

Denny to Wishaw Network Upgrade - Cumbernauld Substation Extension

Biodiversity Net Gain Assessment

June 2026



Denny to Wishaw Network Upgrade –
Cumbernauld Substation Extension - BNG
Assessment



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1. Introduction

This Biodiversity Net Gain (BNG) Report has been prepared by AECOM on behalf of SP Transmission (also referred to as the Applicant). It accompanies applications under Section 37 of the Electricity Act 1989 for consent (also referred to as ‘Section 37 consent’) for the Denny Wishaw Network Upgrade (DWNO, also referred to as the Project) (the ‘Project, Appendix A).

The following Works are being undertaken as part of the Project and are being considered within this BNG assessment:

- Extension of Cumbernauld Substation (Central Ordnance Survey Grid Reference NS 77448 74409) (as shown on Figure 1, Appendix A).

For the purpose of this report, the ‘Site’ refers to habitats within BNG Assessment boundary identified as shown in Appendix A-Figure 1.

Full details of the Works are provided in the Volume 1, Environmental Impact Assessment Report - Chapter 4.

The assessment compares the Site’s baseline habitat value with the predicted post-development habitat value, following the mitigation hierarchy (avoid–minimise–restore–offset). Biodiversity units have been quantified using the Scottish and Southern Electricity Networks (SSEN) Transmission Biodiversity Toolkit¹ (hereafter, the ‘Biodiversity Toolkit’), which adapts Natural England’s Biodiversity Metric 3.1² for Scottish use. As Scottish-specific condition criteria are not yet available, Natural England habitat condition sheets are used as a proxy in line with NatureScot interim guidance³.

SPEN is committed to delivering measurable biodiversity enhancements across all projects, in line with its commitment to achieve a minimum 10% Biodiversity Net Gain (BNG) for developments requiring consent. This assessment quantifies the baseline habitat value and evaluates the anticipated biodiversity unit loss resulting from the proposed works, establishing the net change in biodiversity (the development impact). The 10% uplift is then applied specifically to this net change, and the combined total defines the number of biodiversity units required to deliver a 10% net gain for the development.

No (baseline) hedgerow or watercourse habitats are present within the BNG assessment boundary.

1.1 Policy and Legislation

Policy 3b of National Planning Framework 4⁴ (NPF4) requires biodiversity enhancements be provided in addition to any proposed mitigation stating that:

¹ Scottish and Southern Electricity Networks (SSEN), 2024. *SSEN Biodiversity Toolkit*.

² Natural England (2022). *Biodiversity Metric 3.1: Habitat Condition Assessment Sheets*.

³ NatureScot (2023/2024). *Interim advice on using Natural England Biodiversity Metric 3.1 habitat condition sheets in Scotland*.

⁴ Scottish Government (2023). *National Planning Framework 4*

“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”.

By implementing measures to achieve net gain, the Project will achieve compliance with this aspect of NPF4, and this BNG assessment provides details of how this will be achieved. This is aligned to the Scottish Government’s NPF4 Policy for Project to contribute to biodiversity enhancement.

2. Methods

2.1 Biodiversity Toolkit

The biodiversity baseline and post-development habitat value has been quantified using the SSEN Biodiversity Toolkit¹ and SSEN Toolkit User Guide⁵. A BNG assessment involves making a comparison between the biodiversity value of habitats present within the Site prior to development (i.e., the ‘baseline’) and the predicted biodiversity value of habitats following the completion of the development (i.e., ‘post-development’). The comparison is made in terms of ‘biodiversity units’, with a ‘Biodiversity Toolkit’ providing the mechanism to allow biodiversity values to be calculated and compared.

The Biodiversity Toolkit assesses distinctiveness (habitat type/value), condition, extent, connectivity, and strategic significance (SS) for baseline and post-development habitats. A net gain is achieved where the post-development unit score exceeds the baseline.

