APPENDIX 9.6: BIODIVERSITY NET GAIN (BNG) ASSESSMENT

EXECUTIVE SUMMARY

Scottish and Southern Electricity Networks Transmission (hereafter referred to as 'the Applicant') operating under licence as Scottish Hydro Electric Transmission plc, is proposing the construction of a new strategic transmission hub (hereafter the 'Proposed Development'). The Proposed Development would be located in Aberdeenshire east of Turriff at National Grid Reference NJ 82128 47081 (hereafter referred to as the 'Site').

This Biodiversity Net Gain (BNG) assessment has been prepared by WSP UK Ltd (hereafter referred to as 'WSP') on behalf of the Applicant.

This report includes:

- A BNG assessment of the Proposed Development following the guidance outlined within SSEN Transmission's Biodiversity Net Gain Toolkit User Guide and the SSEN Transmission Assessment Methodology & Associated Guidance;
- A qualitative assessment against the BNG Good Practice Principles; and
- Details of the habitat creation and / or enhancement required to meet 10 % BNG.

The Site comprised modified grassland and cropland intercepted by built linear features and developed land; sealed surface as well as small areas of coniferous woodland, gorse scrub, and species poor neutral grassland. Linear habitat features recorded include hedgerows and lines of trees, as well as water courses.

A summary of the baseline and post development area-based Biodiversity Units (BU), Linear Hedgerow Units (LU-H) and Linear Watercourse Units (LU-W) for the Proposed Development are detailed in **Table 1** below with a summary of overall BU, LU-H and LU-W change. No irreplaceable habitats are present within the Site.

Table 1: Summary of Biodiversity Net Gain Assessment

Development	Area (ha) / Length (km)	Units (BU)		
		Baseline Units	Post Development Units	Change in Units
Biodiversity Units (BU)	120.49	249.13	696.21	+ 447.08 (+179 %)
Linear Units – Hedgerow (LU-H)	4.19	21.97	0	- 21.97 (- 100 %)
Linear Units – Watercourse (LU-W)	2.36	10.38	10.57[1]	+ 0.19 (+2 %)
Only habitats affected have been included. Habitats anticipated to return to existing habitat type and condition within 2 years of the date of impact have been excluded from the Toolkit and BNG assessment.				

The Proposed Development and associated Landscape and Ecological Mitigation Plan (**Volume 3, Figure 8.7: Landscape and Ecological Mitigation Plan**) demonstrate the Proposed Development would be able to achieve a significant enhancement to biodiversity on Site. The Applicant is committed to providing a 10 % Net Gain (NG) and the BNG assessment of the Landscape and Ecological Mitigation Plan demonstrates how this should be comfortably achieved, with the assessment predicting 179 % NG in BU. A 10 % NG in linear watercourse units has not been achieved despite the creation of new watercourses as part of the Proposed Development, resulting in a slightly lower 2 % NG. The assessment assumed that the majority of the hedgerows within the Site would be lost as a result of the Proposed Development and will not be replaced following construction, leading to a -100 % NL in LU-H. These losses in LU-H and limited gains in LU-W are expected to me remedied by the gains in BU from the Proposed Development.

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[1] (PD length: 2.9 km).

actual or implied, in relation to this report, or the ultimate commercial, technical, economic, or financial effect on the project to which it relates, and bears no responsibility or liability related to its use other than as set out within the scope of the contract under which it was supplied.

1. INTRODUCTION

1.1 Background Information

1.1.1 This Biodiversity Net Gain (BNG) assessment has been prepared by WSP UK Limited (hereafter referred to as WSP) on behalf of Scottish Hydro Electric Transmission plc, also referred to as SSEN Transmission, but for the purpose of this assessment referred to as 'the Applicant'. The Applicant owns, operates and develops the high voltage electricity transmission system in the north of Scotland and remote islands. This report describes the BNG assessment of the proposed strategic transmission hub referred to as Greens Substation (hereafter known as the "Proposed Development").

1.1.2 The Proposed Development would be located in Aberdeenshire, east of Turriff and south of Cuminestown (National Grid Reference NJ 82128 47081) and hereafter referred to as 'the Site'. The location of the Site is shown on **Volume 3, Figure 1.1: Site Boundary** and the layout of the Proposed Development is shown on **Volume 3, Figure 1.2: Proposed Development**; both included in Volume 3 of the Environmental Impact Assessment (EIA) Report. For full details of the Proposed Development, please refer to **Volume 2, Chapter 3: Project Description** of the EIA Report. The Applicant is seeking consent under the Town and Country Planning (Scotland) Act 1997 (as amended)[2], from Aberdeenshire Council for the Proposed Development which comprises the following:

- A new 400kV Air Insulated Switchgear (AIS) substation;
- Three buildings within the substation boundary;
- Permanent service roads, parking areas, and space for maintenance and management of the substation and
- A drainage strategy including attenuation basins.

1.1.3 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 and relevant public road improvements, formation of internal access roads, underground cables connecting the components on the Site, drainage, permanent water supply, lighting, security fencing and biodiversity enhancement measures.

1.2 Scope of Report

1.2.1 WSP was commissioned by the Applicant to undertake a BNG assessment to quantify the biodiversity value and the predicted post-construction biodiversity value of the Site. Post-construction habitats are shown in **Volume 3, Figure 9.6.2: Post Development Habitat**. The BNG assessment was undertaken in line with SSEN Transmission's Biodiversity Net Gain Toolkit User Guide[3] (herein referred to as the User Guide). The BNG assessment also informs **Volume 2, Chapter 9: Ecology, Nature Conservation and Ornithology** of the EIA Report.

