog in good or moderate condition. Banniskirk Hub does impact on irreplaceable habitats, please read "**Biodiversity Net Gain Assessment Report – Irreplaceable Habitat Supplement**" for the assessment of impacts to irreplaceable habitats.

2 Introduction

2.1 Background of the Project

2.1.1 Scottish and Southern Electricity Networks (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 Environmental Resources Management Ltd (ERM) to undertake a Biodiversity Net Gain (BNG) assessment for the proposed "Banniskirk Hub" (hereafter referred to as "the Proposed Development") using the Toolkit. SSEN Transmission, hereafter referred to as "the Applicant", proposes to construct and operate a new strategic transmission hub which is required to connect a proposed new 400 kV overhead line between Spittal and Beauly, a new Spittal to Peterhead HVDC link which is part onshore cable and part subsea cable, and the existing 275/132 kV substation at Spittal[1].

2.1.2 The key components of the Proposed Development are a 400 kV substation and a High Voltage Direct Current (HVDC) Switching Station. The Proposed Development would also include the following ancillary works: site clearance, temporary construction compounds and laydown areas, earthworks (including landscaping), permanent access from the public road network, formation of internal access roads, drainage, permanent water supply, lighting, security fencing and biodiversity enhancement measures.

2.1.3 The purpose of this report is to assess the biodiversity net gains or losses resulting from the impact of the Proposed Development.

The Applicant is seeking planning permission in principle under the provisions of the Town and Country Planning (Scotland) Act 1997 (as amended) ('the 1997 Act')[2] for consent from The Highland Council (THC) for the Proposed Development. The application will be accompanied by an Environmental Impact Assessment Report (EIAR).

2.2 Site Description

2.2.1 The Proposed Development is located in Caithness on agricultural land approximately 460 m northeast of the existing Spittal Substation, and approximately 2.4 km southeast of the nearest settlement of Halkirk at closest approach. Currently the majority of the Site of the Proposed Development (the "Site") comprises rough grassland used for cattle / sheep grazing, of Land Capability for Agriculture (LCA) grade 4.2 (Land capable of producing a narrow range of crops, primarily on grassland with short arable breaks of forage crops)[3], with a small (approximately 6 ha) area of coniferous woodland present along the western edge bordering the A9 highway.

2.2.2 Habitats present within the Site include grassland (acid and neutral), blanket bog, agricultural land, broadleaved and coniferous woodland, and heathland. The blanket bog on-site is of Good condition and therefore considered to be irreplaceable habitat. Agricultural activities in the area have impacted local habitats via extensive sheep-grazing. Within the RLB, habitats are dominated by woodland (mixed, broadleaved and conifer), upland heathland, and modified grassland.

2.2.3 The Site is near to 'The Flow Country', an area of peatland which is now a World Heritage Site.

2.2.4 There are two unnamed areas of woodland listed on the AWI (Antiquity 2b: Long-Established (of plantation origin)) within 2 km of the Proposed Development.

2.2.5 The Caithness Lochs Special Protection Area (SPA) including Loch Scarmclate Site of Special Scientific Interest (SSSI), Loch Watten SSSI and Loch Calder SSSI are within 3 km of the Site.

2.3 Proposed Development Description

2.3.1 The Proposed Development would include the following works, for which detailed planning permission under the 1997 Act is sought (further details of the project design are provided within Chapter 1 of the EIAR) :

- Creation of a platform and the construction of a new outdoor Air Insulated Switchgear (AIS), 400 kV substation complete with 400 kV double busbar arrangement;
- Creation of a platform and construction of a new 525 kV DC 2 GW Bi-pole HVDC converter station;
- Installation of two new Super Grid Transformers (SGT) within noise enclosures;
- Installation of two Synchronous Compensators (SYNCOMs);
- A new substation control building and two SYNCOM buildings;
- Security fencing around the substation and converter station;
- Sustainable Drainage Systems (SuDS), foul water drainage and detention basins for drainage control;
- Realignment of the Achalone Tributary around the southern and eastern edges of the Site, with naturalisation measures included to improve the realigned watercourse above its current condition;
- Internal roads for access and maintenance;
- Access points at approximate grid references ND 15580 56484 (planned to be the principal Site access), and ND 15676 56250 (planned to be a temporary site access);
- Mounding for the purposes of visual screening;
- Planting for the purposes of visual screening, landscape improvement and BNG;

1 Further details of these developments are available online at https://www.ssen-transmission.co.uk/projects/2030-projects/

[2] Town and Country Planning (Scotland) Act 1997. Available online at: https://www.legislation.gov.uk/ukpga/1997/8/section/46 (Accessed: February 2024)

[3] Scotland's Soils, National scale land capability for agriculture, 2024. Available online at: National scale land capability for agriculture | Scotland's soils (environment.gov.scot)

- Cut and fill earthworks as required to enable the above; and,
- Temporary construction compounds and material storage areas for the duration of the construction phase.