For post-development calculations, the Toolkit applies standard risk multipliers to reflect delivery risk, time to target condition, and the location of mitigation relative to losses. These multipliers reduce the value of created/restored habitats, meaning larger areas and/or higher-value habitats are required to offset losses and deliver net gain.

This BNG Assessment and associated recommendations are based on findings of the Phase 1 habitat survey⁶ and Statutory Metric Habitat Condition Assessment (HCA)⁷ surveys undertaken in August 2025. For this assessment, the Biodiversity Toolkit has been completed in Phase 1⁶ habitat classification system.

2.2 Strategic Significance

Strategic Significance (SS) is the local significance of a habitat based on its location. As per the Biodiversity Toolkit guidance all baseline and post-development habitats have been assigned a SS rating depending on “*if the habitat or area is included within any local plans, policies or strategies, or is ecologically valuable*”⁵.

⁵ Scottish and Southern Energy (SSE) Renewables, 2024. *Biodiversity Net Gain Toolkit User Guide v2.2*.

⁶ Joint Nature Conservation Committee (JNCC) (2010) Handbook for Phase 1 habitat survey. Available Online at: [Handbook for Phase 1 habitat survey](#)

⁷ DEFRA, 2025. Statutory Biodiversity Metric Condition Assessments. Available Online at: [Statutory Biodiversity Metric Condition Assessments](#).

2.3 Connectivity

A connectivity rating has been assigned to all baseline habitats as per the Toolkit User Guide⁵ with all 'High' and 'Very high' distinctiveness habitats assigned a 'Moderate' connectivity rating, and all other habitats assigned a 'Low' connectivity rating.

2.4 Assumptions

In undertaking the calculation, the following assumptions have been made:

- A 28-month construction period (rounded to two years) has been added to all post-development habitats' time to target conditions;
- Time to target condition of B6: Poor semi-improved grassland (target condition Poor) has been assigned 1 year (not including the construction period), based on the time to target condition for UKHab Modified grassland (given these both attain 'Low' distinctiveness only, unlike all other forms of grassland that achieve higher distinctiveness categories);
- Habitats within the BNG Assessment Boundary that are existing and will be retained are excluded from the assessment;
- All baseline and post-development hard-standing has been assigned Phase 1 habitat category J3.6 – Buildings;
- Post-development areas of proposed gravel have been assigned Phase 1 habitat category J4 – Bare ground;
- A precautionary approach to all post-development habitat conditions has been taken and as such all have been assigned Poor condition, acknowledging that long term management of habitats is unlikely to take place; and
- Composition of A1.3.2 – Mixed plantation woodland is variable within the Site, and some areas are dominated by planted non-native conifers. These areas have nonetheless been assigned 'High' SS in Section 3.1 below, owing to the presence of native broadleaved trees interspersed throughout and the reasonably quality of the ground flora identified.

3. Results

3.1 Baseline Habitats – Strategic Significance

A SS rating has been assigned to all baseline habitats as per the Toolkit User Guide⁵. Information was obtained from the North Lanarkshire Biodiversity Action Plan (LBAP) to assess the SS rating. Table 3-1 summarises the SS rating assigned to each habitat type.

Table 3-1: Strategic Significance Justification

Strategic Significance	Justification Reasoning
High	The following habitats have been identified within the North Lanarkshire LBAP as the local priority habitat ‘Woodland (with the exception of non-native plantations)’⁸: • A1.1.1 – Broadleaved semi-natural woodland • A1.1.2 – Broadleaved plantation woodland • A1.3.2 – Mixed plantation woodland • J2.1.1 – Intact species-rich hedge
Medium	The following habitats have not been formally identified as a local priority habitat but are considered ecologically desirable: • A2.1 – Dense scrub • B2.2 - Semi-improved neutral grassland • B5 – Marsh/marshy grassland
Low	The following habitats have not been formally identified as a local priority habitat and are not considered ecologically desirable: • J3.6 – Buildings • J4 – Bare ground

3.2 Baseline Habitats Units

There are no irreplaceable habitats within the Site.