1.2.2 The assessment was based upon the findings of a UK Habitat Classification ('UKHab') survey, which was undertaken in December 2022 to inform the Proposed Development's Stage 2: Detailed Site Selection and updated following a survey in January 2024. Full details are provided in **Volume 4, Appendix 9.1: Habitats Baseline**. Habitat Condition Assessment (HCA) data were also gathered during the Site surveys. The biodiversity baseline value for the Proposed Development has been quantified using the SSEN Transmission's Biodiversity Site Project Toolkit V3.1 (herein referred to as the "toolkit").

1.2.3 Recommendations have been provided in line with the Construction Industry Research and Information Association (CIRIA), Chartered Institute of Ecology and Environmental Management (CIEEM) and Institute of

[2] Town and Country Planning (Scotland Act) 1997. Available at: https://www.legislation.gov.uk/ukpga/1997/8/contents [Accessed: November 2024].
[3] SSEN Transmission (2023). Biodiversity Net Gain Toolkit User Guide. SSEN Transmission, Perth.

Environmental Management and Assessment (IEMA) BNG Good Practice Principles[4] (hereafter referred to as 'Good Practice Principles') and the published UK guidance[5]. An assessment of the Good Practice Principles can be found in **Annex B.**

1.3 Policy and Legislation

1.3.1 All councils have a duty under the Nature Conservation (Scotland) Act 2004[6] to further the conservation of biodiversity and to report back on their biodiversity targets.

1.3.2 The Planning (Scotland) Act 2019[7] requires the National Planning Framework 4 (NPF4)[8] to protect biodiversity from development, reverse biodiversity loss, deliver positive effects from development and strengthen nature networks. Policy 3 of NPF4 states:

"*Development proposals for national or major development, or for development that requires 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 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.*"

1.3.3 The Applicant uses their BNG approach as a valid method to demonstrate positive effects for biodiversity via the new NPF4.

1.3.4 The Aberdeenshire Local Development Plan 2023[9] sets the requirement for biodiversity enhancements and compensation; see Policy P1.7 on Biodiversity:

"Measures require to be identified to enhance biodiversity in proportion to the opportunities available and the scale of the development opportunity. In very rare circumstances, when it is not practical to meet biodiversity net gain within a development site, we may require off-site contributions towards biodiversity enhancement within the settlement or near to the Site. These obligations may be controlled by conditions."

1.4 SSEN Transmission's Biodiversity Ambition

1.4.1 The Applicant is committed to protecting and enhancing the environment by minimising the potential impacts from their construction and operational activities. The Applicant is committed to deliver a 10 % BNG on all new projects[10], which adds onto their previous Sustainability Strategy (2024)[11] for new infrastructure projects, committing to:

- Ensure natural environment considerations are included in decision making at each stage of a project's development;
- Utilise the mitigation hierarchy to avoid impacts by consideration of biodiversity in project design;

[4] CIEEM, CIRIA, IEMA (2016). Biodiversity Net Gain – Good practice principles for development. Available: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development/ [Accessed: November 2024]
[5] CIEEM, CIRIA, IEMA (2019). Biodiversity Net Gain – Good practice principles for development. A Practical Guide. Available: http://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development-a-practical-guide/ [Accessed: November 2024]
[6] Scottish Government (2004). Nature Conservation (Scotland) Act 2004. Available at: https://www.legislation.gov.uk/asp/2004/6/contents [Accessed: November 2024]
[7] Scottish Parliament (2019) Planning (Scotland) Act 2019. Available at: https://www.legislation.gov.uk/asp/2019/13/contents [Accessed: December 2024]
[8] National Planning Framework 4: Revised Draft. Available: https://www.gov.scot/binaries/content/documents/govscot/publications/advice-and-guidance/2022/11/national-planning-framework-4-revised-draft/documents/national-planning-framework-4-revised-draft/national-planning-framework-4-revised-draft/govscot%3Adocument/national-planning-framework-4-revised-draft.pdf [Accessed: November 2024]
[9] Aberdeenshire Council (2023). Aberdeenshire Local Development Plan 2023. Available: https://online.aberdeenshire.gov.uk/ldpmedia/LDP2021/AberdeenshireLocalDevelopmentPlan2023IntroductionAndPolicies.pdf [Accessed November 2024]
[10] Delivering for Nature and Net Zero on World Biodiversity Day by committing to biodiversity net gain on all our projects - SSEN Transmission (ssen-transmission.co.uk) (2023).
[11] SSEN Transmission (2024) Sustainability Strategy 2024. Available at: https://www.ssen-transmission.co.uk/globalassets/documents/new-sustainability-documents-2024/strategies/ssen-transmission-sustainability-strategy-2024 [Accessed: December 2024]

- Positively contribute to the United Nations and Scottish Government biodiversity strategies by achieving an overall net gain on new infrastructure projects gaining consent;
- Work with their supply chain to gain the maximum benefit during asset replacement and upgrades;
- Avoid all impacts on irreplaceable habitats, wherever possible. Where there is an unavoidable impact the Applicant commits to mitigate, restore more than what is lost, and enhance to support greater biodiversity growth in the long term; and
- No Net Loss (NNL) of woodland cover with tree loss only considered as a last resort. Where unavoidable, compensatory planting of native species mitigates any woodland loss to enhance local ecosystems and create a biodiversity net gain.

2. METHODS

2.1.1 A summary of the BNG assessment methodology and specific data sources, assessment limitations and assumptions are provided in this methodology section.