2.4 Scope of Study

2.4.1 This report sets out the results of the BNG assessment and the approach to delivering on SSEN Transmission's BNG commitments for the Proposed Development. This report identifies the baseline biodiversity measured in Biodiversity Units (BU), to achieve positive effects for biodiversity.

2.5 Policy and Legislation

2.5.1 National Planning Framework 4 (NPF4)[4] requires significant biodiversity enhancements be provided in addition to any proposed mitigation, Policy 3b states that for national or major development "*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*."

2.5.2 A biodiversity site assessment was undertaken early in the project design to inform the site 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.

2.5.3 The Proposed Development was selected and developed via an iterative design process as described in **Section 4 (Site Selection Process and Alternatives) within Chapter 1 of the** EIA Report (**EIAR)**[5]. This section outlines the site selection process and consideration of reasonable alternatives studied by the Applicant, in accordance with Regulation 5(2)(d) and schedule 4, paragraph 2 of the EIA Regulations. It discusses the main reasons for selecting the site for the Proposed Development, and the design and layout options that have been considered.

2.5.4 The need for the Banniskirk Hub and the work undertaken by SSEN Transmission to assess the strategic electricity transmission infrastructure requirements to identify the most appropriate, viable, and long term, enduring technical design solution is explained in **Chapter 2 – Project Need of the EIAR**.

2.5.5 Details of the following stages are described in **Chapter 1** of the EIAR, along with their respective outcomes:

- The approach to the site selection stages of the project;
- The site selection stage process and consultation responses;
- Design solutions considered;

[4] National Planning Framework 4 (2023) Available online at: https://www.gov.scot/publications/national-planning-framework-4/

[5] Scottish and Southern Electricity Networks Transmission, 2024. *Proposed Banniskirk Substation and HVDC Converter Station Environmental Impact Assessment Report*

- Other considerations to avoid or reduce likely significant effects; and
- The design strategy for ancillary infrastructure, including construction and operational access tracks.

2.5.6 Initial site screening and site selection considered the site options engineering constraints, land use impacts and environmental sensitivities.

2.5.7 A Landscape and Ecological Mitigation Plan has been developed to demonstrate the Proposed Development's commitment to contribute to biodiversity enhancement (see Appendix D). This is aligned to the Scottish Government's NPF4[6] Policy 3 for proposed developments to contribute to biodiversity enhancement.

[6] National Planning Framework 4 (2023) Available online at: https://www.gov.scot/publications/national-planning-framework-4/

3 Methodology

3.1 Area and Surveys

3.1.1 **Desk Based Assessment** – The following datasets were reviewed to inform this assessment:

- The NatureScot SiteLink[7] and Scottish Government open-source data sets[8] to obtain information regarding statutory designated sites;
- Ancient Woodland Inventory (AWI) (Scotland)[9] to identify areas of ancient woodland;
- Carbon and Peatland 2016 map[10] to identify areas of carbon-rich soils, deep peat, and priority peatland;
- Habitat Map of Scotland (HabMoS)[11] was consulted to identify any priority habitats listed under Scottish Biodiversity List[12];
- The Highland Council's local biodiversity action plan[13] and the Scottish Biodiversity List were reviewed to identify any locally important priority habitats; and
- The Scottish Government's National Planning Framework 4 (NPF4).