An overview of the baseline biodiversity for the Project is summarised in Table 3-2 and Table 3-3, and the Baseline Habitat Plan is provided in Appendix A. Full details of the baseline habitats present are described in Appendix 8.13.

Table 3-2: Baseline area habitat units

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
A1.1.1 - Broadleaved semi-natural woodland	0.03	High	Moderate	High	0.45
A1.1.2 - Broadleaved plantation woodland	1.77	Medium	Moderate	High	16.29

⁸ North Lanarkshire, 2023. North Lanarkshire Biodiversity Action Plan. Available Online at: [North Lanarkshire Biodiversity Action Plan](#).

Habitat Type	Area (Ha)	Distinctiveness	Condition	SS	Habitat Units
A1.3.2 - Mixed plantation woodland	2.88	Medium	Moderate	High	26.68
A2.1 - Dense scrub	0.14	Medium	Poor	Medium	0.61
B2.2 - Semi-improved neutral grassland	0.12	Medium	Good	Medium	1.45
B2.2 - Semi-improved neutral grassland	0.61	Medium	Poor	Medium	2.68
B5 - Marsh/marshy grassland	0.30	Low	Good	Medium	1.99
J3.6 - Buildings	0.09	N/A	N/A - No biodiversity value	Low	0.00
TOTAL	5.94				50.15

3.3 Post-Development Habitats – Strategic Significance

A SS rating has been assigned to all post-development habitats as per the Toolkit User Guide⁵. Post-development habitats are largely similar to baseline habitats and the justification for the SS of these remains the same.

Additional habitats proposed for post-development are:

- B6 – Poor semi-improved grassland (assigned Low SS given it is not considered ecologically desirable – it will require ongoing maintenance for visibility splay purposes); and
- J2.1.1 - Intact species-rich hedge (assigned High SS as it has been formally identified as a priority habitat in the North Lanarkshire LBAP).

3.4 Post-Development Habitats Units

Post-development habitats are detailed in Table 3-3 and **Error! Reference source not found.**, and the Post-Development Habitat Plan is provided in Appendix B. Details are provided in Appendix C in relation to rationale for habitats that will be created. The Time to Target Condition value, following the Metric 3.1 timescales, with an additional two years added to account for the construction period.

Table 3-3: Created Area Habitats

Habitat Type	Area (Ha)	Distinctiveness	Target Condition	Time to Target Condition (yrs)	SS	Habitat Units
A1.1.2 - Broadleaved plantation woodland	0.69	Medium	Poor	7	High	1.65
A2.1 - Dense scrub	0.79	Medium	Poor	3	Medium	3.12
B2.2 - Semi-improved neutral grassland	2.62	Medium	Poor	4	Medium	10.04
B6 – Poor semi-improved grassland	0.36	Low	Poor	3	Low	0.65
J3.6 - Buildings	0.95	N/A	N/A - Other	2	Low	0.00
J4 – Bare ground	0.53	Low	Poor	2	Low	0.00
Total	5.94					15.46

Table 3-4: Created Hedgerow Habitats

Habitat Type	Length (Km)	Distinctiveness	Target Condition	Time to Target Condition (yrs)	SS	Hedgerow Units
J2.1.1 - Intact species-rich hedge	0.23	High	Poor	3	High	1.57
Total	0.23					1.57

3.5 Summary of Results

The Project is predicted to result in a net loss of 34.69 area habitat units and a gain of 1.57 hedgerow units as detailed in Table 3-5. A copy of the associated Toolkit will be provided alongside this report, see Appendix D for the summary outputs.