2.2 Desk Study

2.2.1 Publicly available datasets were searched for information on statutory and non-statutory designated sites within 2 km of the Site, in accordance with the Chartered Institute of Ecology and Environmental Management (CIEEM) guidelines (2016)[12]. The search results were restricted to those designated sites with qualifying ecological / biological interest (i.e., not solely geological). Designated sites of interest are as follows:

- Local Nature Conservation Sites (LNCS);
- Local Nature Reserves (LNR);
- National Nature Reserves (NNR);
- Sites of Special Scientific Interest (SSSI);
- Special Areas of Conservation (SAC);
- Special Protection Areas (SPA); and
- Ramsar sites.

2.2.2 Qualifying features of the designated sites were obtained from the NatureScot Site Link[13] Where measurements are presented in the findings, these provide the distance of the designated site from the closest point of the Proposed Development.

2.2.3 Publicly available Native Woodland Survey of Scotland[14] data and Ancient Woodland Inventory (AWI)[15] were reviewed to identify the presence of Ancient Woodland within 1 km of the Proposed Development. Also, 1st Edition maps (1843-1882) were reviewed on Past Map[16]. The Native Woodland Survey of Scotland[14] was further examined to acquire details on woodland habitat composition and connectivity.

2.3 Field Survey

2.3.1 This BNG Assessment and associated recommendations are based on findings of the UK Habitat Classification (UKHab) survey and Biodiversity Metric 3.1 Habitat Condition Assessment (HCA) surveys undertaken in May 2024. Surveys covered the full extent of the Site. All habitats were assigned UKHab Primary Habitats in line with UKHab Classification User Manual (Version 1.1)[17]. Full UKHab methodology and survey data are reported separately **Volume 4, Appendix 9.1: Habitats Baseline**. HCA surveys were conducted following the system presented in Natural England Biodiversity Metric V3.1[18]. All habitat mapping was undertaken using Arc Map Version 10.8.1.

2.3.2 An initial UKHab survey was undertaken during the detailed site selection stage in December 2022. This was led by an ecologist who is experienced at a 'capable' level[19] of surveying similar habitat types encountered in the geographical region and land-use setting. Another survey to review the UKHab mapping was undertaken on 7

[12] CIEEM, CIRIA, IEMA (2016) Biodiversity Net Gain – Good practice principles for development. Available: https://cieem.net/resource/biodiversity-net-gain-good-practice-principles-for-development/ [Accessed: November 2024].
[13] NatureScot (online). Site Link. Available: https://sitelink.nature.scot/map [Accessed November 2024]
[14] Scottish Forestry (2014). Native Woodland Survey of Scotland. Available: https://forestry.gov.scot/forests-environment/biodiversity/native-woodlands/native-woodland-survey-of-scotland-nwss [Accessed: November 2024].
[15] Scottish Government (2024). Ancient Woodland Inventory (Scotland) Available: https://www.data.gov.uk/dataset/c2f57ed9-5601-4864-af5f-a6e73e977f54/ancient-woodland-inventory-scotland [Accessed: November 2024]
[16] Past Map. 1st Edition maps (1843-1882). Available: https://pastmap.org.uk/map [Accessed: November 2024].
[17] UKHab Ltd. (2020). UK Habitat Classification, Version 1.1. Available: https://www.ukhab.org. [Accessed November 2024]
[18] Natural England (2023). Biodiversity Metric 3.1 (JP039). Habitat Condition Assessment Sheets and Methodology. Available at: https://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed June 2024]
[19] CIEEM (2023). Competency Standard for Preliminary Habitat Survey. Available from: https://cieem.net/wp-content/uploads/2023/03/Preliminary-Habitat-Survey-Competency-Standard-V2-February-2023.pdf

May 2024 during the optimal botanical season and to extend the coverage across the Site, This was conducted by an 'accomplished'[20] surveyor accredited with the Botanical Society of Britain and Ireland (BSBI) Field Identification Skills Certificate[21] (FISC) Level 3.This report has been completed and quality assured by a team of ecologists with 6 years' collective experience in undertaking BNG assessments. The report has been reviewed and authorised by ecologists with associate and full CIEEM membership respectively.

2.4 Biodiversity Calculations

2.4.1 The BNG assessment was completed within the Toolkit following the User Guide[22]. This method has been revised to align with Natural England Biodiversity Metric 3.1, 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 to be directly affected by the Proposed Development.

2.4.2 The biodiversity values of the baseline and post development habitats were quantified in terms of area-based Biodiversity Units (BU), and Linear Units for hedgerows and lines of trees (LU-H) and watercourses (LU-W). The calculations were completed using the Toolkit and User Guide, with data obtained through the desk-based review and UKHab and HCA survey to determine condition and strategic significance. The Toolkit auto-populates habitat distinctiveness based on the User Guide.

2.4.3 Connectivity followed 2019 Natural England Guidance[23] meaning all habitats of high distinctiveness were assumed to be of moderate connectivity; and all others assumed to be low.

2.4.4 Information from Aberdeenshire Council's website on nature conservation[24], the council's Forestry and Woodland Strategy[25] and North East Scotland Biodiversity Partnership (NESBiP)'s Important Habitats for Biodiversity[26] list was obtained to assess the strategic significance scores, which have been assigned as follows, based on habitats identified of local importance:

- High strategic significance is assigned to woodlands which are proposed post development (excluding coniferous plantations), grasslands (excluding modified grassland) such as other neutral grassland which was recorded both in the baseline and are proposed post development, line of trees, and hedgerows which were recorded in the baseline;
- Medium strategic significance has been assigned to all habitats which are not formally identified but ecologically desirable such as mixed scrub, and wetland (other swamp) habitat both of which are proposed post development, and gorse scrub which was recorded in the baseline; and
- Low strategic significance has been assigned to those habitats which are neither formally identified nor ecologically desirable such as urban, cropland, modified grassland, and coniferous plantation which are all present within the baseline.