[7] NatureScot: Site Link. Available online at: https://sitelink.nature.scot/home (Accessed June 2024)
[8] SpatialData.gov.scot Metadata Portal. Available online at: https://spatialdata.gov.scot/geonetwork/srv/eng/catalog.search#/home (Accessed June 2024)
[9] Scottish Government (2010). Ancient Woodland Inventory (Scotland). Available online at: https://spatialdata.gov.scot/geonetwork/srv/api/records/A091F945-F744-4C8F-95B3-A09E6EF6AE33 (Accessed June 2024)
[10] 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)
[11] Scotland's Environment (2023). Habitat Map of Scotland. Available online at: Habitat Map of Scotland | Scotland's environment web (Accessed June 2024).
[12] NatureScot (2010). Scottish Biodiversity List. Available online at: https://www.nature.scot/doc/scottish-biodiversity-list (Accessed June 2024)
[13] Highland Council (2024). Biodiversity Action Plan 2021-2026. Available online at: Highland_Nature_Biodiversity_Action_Plan_2021_____2026.pdf (Accessed June 2024)

3.1.2 **Field Assessment** - A habitat survey of the site was undertaken in September 2023. The survey was based on the methods described in the UK Habitat Classification User Manual[14]. During the habitat survey, a habitat condition assessment was undertaken for the habitats within the Site based on Natural England's Biodiversity Metric 3.1 Condition Assessment Sheets[15]. Each habitat parcel was assigned a condition score (Good, Moderate, Poor, or N/A). For further detail refer to **Technical Appendix 9.1: Habitat and Fauna Walkover Report**.

3.1.3 Ditches on-site were mapped from the OS Vector Map District surface water linear data[16]. The surface water baseline is presented in **Figure 12.2** within **Chapter 12: Hydrology, Hydrogeology, Geology and Soils** of the EIAR. Ditches were not mapped during the field survey and as such an assumed Medium habitat distinctiveness was assigned based on professional judgement using digital imagery, site photographs and surveyor notes.

3.1.4 **Evidence of technical competence –** The survey was undertaken by ERM Consultant Heather Green an Associated Member of the Chartered Institute of Ecology (ACIEEM) who has 20 years of experience in Ecology. The assistant surveyor was ERM consulting associate Aaron Martin, a Qualifying Member of CIEEM with 2 years' experience in Ecology.

3.2 Approach to Biodiversity Net Gain

3.2.1 A full BNG Assessment was undertaken for the Site. The BNG assessment was completed within the Toolkit following the Toolkit user guide (2023)[17] (hereafter referred to as "The Toolkit User Guide). This method has been revised to align with Natural England Biodiversity Metric 3.1[18], adapted to reflect the requirements of Scottish habitats, to quantify losses and gains of biodiversity. Data were collected on type, area, and condition of the habitat of the Proposed Development, indicating the biodiversity present on-site before the work begins. The same 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.

3.2.2 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 (LU (H)) and LU (W). No Hedgerows were found on-site. Several ditches were mapped on-site and were included within a separate linear (watercourse) Toolkit assessment.

3.3 Time to target condition (TTTC) is the number of years it is estimated to take before the enhancement or creation of a habitat reaches the desired result. This assessment referred

[14] UKHab Limited (2023). UK Habitat Classification Version 2.0. UKHab Ltd, Stockport. Available online at: https://ukhab.org© UKHAB LTD, under licence. No onward licence implied or provided. All rights reserved [https://ukhab.org/register/].

[15] Natural England: Biodiversity Metric 3.1 Habitat Condition Assessment Sheets. Available online at: https://publications.naturalengland.org.uk/file/5450039124819968

[16] OS VectorMap® District. Available online at: OS VectorMap® District | Backdrop Map for Web Applications | Free OS Data downloads

[17] SSEN (2022) TG-NET-ENG-526: Biodiversity Net Gain Toolkit User Guide. Revision 2.00

1.4

to the time to target condition outlined within the Biodiversity Metric 3.1 Technical Supplement[19]. Any further delay in habitat creation due to the construction of the Proposed Development were added to the TTTC values within the Toolkit. A precautionary 3-year delay in habitat creation was applied to reflect the Proposed Development's construction programme.

3.4 The BNG assessment involves assessing any impacts on irreplaceable habitats separately from non-irreplaceable habitats. If irreplaceable habitats are present on site, the impact of development on irreplaceable habitats has not been calculated using the Toolkit as bespoke compensation must be provided for these impacts. Therefore, 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. Banniskirk Hub does impact on irreplaceable habitats, please read "**Biodiversity Net Gain Assessment Report – Irreplaceable Habitat Supplement**" for the assessment of impacts to irreplaceable habitats.