Table 3-5: Summary of Results

Habitat Type	Baseline BUs	Post-Development BUs	Total Net Unit Change	Number of BUs required to achieve a 10% Gain
Area Units	50.15	15.46	-34.69	30.71
Hedgerow Units	0.00	1.57	+1.57	Achieved

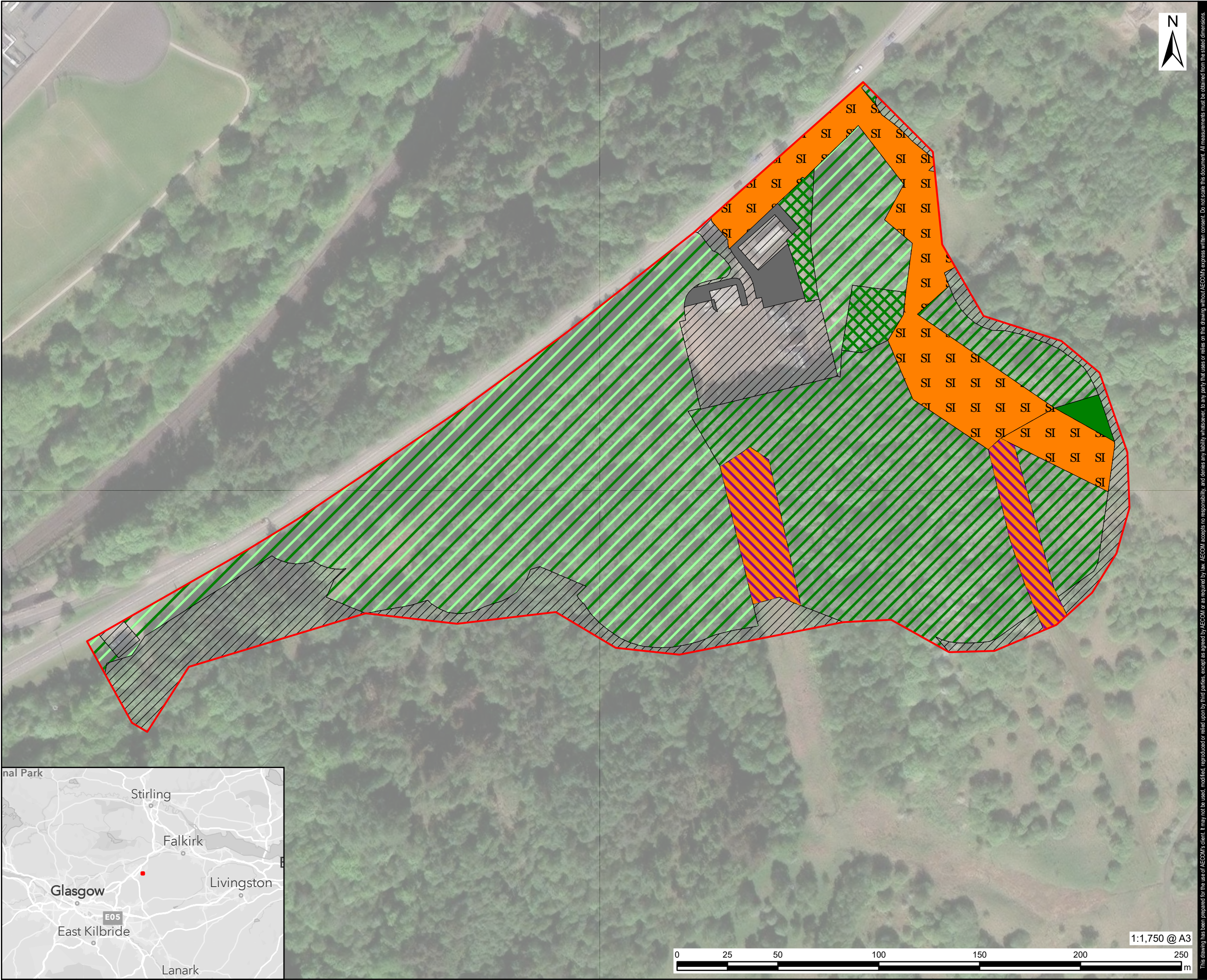
4. Conclusion

The Project is predicted to result in a net loss of 34.69 area habitat units and a net gain of 1.57 hedgerow units. To achieve the targeted 10% gain, an additional 39.71 area habitat units would be required.