2.4.5 Difficulty and Time to Target Condition (TTTC) values have been assigned as per the values given in the Biodiversity Metric 3.1 Technical Supplement[27].

[20] CIEEM (2021). Competency Framework. Available at: https://cieem.net/resource/competency-framework [Accessed: December 2024]
[21] BSBI (2024). Field Identification Skills Certificate. Available from: Field Identification Skills Certificate – Botanical Society of Britain & Ireland
22 SSEN Transmission (2022). Biodiversity Net Gain Toolkit User Guide. SSEN, Perth.
[23] Biodiversity metric 2.0 User Guide - Beta Test Final (1).pdf. Available: https://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed November 2024]
[24] Aberdeenshire Council (online). Nature Conservation – Habitats. Available: https://www.aberdeenshire.gov.uk/environment/natural-heritage/biodiversity/ [accessed: November 2024].
[25] Aberdeenshire Council (2023). Aberdeenshire Forestry and Woodland Strategy: Planning Advice PA2023-01. Available: http://publications.aberdeenshire.gov.uk/dataset/0ceb7c55-b43d-45c4-a311-798f4bc9fa75/resource/0dc09e1e-a83c-4bfb-bd10-72b7128dbd29/download/pa2023-01---planning-advice---aberdeenshire-forest-and-woodland-strategy-2021.pdf [Accessed: November 2024]
[26] North East Scotland Biodiversity Partnership. (n.d.). Important habitats for biodiversity in the North East of Scotland. Available: https://www.nesbiodiversity.org.uk/biodiversity-information-for-developers/important-habitats-for-biodiversity-in-the-north-east-of-scotland/ [Accessed: December 2024]
[27] Natural England (2022). Biodiversity Metric 3.1 (JP039). Technical Supplement. Available at: Available: https://publications.naturalengland.org.uk/publication/5850908674228224 [Accessed November 2024]

2.5 Irreplaceable Habitats

2.5.1 To aid understanding of the value of the irreplaceable habitats where these are present, they are quantified in terms of BU, area and / or number of the trees within a separate toolkit. Woodland listed on the AWI as categories 1a and 2a[28], ancient and veteran trees and blanket bog in moderate condition or above are classed as irreplaceable habitats[29].

2.5.2 In these situations, the SSEN Transmission Assessment Methodology & Associated Guidance[30], hereafter referred to as 'SSEN Guidance', dictates that any compensation offered to address impacts on irreplaceable habitats should be agreed directly with the planning authority, in this case Aberdeenshire Council. The presence (or likely absence) of irreplaceable habitats within the Site is discussed in the Results Section.

2.6 Limitations and Assumptions

2.6.1 Field surveys were undertaken in May which is an optimal time of year for botanical survey. Based upon the desk study and field data collected, the experience of the surveyors, and the dominant land-use (e.g., modified grassland for grazing, cropland) it is considered that the data were robust and provided a sufficiently accurate reflection of the habitats present and their condition with respect to BNG. A precautionary approach was taken when assessing condition, whereby criteria would be passed if unknown due to seasonality and a pass would be plausible under the continued land-use practices.

2.6.2 The following assumptions have been made for the baseline BU calculations for the Site.

- The BNG Assessment Boundary encompasses the main area of the Site and the indicative pipeline routes for drainage. The pipeline routes may be subject to change at detailed design (within the limits of the Site boundary). The habitats across the land adjacent to the pipeline routes within the Site boundary would be comparable, such that substantial changes in Biodiversity Units affected would be unlikely.
- Area calculations are based on areas being rounded to two decimal places before being entered into the biodiversity toolkit. Therefore, there may be a difference of 0.01 hectares (ha) between the Site area and total baseline habitat area based on rounding up or down of values. The BU achieved from these small changes is negligible and therefore this does not affect the BNG calculations.
- Indicative programme development indicates that the construction period would be three years. TTTC for all habitats has been calculated by using the Biodiversity Metric 3.1 Technical Supplement standard TTTC plus three years as a worst-case scenario e.g., TTTC for other neutral grassland in moderate condition is five years, therefore final TTTC input into the toolkit as eight years.
- All of the watercourses in the Site have been included as part of the BNG assessment and assumed to be of medium distinctiveness. This classification is based on the current ecological condition and characteristics of these watercourses. The drainage ditch, which feeds into the Burn of Greens, has been heavily modified for agricultural drainage, as evidenced by its straightened nature and overgrown vegetation. While the Burn of Greens itself extends along the eastern boundary, no features within the Site qualify it as Scottish Biodiversity List[31] priority watercourse habitats and NESBiP recognises that straightened watercourses like those present within the Site often result in degraded ecological conditions. In the absence of a mid point to account for ditches in the User Guide, the present ditches have been interpreted as if they are the category Ditches in the Statutory Biodiversity Metric[32] and are therefore assigned medium distinctiveness.
- TTTC has been assigned in accordance with the Metric 3.1. The three years have not been added to their TTTC, as the watercourse is expected to be built and completed in the beginning of the Proposed Development.