3.5 Limitations and Assumptions

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

- Opportunities for habitat creation on-site were limited by the nature of the Banniskirk Hub. As a new strategic transmission hub, there is a requirement to allow for potential future installation of additional amenities such as Overhead Lines (OHL) and Underground Cables (UGC) to enable the future connections to associated infrastructure. This led to restrictions in the habitats that could be proposed within the Site.
- Extensive ground works are required to level the Site. This assessment assumes that habitats which are not subject to permanent or temporary loss (associated with the proposed infrastructure) are also lost due to these works.

The majority of baseline habitats on-site are considered to be ecologically desirable although not identified in a local strategy, plan or policy and were therefore assigned a Medium Strategic Significance. Urban habitats were assigned a Low Strategic Significance. Upland heathland and blanket bog are listed on the Scottish Biodiversity List and as such are of High Strategic Significance.

- Ditches recorded within the Site were classified in the Toolkit as 'Rivers and lakes – Other rivers and streams (Medium)' to align with the Natural England Biodiversity

[18] Natural England Biodiversity Metric 3.1. Available online at: Archive Site for Legacy Biodiversity Metrics (naturalengland.org.uk)

[19] Time To Target Condition informed by the Biodiversity Metric 3.1 Technical Supplement. Available online at: (https://publications.naturalengland.org.uk/file/6059060118683648)

Metric 3.1 guidance[20] on habitat distinctiveness categories. This approach aligns with SSE Renewables guidance on relating Moderate distinctiveness watercourses with Moderate condition assessments[21].

- The Applicant proposes to re-naturalise a ditch into a stream that historically had run through the Site. The proposed stream was classified as 'Rivers and lakes – Other rivers and streams (High)' to align with the Natural England Biodiversity Metric 3.1 guidance[22]. Within the Toolkit after work actions, the section of the ditch which is being re-routed was considered to be a newly created stream, whereas the existing ditch that is subject to re-naturalisation was considered to be an enhancement.

[20] Natural England (2022) Biodiversity Metric 3.1: Technical Supplement: Table TS2-15: Medium distinctiveness habitats. Available online at: [ARCHIVED CONTENT] Archive Site for Legacy Biodiversity Metrics (nationalarchives.gov.uk).

[21] SSE Renewables Biodiversity Net Gain Toolkit User Guide Version 1.2. Available online at: Biodiversity Net Gain | SSE Renewables

[22] Natural England (2022) Biodiversity Metric 3.1: Technical Supplement: Table TS2-11: River habitats classified as being of High distinctiveness. Available online at: [ARCHIVED CONTENT] Archive Site for Legacy Biodiversity Metrics (nationalarchives.gov.uk).

4 Results

4.1 Biodiversity Baseline

4.1.1 The non-irreplaceable baseline habitats impacted by Proposed Development are shown in the baseline habitat plan (see **Appendix B**) detailed in the Toolkit (see **Appendix C**) and are summarised in **Table 1**.

Table 1 Baseline habitats within the Site

Habitat Type for Toolkit Input	UKHab Classification	Distinctiveness	Condition	Area
Area Habitats				
Grassland - Other lowland acid grassland	g1a6 - Other lowland dry acid grassland	High	Moderate	25.38 ha
Grassland - Other neutral grassland	g3 - Neutral grassland	High	Moderate	1.07 ha
	g3c - Other neutral grassland		Poor	0.22 ha
	g3c8 - Holcus-Juncus neutral grassland		Moderate	31.38 ha
Heathland and shrub - Gorse scrub	h3e - Gorse scrub	Low	Poor	0.27 ha
Heathland and shrub - Upland Heathland	h1b - Upland Heathland	High	Moderate	15.79 ha
	h1b5 - Dry heaths; upland (H4030)		Poor	3.76 ha
Urban - Developed land; sealed surface	u1e - Built linear features	Very Low	N/A - No biodiversity value	1.75 ha
Woodland and forest - Other woodland; mixed	w1h - Other woodland; mixed	Medium	Poor	5.32 ha
Total				**84.94 ha**
Linear Habitats				
Rivers and Lakes - Other rivers and streams (Medium)	r2b Other rivers and streams	Medium	Moderate	7.85 km
Total				**7.85 km**

4.1.2 The baseline BU for non-irreplaceable habitat is 876.82 BU.

4.1.3 The baseline LU (W) is 103.75 LU (W).

4.1.4 No hedgerows were recorded on-site, as such no LU (H) have been calculated.

4.2 Temporary Impacts

4.2.1 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 and removed from the relevant Toolkit. Due to extensive groundwork that are required within the Site, and the timeline for the Proposed Development, no habitats are predicted to return to their original condition within two years.