In order to provide significant biodiversity enhancements to meet with the requirements of NPF4, SPEN are committed to the Project providing a 10% net gain. This 10% gain will be achieved offsite, by providing the number of units identified within this assessment (subject to potential design revisions prior to construction and reassessment if necessary). This offsite gain will be achieved via an offsite partner and will be secured by way of a legal agreement with a 5-year establishment period applied.

Appendix A Baseline Habitat Plan

A.1 Cumbernauld Substation



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LEGEND

- Biodiversity Net Gain Assessment Boundary
- Habitats Excluded from Assessment
- Baseline Phase 1 Habitat Type**
- A1.1.1 - Broadleaved woodland - semi-natural
- A1.1.2 - Broadleaved woodland - plantation
- A1.3.2 - Mixed woodland - plantation
- A2.1 - Scrub - dense/continuous
- B2.2 - Neutral grassland - semi-improved
- B5 - Marsh/marshy grassland
- J3.6 - Buildings

NOTES

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ISSUE PURPOSE

BNG Assessment

PROJECT NUMBER

60602788

FIGURE TITLE

Biodiversity Net Gain Assessment -
Cumbernauld Baseline
Phase 1 Habitats Plan

FIGURE NUMBER

Figure 1

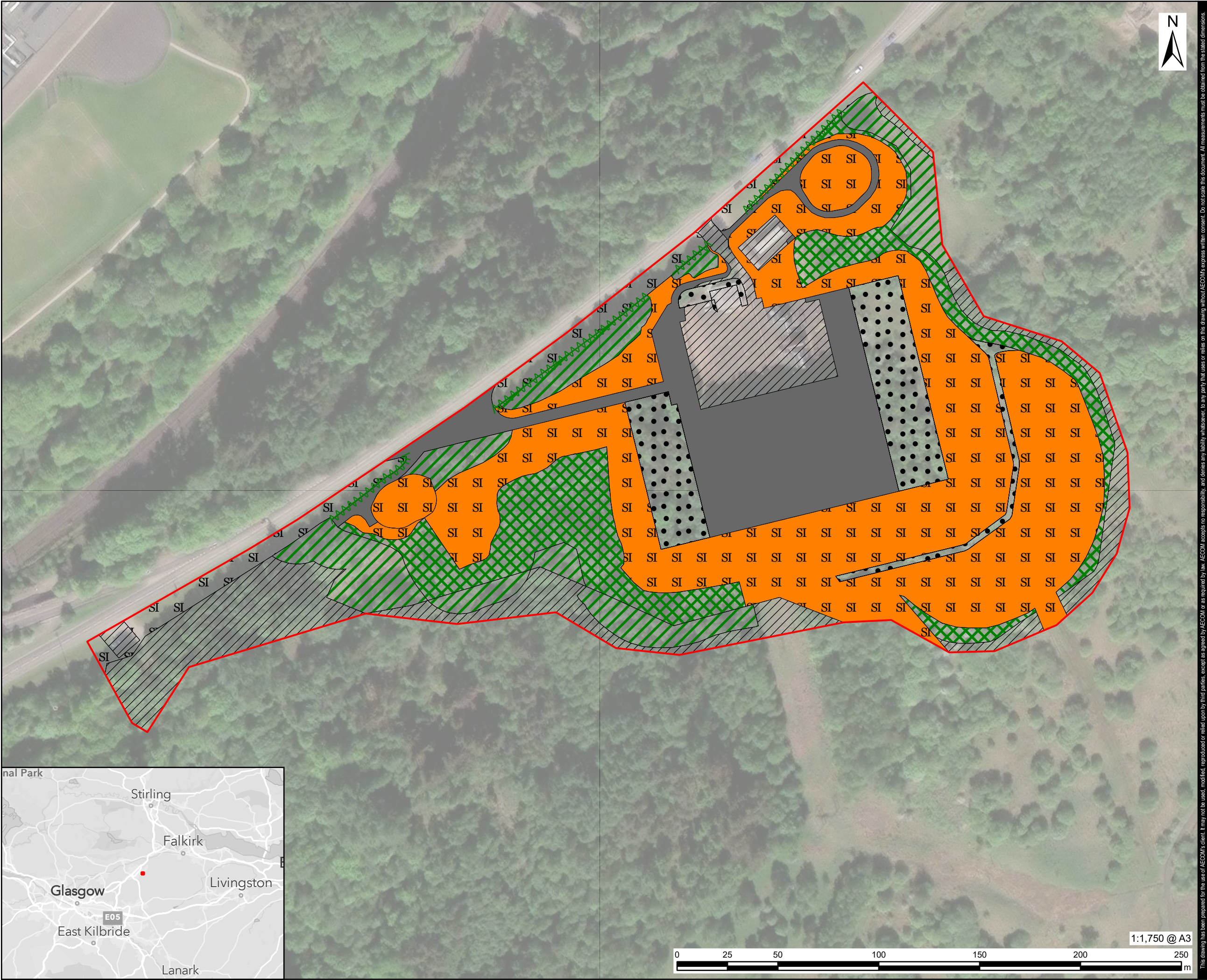
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Appendix B Post-Development Habitat Plan