[28] SSEN Transmission (2023) Ancient Woodland - Approach to Assessment and Reporting.
[29] SSEN do not consider woodland classed on the AWI as Long-Established Plantation Origin as irreplaceable habitat.
[30] SSEN Transmission (2019). Biodiversity Net Gain Technical Assessment Methodology & Associated Guidance. SSEN, Perth.
[31] NatureScot. (n.d.). Scottish biodiversity list. https://www.nature.scot/scotlands-biodiversity/scottish-biodiversity-strategy-and-cop15/scottish-biodiversity-list [Accessed December 2024]
[32] Statutory biodiversity metric tools and guides - GOV.UK

- Hedgerows (LU-H) are included in the baseline calculations but excluded from post-development habitat proposals. This limitation is based on operational difficulties arising around long-term maintenance of hedgerows across the Proposed Development's lifetime. The boundary shrub vegetation is considered as ecologically analogous to hedgerows without the added connectivity of the linear features. Despite this exclusion in the Toolkit, the ecological functions typically associated with hedgerows are maintained on-site by the extensive woodland and scrub cover, which is considered a suitable compensation for the loss of the present hedgerows.
- One small section of hedgerow is retained, as shown in **Volume 3, Figure 8.7: Landscape and Ecological Mitigation Plan**. This is not reflected in the toolkit as retained habitat was taken out of the assessment.
- All of the habitats mapped as Arable and horticulture UKHab Primary Habitat '(c1) Arable and Horticulture' are assumed as Cereal crops UKHab Primary Habitat '(c1c) Cereal crops'.
- Post-development habitats have been classified based on the various seed mixes and habitat descriptions identified as part of **Volume 3, Figure 8.7: Landscape and Ecological Mitigation Plan**:
    - Retained Woodland has been classified as UKHab Primary Habitat '(w2c) Other coniferous woodland.' This habitat is assumed to remain as the existing baseline habitat type and condition.
    - Retained Hedgerow has been classified as UKHab Primary Habitat '(h2a) Native hedgerow' to reflect its ecological value as part of the baseline habitats.
    - Proposed Woodland has been classified as UKHab Primary Habitat '(w1g) Other woodland; broadleaved'. These areas will be planted with broadleaved species, enhancing biodiversity and contributing to visual and ecological integration within the landscape.
    - Proposed Scrub forming the boundary vegetation around the proposed woodland has been classified as UKHab Primary Habitat '(h3h) Mixed scrub'. This scrub will be introduced to provide structural diversity, supporting various wildlife species, particularly those that utilise edge habitats.
    - Neutral Wildflower Grass Seeding has been classified as UKHab Primary Habitat '(g3c) Other neutral grassland'. These areas will be seeded with a mix of wildflower species, fostering biodiversity through habitats that attract pollinators and other invertebrates.
    - Wetland Margin Grass Seeding around the proposed diverted burn and SuDS has been classified as UKHab Primary Habitat '(f2f) Other swamp'. Grass seeding around wetland features will help stabilise soil, improve water quality, and enhance habitat complexity along wetland edges.
    - The SuDS basins within the Site have been classified under the UKHab Primary Habitat '(f2f) Other swamp'. This classification is based on the intended function of the SuDS basin floor, which is seeded with a "Seeding to SuDS Basin Floor" mix. While the specific composition of the mix is not detailed, it is assumed that it supports the establishment of wetland vegetation and species such as soft rush *Juncus effusus* will most likely establish. This aligns with the hydrological function of the SuDS basins in managing water and providing ecological benefits for wetland-associated species. The classification reflects the expectation that these areas will seasonally / periodically maintain wetland characteristics, consistent with the requirements for habitats supporting hydrophilic vegetation.
    - Drains and Diverted Burns have been classified as UKHab Primary Habitat '(r2b) Other rivers and streams'. These naturalised water channels will serve as linear aquatic habitats, supporting biodiversity while managing surface water flow across the site.
    - All Developed Land is classified as UKHab Primary Habitat '(u1b) Developed land; sealed surface'. This includes areas of hardstanding such as the main substation platform and access roads, essential for site functionality but with no ecological value.

3. RESULTS

3.1.1 The biodiversity baseline and post development values for the Site are presented below and shown in **Volume 3, Figure 9.6.1: Baseline Habitat** and **Volume 3, Figure 9.6.2: Post Development Habitat**, respectively.

3.1.2 No irreplaceable habitats or designated sites were identified within the Site.

3.2 Temporary Impacts

3.2.1 Temporary footprint comprises all habitat to be lost over the construction period (3 years). Any habitats temporarily lost are assumed to be reinstated to the same baseline habitat type and condition. As this will not occur within two years, the existing habitats will be permanently lost.

3.3 Baseline Biodiversity Value

3.3.1 The Site is primarily composed of cropland dominated by cereal crops (UKHab Primary Habitat '(c1c) Cereal crops') of low biodiversity value, assigned a "low" distinctiveness and "N/A - Agriculture" condition rating. The Site also includes large areas of modified grassland (UKHab Primary Habitat '(g4) Modified grassland') in poor condition, alongside pockets of gorse scrub (UKHab Primary Habitat '(h3e) Gorse scrub') which have been assessed as poor condition.

3.3.2 Further habitats recorded include other neutral grassland (UKHab Primary Habitat '(g3c) Other neutral grassland') in poor condition. Urban features on the Site include built linear features and developed land (UKHab Primary Habitat '(u1e) Built linear features' and '(u1b) Developed land; sealed surface'), which have been assigned a very low distinctiveness and no biodiversity value.

3.3.3 The Proposed Development contains linear habitats in the form of native hedgerow (UKHab Primary Habitat '(h2a) Native hedgerow') in good and medium condition, line of trees (UKHab Primary Habitat (w1g6) Line of trees') in poor condition and watercourses (UKHab Primary Habitat '(r2b) Other rivers and streams') in poor condition and medium distinctiveness as shown in **Volume 3, Figure 9.6.1: Baseline Habitat**.