4.3 Post-development Biodiversity Units

4.3.1 The post-development units have been calculated within the Toolkit using the difference between the baseline and the after works impact on the habitat. Post-development actions are discussed further in the following sections.

4.3.2 The post-development BU is577.80 BU.

4.3.3 The post-development LU (W) is 32.58 LU (W).

4.4 Habitat Creation (Within the Development Boundary)

4.4.1 Opportunities for habitat creation and enhancement on-site have been identified and assessed on the Landscape Mitigation Plan[23] dated 28 August 2024 (see Appendix D).

4.4.2 Due to the extensive ground clearance works, creation of bunds on-site and subsequent landscaping, the topsoil composition will be altered and is anticipated to represent a more neutral soil pH post-construction.

4.4.3 As mentioned within **Section 2.3**, opportunities for habitat creation on-site were limited by the nature of the Banniskirk Hub and restrictions on tree planting or scrub due to potential interference with future OHL / UGC. The Landscape Mitigation Plan focussed on delivering the required screening for the Proposed Development (see **Chapter 8: Landscape Character and Visual Amenity** for further detail) whilst optimising the BUs on-site through the creation of the following proposed habitats*:*

- Grassland - Other neutral grassland (g3c) - as a result of the groundwork required to level the site for the creation of the substation, the post development surface soil will predominantly consist of neutral soil suitable to support neutral grassland. Such other neutral grassland was also considered to optimise BUs delivered on-site whilst providing a habitat that would be suitable for planting underneath or above future infrastructure such as OHL / UGC;

[23] Drawing number 697221-DR-LAN-101.

- Woodland and forest - Other woodland; broadleaved (w1g) - to aid with the visual screening and partially replace the woodland lost as result of the Proposed Development;
- Grassland – Holcus-Juncus neutral grassland (g3c8) – proposed as part of the SuDS components of the Site to maximise biodiversity and habitat creation through the establishment of seasonally wet grassland;
- Rivers and lakes – Other rivers and streams (Medium) (r2b) - part of the drainage design for the Site; and,
- Rivers and lakes – Other rivers and streams (High) (r2b) - result of the renaturalisation of the stream on-site which was suggested by the Scottish Environment Protection Agency (SEPA) during consultation.

4.4.4 The BU designed in by on-site habitat creation or enhancement are 577.80.11 BU. This is not sufficient to achieve a biodiversity gain on-site and results in -34% net loss. It is not possible to achieve net gain on-site through habitat creation therefore off-site mitigation will be required. This will be arranged by the Applicant.

4.5 The LU (W) designed in by on-site habitat creation or enhancement are 32.58 LU (W). This is not sufficient to achieve a biodiversity gain on-site and results in -69% net loss. BNG for LU (W) opportunities will be explored at locations remote from the Site but within the Highland Council area in line with the policy commitments of the Applicant and expected planning requirements.

4.6 Habitat Creation (Off-site)

4.6.1 Off-site habitat creation 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 Local Planning Authority (LPA) of the Proposed Development. Following Toolkit guidance, any areas of compensation outside of the development site (offsets) will require application of the spatial risk multiplier[24].

4.6.2 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.

4.6.3 As it was not possible to deliver the net gain on-site, a suitable offsite area will be identified by the Applicant to deliver NG.

4.6.4 The off-site identified 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 biodiversity strategies.

[24] SSEN (2022) TG-NET-ENG-526: Biodiversity Net Gain Toolkit User Guide. Revision 2.00

5 Summary

5.1.1 The post-development BU is577.80 BU, meaning that the Proposed Development will achieve -34% net loss.

5.1.2 The post-development LU (W) is 32.58 LU (W), meaning that the project will achieve -69% net loss.

5.1.3 The habitat creation has 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 3.1.

5.1.4 A suitable offsite area will be identified by the Applicant to deliver a 10% NG. This will ensure that the Proposed Development will achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began.