B.1 Cumbernauld Substation



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LEGEND

Biodiversity Net Gain Assessment Boundary

Habitats Excluded from Assessment

Post Development Phase 1 Habitat Type

J2.1.1 - Intact hedge - native species-rich

A1.1.2 - Broadleaved woodland - plantation

A2.1 - Scrub - dense/continuous

B2.2 - Neutral grassland - semi-improved

B6 - Poor semi-improved grassland

J3.6 - Buildings

J4 - Bare ground

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ISSUE PURPOSE

BNG Assessment

PROJECT NUMBER

60602788

FIGURE TITLE

Biodiversity Net Gain Assessment - Cumbernauld Post-Development Phase 1 Habitats Plan

FIGURE NUMBER

Figure 2

Appendix C Description of Post-Development Habitats

Table C1: Summary of Results

Landscape Mitigation Plan Proposal	Post-development Phase 1 habitat type	Target Condition	Description
Proposed woodland	A1.1.2 - Broadleaved plantation woodland	Poor	Proposed species: • Downy birch <i>Betula pubescens</i>; • Hazel <i>Corylus avellana</i>; • Rowan <i>Sorbus aucuparia</i>; • Sessile oak <i>Quercus petraea</i>; • Silver birch <i>Betula pendula</i>; • Grey willow <i>Salix cinerea</i>; and • Goat willow <i>Salix caprea</i>.
Proposed shrub planting	A2.1 - Dense scrub	Poor	• Proposed species: Blackthorn <i>Prunus spinosa</i>; • Elder <i>Sambucus nigra</i>; • Guelder rose <i>Viburnum opulus</i>; • Hawthorn <i>Crataegus monogyna</i>; and • Hazel.

Proposed species diverse meadow	B2.2 - Semi-improved neutral grassland	Poor	Proposed seed mix: MG5 Meadow Mix ⁹ , Scotia Seeds.
Proposed wet grassland	B2.2 - Semi-improved neutral grassland	Poor	Proposed seed mix: Dry Places Wildflowers Mix ¹⁰ , Scotia Seeds. Since the Landscape Mitigation Plan was developed, it became understood that the basins for which this habitat was proposed would not be wet and therefore a dry seed mix has been opted.
Proposed perimeter grassland	B6 – Poor semi-improved grassland	Poor	Proposed seed mix: Flowering Lawn Mix ¹¹ , Scotia Seeds.
Proposed hedgerow	J2.1.1 - Intact species-rich hedge	Poor	Proposed species: • Blackthorn; • Guelder rose; • Hawthorn; • Hazel; and • Holly <i>Ilex aquifolium</i>.