3.3.4 The total BU baseline value for the Proposed Development is 249.13, which comprises 13.6 % high distinctiveness habitats and 86.4 % low and very low distinctiveness habitats within the toolkit.

3.3.5 The total LU-H baseline value for the Proposed Development is 21.97, which comprise 100 % low distinctiveness habitats. The total LU-W baseline value for the Proposed Development is 10.38, comprising 100 % medium distinctiveness habitats.

3.3.6 The average BU per one hectare of habitat can range between 2 BU/ha (low biodiversity value) and 18 BU/ha (very high biodiversity value), as such the baseline habitats present within the Site are of low biodiversity value (2.27 BU/ha).

Table 2: Summary of Baseline results

Area Based Habitats	Condition	BU
Cropland - Cereal Crops	N/A - Agriculture	132.82
Urban - Built linear features	N/A - No biodiversity value	0
Urban - Developed land; sealed surface	N/A - No biodiversity value	0
Heathland and shrub - Gorse scrub	Poor	1.36
Grassland - Modified grassland	Poor	76.24
Woodland and forest - Other coniferous woodland	Poor	4.48
Grassland - Other neutral grassland	Poor	34.23
Linear Watercourse (W) Habitats	**Condition**	**BU**

Rivers and lakes – Other rivers and streams (Medium)	Poor	10.38
Linear Hedgerow (H) Habitats	**Condition**	**BU**
Line of Trees	Poor	0.3
Native Hedgerow	Good	8.83
Native Hedgerow	Moderate	12.83

3.4 Post Development Biodiversity Value

3.4.1 The Proposed Development post development area-based habitats would consist of urban Developed land; sealed surface habitats (UKHab Primary Habitat u1b) of no biodiversity value. Additionally, extensive stands of mixed scrub (UKHab Primary Habitats h3h) in moderate condition and other woodland; broadleaved habitat (UKHab Primary Habitat w1g) in moderate condition are proposed across the Site. Large sections of the Site are proposed to be covered in other neutral grassland (UKHab Primary Habitats g3c) in moderate condition. Other swamps (UKHab Primary Habitats f2f Other wetlands) in moderate condition are proposed around and within the aquatic features across the Site, namely the redirected burn and SuDS. There is one small parcel of retained other coniferous woodland (UKHab Primary Habitat w2c) in poor condition in the north east of the Site and one retained section of a native hedgerow (UKHab Primary Habitat h2a) in moderate condition in the south east of the Site as shown in **Volume 3, Figure 9.6.2: Post Development Habitat**.

3.4.2 All the other baseline linear hedgerow habitats would be permanently lost and will not be compensated through the creation of new hedgerows. It is anticipated that the extensive woodland and scrub creation will perform a similar ecological function to the lost hedgerows by providing similar foraging and nesting opportunities for birds and suitable habitat for invertebrates. Refer to Limitation and Assumption Section 2.6 for further details. The Proposed Development post development linear watercourse habitats would consist of created watercourses (UKHab Primary Habitat r2b) (See limitations and assumptions Section 2.6). The recreated and naturalised watercourse is anticipated to be of medium distinctiveness and moderate condition.

3.4.3 The total post development BU value for the Proposed Development is anticipated to be 696.21, which comprises 75.7 % high distinctiveness habitats, 20.6 % medium distinctiveness habitats and 3.7 % low distinctiveness habitats within the toolkit.

3.4.4 The total LU-H post development value for the Proposed Development is anticipated to be 0 which comprise 100 % low distinctiveness habitats[33].

3.4.5 The total LU-W post development value for the Proposed Development is 10.57 which comprise 100 % medium distinctiveness habitats.

3.4.6 The average BU per one hectare of habitat can range between 2 BU/ha (very low biodiversity value) and 18 BU/ha (very high biodiversity value), as such the post development habitats present within the Proposed Development would be of medium biodiversity value (4.35 BU/ha).

3.4.7 The creation and enhancement of natural habitats contribute to Scottish Biodiversity List conservation priorities by supporting species and habitats requiring action. These efforts align with national biodiversity targets and complement local initiatives like the Local Biodiversity Action Plan for North East Scotland. Furthermore, the created habitats will contribute to Aberdeenshire's Green Network Strategy by forming continuous ecological corridors within and beyond the Site. These features strengthen links with nearby habitats, such as woodland and hedgerows, to create a cohesive habitat network.

3.4.8 By incorporating a diverse habitat mosaic, including scrub, neutral grassland, wetland features, and woodland, the Site will better support both terrestrial and aquatic species, promoting biodiversity resilience and facilitating wildlife movement within and beyond the Site. The design could support future opportunities for collaboration with adjacent land managers to integrate stepping stones and corridors into the surrounding landscape. Such

[33] Note that one small section of hedgerow is retained, but has been taken out of the BNG calculations resulting in the overall 100 % NL

measures enhance regional connectivity and align with broader ecological goals. The inclusion of sustainable urban drainage systems (SuDS) reduces flood risks and provides valuable wetland habitats for biodiversity.

3.4.9 **Plate 1** in **Annex A** summarises the predicted changes in BU, LU-H and LU-W that would be anticipated from the Proposed Development.