5.2 Summary of Results

Table 1. Summary of biodiversity units

Habitat Type	Base Line BU	Post-Development BU	Difference in BU	Difference in BU (%)	BU required off-site to achieve 10% NG
Area	876.82 BU	577.80 BU	-299.03	-34 %	386.70 BU
Linear (Watercourses)	103.75 LU (W)	32.58 LU (W)	-71.18 LU (W)	-69 %	81.55 LU (W)

5.3 Biodiversity Outcomes

5.3.1 The outcome of the proposed habitat works and further biodiversity enhancement on-site measures will be:

- The re-naturalisation of a ditch into a stream;
- The design of SuDS to maximise biodiversity and habitat creation through the establishment of seasonally wet grassland;
- Native woodland planting; and
- The creation of Moderate condition other neutral grassland.

Implementing and Monitoring

5.3.2 Biodiversity enhancements will be achieved within the following timeframe[25].

- Grassland - Other neutral grassland (g3c and g3c8) - Moderate condition: 8 years; and
- Woodland and forest – Other woodland (w1g) mixed – Poor condition: 8 years.

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

[25] Time To Target Condition informed by the Biodiversity Metric 3.1 Technical Supplement. Available online at: (https://publications.naturalengland.org.uk/file/6059060118683648)

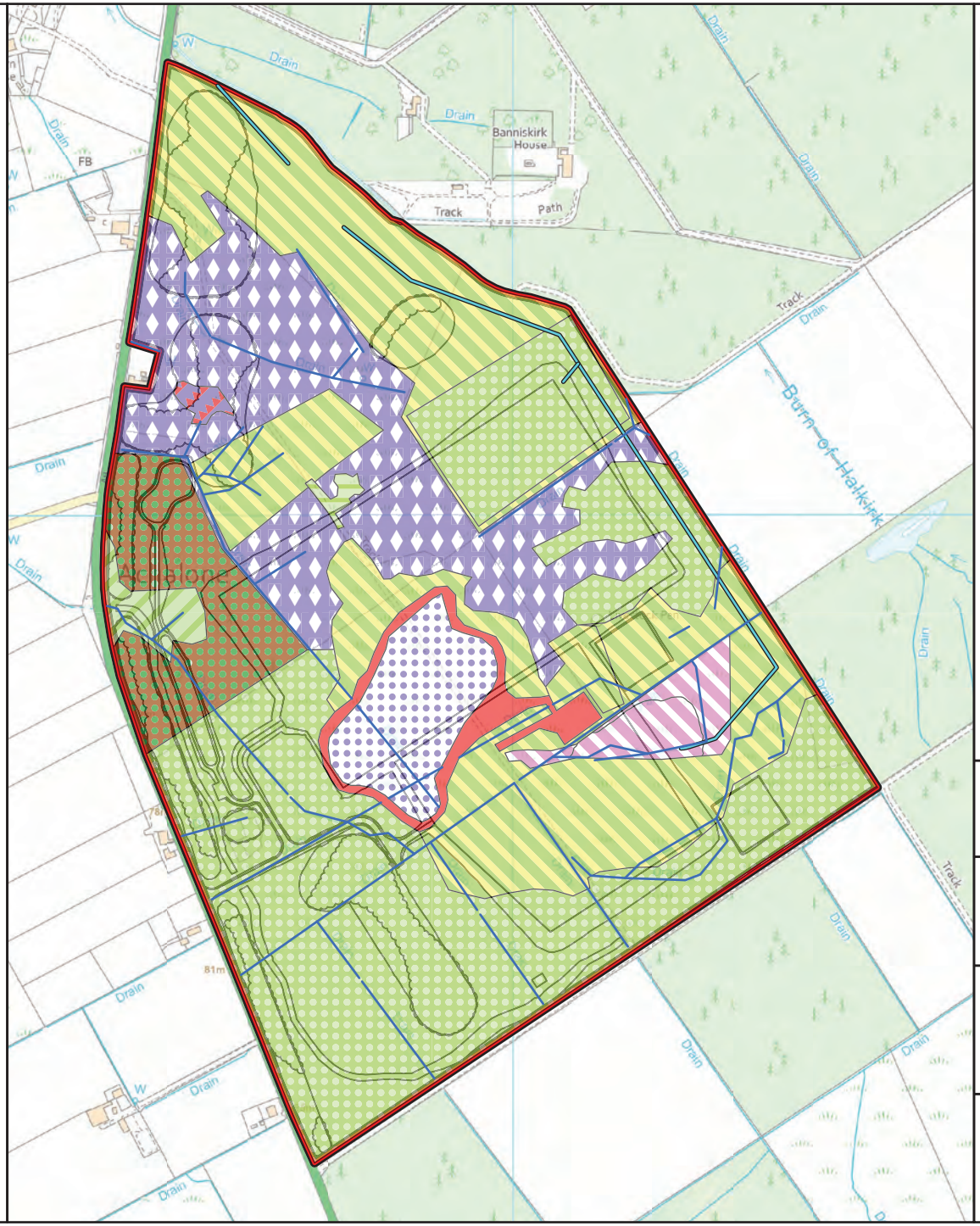
Appendix A Good practice principles for biodiversity net gain