⁹ <https://www.scotiaseeds.co.uk/shop/mg5-meadow-mix/>

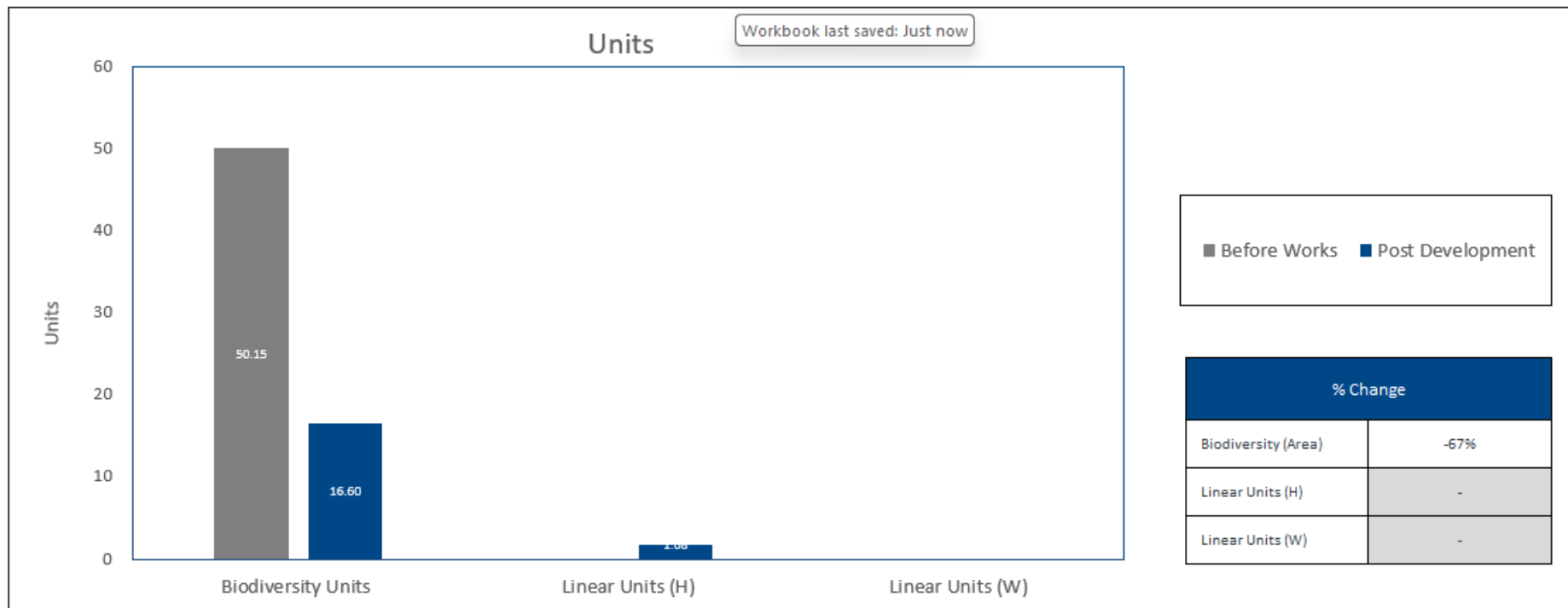
¹⁰ <https://www.scotiaseeds.co.uk/shop/dry-places-wildflowers-mix/>

¹¹ <https://www.scotiaseeds.co.uk/shop/flowering-lawn-mix/>

Appendix D Biodiversity Toolkit

Biodiversity Toolkit to be included as an attachment.

D.1 Cumbernauld Substation



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