Table 3: Summary of Post Development results

Area Based Habitats	Condition	BU
Grassland - Other neutral grassland	Moderate	528.96
Heathland and shrub - Mixed scrub	Moderate	21.47
Urban - Developed land; sealed surface	N/A - No biodiversity value	0
Wetland - Other swamps	Moderate	25.2
Woodland and forest - Other woodland; broadleaved	Moderate	120.58
Linear Watercourse (W) Habitats	**Condition**	**BU**
Rivers and lakes – Other rivers and streams (Medium)	Poor	10.57

4. RECOMMENDATIONS AND CONCLUSIONS

4.1.1 The Site is comprised of developed land, modified grassland, cropland, other neutral grassland, gorse scrub and other coniferous woodland; linear habitats comprised of hedgerows, lines of trees, and watercourses. The Proposed Development does not impact on any irreplaceable habitat, as none lie within the Site.

4.1.2 The baseline biodiversity value for the Proposed Development is 249.13 BU, 21.97 LU-H and 10.38 LU-W. Based on the assumptions made with respect to habitat reinstatement and **Volume 3, Figure 8.7: Landscape and Ecological Mitigation Plan**, the post construction BU value is predicted to be 696.21 BU, 0 LU-H and 10.57 LU-W, a predicted increase of 447.08 BU, a decreased of -21.97 LU-H, and an increase of 0.19 LU-W.

4.1.3 Overall, this would equate to a predicted 179 % NG in BU, 100 % Net Loss (NL) in LU-H and 2 % NG in LU-W. Based on this assessment, it is predicted that the Proposed Development would achieve the Applicant's committed target of a 10 % NG for area-based habitats and thus delivering significant biodiversity enhancements to the Site. A NG in linear watercourse units has been achieved, but not to the applicants 10 % NG target, despite the creation of new watercourses as part of the Proposed Development, resulting in a 2 % NG in LU-W. The assessment assumed that the majority of the hedgerows within the current design footprint would be lost as a result of the Proposed Development and will not be recreated after construction, leading to a -100 % NL in LU-H.[34] The losses in linear hedgerow units and limited gain in watercourse units are expected to be compensated for by the high NG in BU across the area-based habitats. The ecological function of hedgerows that are to be lost is expected to be maintained throughout the Site due to the proposed high woodland and scrub cover, providing increased habitat and connectivity to species, who are likely to use the hedgerows present on Site. The limited gain of linear watercourse features should be assessed in combination with the gain in wetland habitat adjacent to the proposed swales.

4.1.4 Taking the above into account it is considered that the Proposed Development would meet with the requirements of NPF4 Policy 3(b)(iv), as follows:

- *Provides significant biodiversity enhancements*: Based on this assessment of the Landscape and Ecological Mitigation Plan, it can be confidently determined that the final design would achieve the Applicant's commitment to provide a 10 % NG. The 1790 % increase in Biodiversity Units (BU) for area habitats reflects the strategic inclusion of diverse habitat types, including enhanced neutral grasslands, mixed scrub, and creation of broadleaved woodland. These enhancements contribute to a varied habitat matrix, which will support a broad range of ecological functions and wildlife species. The post-development linear watercourse habitats, resulting in a 2 % NG are anticipated to reach a moderate condition. These created watercourses will provide improved habitat quality and functional ecological corridors, supporting aquatic biodiversity over the long term and will be fundamental to the creation of and ecological diversity of the proposed wetland habitats as part of the swales which are assessed as an area-based habitat and contribute to the 179 % NG in BU.
- *Measures should include nature networks, linking to and strengthen habitat connectivity*: The creation of woodland, other neutral grassland, and other upland acid grassland increases the quality of the habitat within the Site and provides a hotspot of high and medium distinctiveness habitats within the wider landscape which is dominated by intensively managed and low distinctiveness agricultural habitats.
- *Management arrangements for long term retention and monitoring*: Management and monitoring would be set out within the LHMP and CEMP and would ensure the success of the habitat creation to be tracked against the predicted BNG values. Implementing an adaptive management plan focused on water quality, vegetation structure, and hydrology could help the recreated watercourse reach its full ecological potential over time, leading to incremental gains in biodiversity units.

[34] Note that one small section of hedgerow is retained, but has been taken out of the BNG calculations resulting in the overall 100 % NL.

4.1.5 To ensure positive habitat creation and enhancements are achieved long term, monitoring and maintenance procedures as well as estimated timeframes, restoration techniques, and an outline of responsible parties are detailed in the Habitat Management Plan associated with the Proposed Development.

ANNEX A: TOOLKIT DASHBOARD

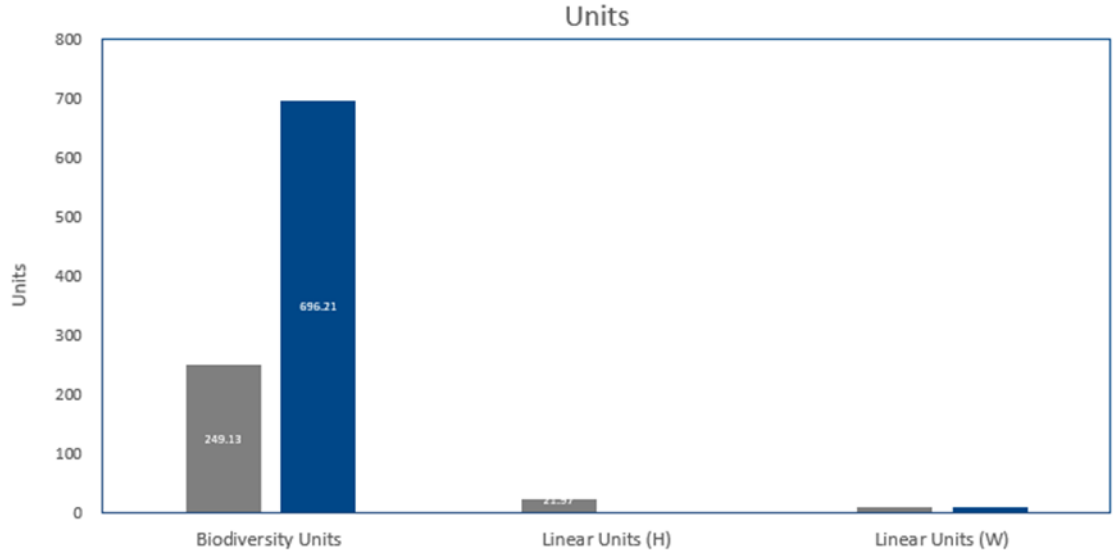
Plate 1: Proposed Development Summary Dashboard