The project has applied the UK good practice principles for biodiversity net gain (CIRIA C776a Biodiversity net gain. Good practice principles for development. Part A: A practical guide) below:

Principle	Summary of project actions
Apply the mitigation hierarchy	**Section 4** (Site Selection Process and Alternatives) within **Chapter 1** of the EIAR outlines the site selection process and consideration of reasonable alternatives studied by the Applicant, in accordance with Regulation 5(2)(d) and schedule 4, paragraph 2 of the EIA Regulations. It discusses the main reasons for selecting the site for the Proposed Development, and the design and layout options that have been considered.
Avoid losing biodiversity that cannot be offset elsewhere	The Proposed Development would include ancillary works including site clearance resulting in the loss of all habitats onsite. Offsite compensation will be required to compensate for these losses.
Be inclusive and equitable	At Initial Site Selection (Stage 1) a Report on Consultation (RoC) was developed for the Proposed Development. Following this, stakeholder engagement was undertaken at Detailed Site Selection (Stage 2) and a Pre-Application Consultation (PAC) report will be developed to support the Application.
Address risk	Revision 3.0 of the Toolkit user guide informed this assessment along with the completion of Version 3 of the Toolkit. The assessment applied the Natural England Biodiversity Metric 3.1 Habitat Condition Assessment sheets. The Creation / Enhancement risks and Time To Target Condition from Biodiversity Metric 3.1 Technical Supplement informed the assessment.
Make a measurable net gain contribution	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began.
Achieve the best outcomes for biodiversity	The Landscape Mitigation Plan was developed to provide screening in the form of Woodlands and to optimise the BNG return through the creation of grassland of good condition which would be suitable on the soil base established post development. The SuDS were designed to maximise biodiversity through habitat creation of seasonally wet grassland.
Be additional	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive

	effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began
Create a net gain legacy	As it was not possible to deliver net gain on-site, a suitable offsite area will be identified by the Applicant to deliver the net gain to ensure that the Proposed Development will overall achieve positive effects for biodiversity, leaving the natural environment in a demonstrably better state than before development work began
Optimise sustainability	As outlined in **Chapter 1** (Introduction and Background) of the EIAR, renewable energy generation volumes connecting to the SSEN Transmission licensed area, particularly offshore wind, are expected to increase towards the end of the decade and into the 2030s. Most of this is likely to connect to the far north of the SSEN Transmission network and as a result of this increase there is a requirement for additional transmission system capacity to the north of Beauly to meet this demand. The Network Options Assessment (NOA) undertaken by the National Grid Electricity System Operator (NGESO) is one of the documents that sit under the Pathway to 2030: A Holistic Network Design (HND) to support offshore wind deployment for net zero. The NOA 2021/22 Refresh is an update to the NOA 2021/22 that was published in January 2022 in accordance with standard condition C27 of the NGESO transmission licence. It now fully integrates the HND's offshore network and confirms the wider onshore network requirements. Together, the HND and the NOA 2021/22 Refresh have identified 94 schemes that are required to meet the Government's ambition for 50 Gigawatt (GW) of offshore wind by 2030. This comprises 56 schemes that have been identified as HND essential options (options needed for 2030 for delivery of 50 GW offshore wind), and 38 optimal schemes from this NOA 2021 / 22 Refresh analysis. NOA Option Beauly to Loch Buidhe 400 kilovolt (kV) reinforcement (BLN4) identifies the requirement to reinforce the electricity transmission network between Beauly Substation and the existing Loch Buidhe Substation and the need to create new electricity transmission between Loch Buidhe Substation and Spittal. This network reinforcement and creation also triggers the requirement to construct new standalone substations at Spittal, Loch Buidhe and Beauly capable of operating at 400 kV.
Be transparent	To demonstrate SSEN's transparency in meeting targets to the regulator, SSEN publish annual reports containing data on biodiversity enhancements for every project gaining consent.