Biodiversity Project Toolkit

Scottish & Southern Electricity Networks

Summary outputs

Review the automatically updated biodiversity unit and linear habitat (hedgerow (H) and water courses (W)) results graphs to help the optioneering process and site selection.



% Change	
Biodiversity (Area)	179%
Linear Units (H)	-100%
Linear Units (W)	2%

Before Works	Units
Biodiversity (Area)	249.13
Linear Units (H)	21.97
Linear Units (W)	10.38

Post Development	Units
Biodiversity (Area)	696.21
Linear Units (H)	0.00
Linear Units (W)	10.57

Net Change	Units
Biodiversity (Area)	447.08
Linear Units (H)	-21.97
Linear Units (W)	0.19

ANNEX B: GOOD PRACTICE PRINCIPLES

Table 4 sets out the review of the Proposed Development against the Good Practice Principles. This review has identified that five of the Good Practice Principles have been achieved and five are on-target to be achieved following construction and when the proposed habitat creation areas reach target habitat type and condition.

Table 4: Recommendations for Achieving Good Practice Principles

Principle	Outcomes	Progress
1. Apply the mitigation hierarchy	The mitigation hierarchy has been integrated into the planning and design phases of the Proposed Development, ensuring avoidance, minimisation, and mitigation of impacts on biodiversity through construction and operational planning and EIA undertaken as part of the planning application.	Achieved
2. Avoid losing biodiversity that cannot be offset by gains elsewhere	No irreplaceable habitats or designated sites were identified within the Site boundary, ensuring that no biodiversity losses are beyond what can be offset or mitigated as part of the Proposed Development.	Achieved
3. Be inclusive and equitable	Through the EIA process, discussions have been held with statutory bodies and stakeholders to explore and agree approaches for biodiversity.	Achieved
4. Address risks	The habitat reinstatement in the areas of temporary loss would follow recognised best practice techniques to minimise the risk of damage to the soils and aid recovering habitats. A Landscape and Habitat Management Plan (LHMP) would be produced for the Proposed Development, which would include details on monitoring requirement, to determine if the habitats are on track to reach their targeted condition. Should habitat reinstatement or enhancement be unsuccessful in any location, the LHMP would include a feedback loop, to ensure that active management is undertaken, and remedial measures are implemented.	On-target
5. Make a measurable NG contribution	The Proposed Development is anticipated to achieve a substantial biodiversity gain of 179 % BU, exceeding regulatory requirements. No off-site habitat creation or enhancement is required to meet the NG targets.	On-target
6. Achieve the best outcomes for biodiversity	The Landscape and Ecological Mitigation Plan **Volume 3, Figure 8.7: Landscape and Ecological Mitigation Plan** sets out to create grassland, woodland and scrub habitats within the Site. The post-development landscape for the Proposed Development will consist of various habitats, including retained urban developed land with sealed surfaces (no biodiversity value), enhanced and created other neutral grasslands in moderate condition, mixed scrub in moderate condition, other swamps in moderate condition, broadleaved woodland in moderate condition, and retained coniferous woodland in poor condition. These habitats are designed provide benefits to breeding and foraging birds, mammals, and invertebrates and contribute positively to the overall ecological value of the Site These habitat restoration and creation measures are in line with local and national targets. Implementation of a LHMP and Construction Environmental Management Plan (CEMP) would ensure that proposed landscaping is successfully implemented.	On-target
7. Be additional	The BNG Assessment of the Proposed Development demonstrates that additional positive outcomes would be achieved for biodiversity through exceeding the minimum requirement of a 10 % NG for area-based habitats. This is anticipated to be achieved through the creation of high distinctiveness grassland, medium distinctiveness woodland, and medium distinctiveness wetland. The BNG Assessment of the Proposed Development demonstrates a predicted overall 2 % NG in LU-W through the creation of a medium distinctiveness, moderate condition non-priority watercourse.	On-target

Principle	Outcomes	Progress
8. Create a Net Gain Legacy	The habitat creation as part of the Proposed Development would provide long-term benefits by adaptive management planning and dedicated funding for long-term management. Additionally, biodiversity benefits would extend beyond the Site by providing suitable foraging, resting, breeding habitats for notable or protected species within the wider landscape and provides higher distinctiveness habitats than the baseline Site.	On-target
9. Optimise sustainability	BNG has been integrated from the start of the initial development design stages with input across multiple disciplines to optimise the sustainability of the final Proposed Development.	Achieved
10. Be transparent	The Applicant is keen to ensure that approaches following on from this project are shared to ensure that any lessons learnt through BNG assessment, habitat enhancement / creation and habitat management can be factored into future projects. Opportunities to share information on the Proposed Development and its approach will be sought.	Achieved