Appendix B Site plan of baseline habitats and Red Line Boundary



UK Habitat Classification:

- f1a - blanket bog
- g1a6 - other lowland dry acid grassland
- g3 - neutral grassland
- g3c - other neutral grassland
- g3c8 - Holcus-Juncus neutral grassland
- h1b5 - dry heaths, upland (H4030)
- h1b6 - wet heathland with cross-leaved heath, upland (H4010)
- h3e - gorse scrub
- u1b - developed land, sealed surface
- u1e - built linear features
- w1h - other woodland, mixed
- r1g - other standing water
- r2b - other rivers and streams

Site Boundary

Proposed Site Infrastructure

Proposed Permanent Works

0 100 200 300 400

Metres

N

SCALE: See Scale Bar	VERSION: A03
SIZE: A4	DRAWN: CR
PROJECT: 0697221	CHECKED: DN
DATE: 10/10/2024	APPROVED: LS

Appendix B
UK Habitat Classification

ERM

Scottish & Southern Electricity Networks TRANSMISSION

PROJECTION: British National Grid

Path: \\UKSPRDGISFS01\Data\London\Projects\0697221 - SSE Spittal Hub\MAPS\0697221 - SSE Banniskirk Final\0697221 - SSE Banniskirk Final.aprx\0697221 - BS - Eco - Appendix B - UK Habitat Classification - A03

Appendix C Project Biodiversity Toolkit

Appendix D Proposed Landscape Mitigation Plan

N

KEY

SITE BOUNDARY

PROPOSED TRACK

REALIGNED WATER COURSE

EXISTING TREES, WOODLAND, HEDGEROWS AND VEGETATION

PROPOSED NATIVE SPECIES LOW MAINTENANCE MEADOW MIX
Low Maintenance Wildflower and Grasses Seed Mix (or similar approved)

SUDS PONDS AND BANKS OF REALIGNED WATER COURSE
Wet Wildflower Meadow Seed Mix (or similar approved)

PROPOSED NATIVE SPECIES WOODLAND AND SCRUB MIX
Planted with transplants 60-80 cm high using locally native species including rowan (*Sorbus aucuparia*), field maple (*Acer campestre*), willow (*Salix caprea*), blackthorn (*Prunus spinosa*), holly (*Ilex aquifolium*), hazel (*Corylus avellana*), hawthorn (*Crataegus monogyna*) and bird cherry (*Prunus padus*)

EARTHWORK - FILL
Seeded with Low Maintenance Wildflower and Grasses Seed Mix (or similar approved)

EARTHWORK - CUT
Seeded with Low Maintenance Wildflower and Grasses Seed Mix (or similar approved)

PROPOSED MOUNDS/BUNDS
Seeded with Low maintenance Wildflower and Grasses Seed Mix where not planted with trees/scrub (or similar approved)

NOTES: All planting to be protected from deer incursion/attack by deer-proof fencing with access gates for maintenance.

Drain
FB
Achalone Croft
Banniskirk House
Burn of Halkirk
Pond
SuDS
SuDS
SuDS
Achlone Cottage
Mossgiel
Well
Track
OHL TOWER PLATFORM (SUBJECT TO SEPARATE PLANNING APPLICATION)

0 20 40 60 80 100 120 140 160 180 200m
SCALE 1:2000

REVISION SCHEDULE

Rev	Date	Description
A	02.09.24	Revised following client's comments (WM)

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STATUS: **DRAFT**

BASE:

GRID REFERENCE: ND 159568

PROJECT: Banniskirk Substation

TITLE: Landscape Mitigation Plan

CLIENT: SSE

DATE: 28.08.24 SCALE: 1:2000@A1

DRAWN: WM DRAWING NO.: 0697221-DR-LAN-101

CHECKED: JF REVISION: A

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